

# **About Fluke**

# Dedicated to your safety, driven by your success

At Fluke, we're working every day so you can do your essential work with confidence. We are driven to keep you safe, help you succeed and equip you for maximum impact in your industry. Our modern, technology-enabled world works because people like you are at this very moment maintaining it, measuring it, testing it and improving upon it.

#### The future of Fluke

Our founder, John Fluke Sr. was a "get the job done right" kind of guy. His vision revolved around improving the way things work, and he saw test and measurement as the surest and most effective way of doing that.

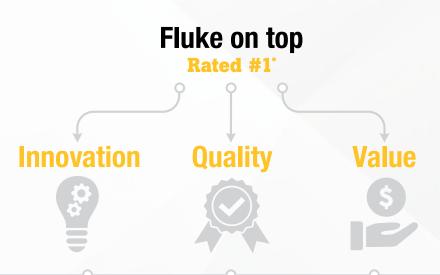
Today, we're expanding our product line beyond the physical tools that defined our early history. But at Fluke the one thing that never changes is our commitment to the people who use our tools: you.

#### One world—one Fluke

Throughout the year and around the globe, Fluke leads events that bring communities together for greater impact. One example is the WorldSkills Competition. At this epicenter of vocational education and training, Fluke engages with students and professionals from around the world to share industry best practices and show how Fluke can help fill critical skills gaps in all industries.

#### **Taking our commitment further**

Fluke's support doesn't begin or end with a tool. Our website is loaded with hundreds of useful resources, such as blog posts, videos, how-to guides and more, to help you stay ahead of the curve. Visit Fluke at www.fluke.co.au



#### Top product

2018 Product of the Year Plant Engineering

#### Top choice

2019 Engineer's Choice Award Control Engineering

# Top in innovation

2018 Innovation Award Winners (2) *Pro Tools Review* 

# Top in safety

2019 New Product
Competition Award
Protective tools, hardware
and equipment
MCEE

#### Top in breakthrough technology

2018 Breakthrough Product Award Processing Magazine

\*2019 IMI International Brand Equity Study



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# What's New at Fluke



# Fluke 87V MAX True-RMS Digital Multimeter

Fluke's most rugged digital multimeter.

- IP 67 (waterproof and dustproof) rating
- Extended operating temperature range of -15  $^{\circ}\text{C}$  to +55  $^{\circ}\text{C}$
- · True-RMS AC voltage and current for accurate measurements on non-linear signals
- Measure up to 1,000 V AC and DC
- Measure up to 10 A (20 A for 30 seconds)
- · Frequency to 200 kHz
- Withstands drops up to 4 metres

For more information on the Fluke 87V MAX True-RMS Digital Multimeter, see page 17



#### **PLS Laser Levels**

Layout. Level. Build.

- · Beam quality will be bright, thin and crisp
- · Drop tested with water and dust Ingress Protection (IP)
- Designed for the professional contractor with self-leveling technology
- The PLS range includes point, line, combo and rotary lasers. Available as a standalone unit or as a kit that is complete with all accessories

For more information on the PLS Laser Level range, see page 43



# Fluke ii900 Sonic Industrial Imager

A fast, simple way to detect compressed air, steam, gas and vacuum leaks.

- Locate leakage immediately on screen up to 50 metres in distance
- Do more with the same air compressors with regular leak detection maintenance delay the capital expense of installing an additional compressor
- · Ensure proper air pressure to your pneumatic equipment at all times
- Lowers energy costs due to undetected pressure leaks
- Easy to use intuitive camera interface enables you to train the team in a matter of minutes
- · Quick leak detection and validate repairs on the spot

For more information on the Fluke ii900 Sonic Industrial Imager, see page 62



# Fluke MDA-510 and MDA-550 Motor Drive Analysers

Simplify complex motor-drive troubleshooting with guided test setups and automated drive measurements.

- · Measure key motor-drive parameters
- Perform extended harmonics measurements with one tool
- Guided testing with graphical step-by-step voltage and current connection diagrams makes setup and connection to variable frequency drives easier than ever
- Preset measurement profiles collect data based on the chosen test procedure and reduce the need for complex configuration
- Measure additional electrical parameters with full 500MHz oscilloscope

For more information on the Fluke MDA-550 Motor Drive Analysers, see page 98



# Fluke TiS20+ and TiS60+ Infrared Cameras

Save time with the right level of infrared and analysis.

- TiS20+ infrared resolution: 120 x 90 up to 150°C in temperature range
- TiS60+ infrared resolution: 320 x 240 up to 400°C in temperature range
- Intuitive interface with 3.5 inch LCD screen and fixed focus
- Pinpoint a hotspot blend visual and IR image with IR Fusion® blending technology
- One-handed, image capture, review and save capability with Fluke Connect™ compatibility

For more information on the Fluke TiS20+ and TiS60+ Infrared Cameras, see page 56



#### Fluke Professional Series Infrared Cameras

Fluke Ti300+, Ti401 PRO, Ti480 PRO, TiX501 and TiX580

- Superior image quality: 640 x 480 resolution (Ti480 PRO, Ti401 PRO, TiX501 and TiX580) and 320 x 240 (Ti300+)
- Make confident decisions with increased temperature sensitivity
- LaserSharp™ Auto Focus provides you in-focus images every single time
- Work faster and smarter with the new 3.5" LCD touchscreen interface and IR-PhotoNotes™
- View all your assets with increased accuracy using one of the four optional lenses (macro, wide-angle, 2x telephoto and 4x telephoto)

For more information on the Fluke Professional Series Infrared Cameras, see page 57



#### **Fluke Insulated Hand Tools**

Safe. Rugged. Fluke. 1000 Volt Insulated Tools, lifetime warranty.

- The most comfortable, ergonomic design possible
- Designed and manufactured in state-of-the-art German facilities in Germany to traditional Fluke quality standards
- Compliant to the global safety standards
- Certified to 1000 V AC, 1500 V DC
- · Backed by a limited lifetime warranty

For more information on Fluke Insulated Hand Tools, see page 137



# Fluke 729 Automatic Pressure Calibrator

Portable automatic pressure calibrator simplifies pressure calibration.

- · Automatic pressure generation and regulation up to 300 psi
- Easily document the process using onboard test templates
- · Measure, source and simulate 4 to 20 mA signals
- 24V loop power for powering transmitters for tests
- HART communication for testing HART smart transmitters

For more information on the Fluke 729 Automatic Pressure Calibrator, see page 121



# SEE IT. SAVE IT. SHARE IT.

All the facts, right in the field.

# DOWNLOAD THE FREE APP! The Fluke Connect App that turns your phone into a Fluke Tool.

By using the Fluke Connect® App, you can efficiently and safely capture, store and share maintenance data without leaving the field. You can securely connect and collaborate with others, so they can see what you see.







#### Share from anywhere

Stay on the same page even when you and your team are in different places, only with ShareLive™ video call. Securely connect and collaborate with others, so they can see what you see. Get approvals without leaving the field.



#### **Save Time Reporting**

Make better decisions faster than before. Organise your measurements by asset in one location with EquipmentLog™ history. Measure once, and cut out the paper with AutoRecord™ measurements.

When your measurements are associated with equipment, there is no need to record in the field and then transcribe into an office computer. Make decisions quicker than before by viewing temperature, mechanical, electrical and vibration measurements from one location.



#### Troubleshoot faster

Instantly trend and monitor intermittent problems with TrendIt  $^{\text{TM}}$  graphs so you can easily identify trends and stop problems before they happen. Seeing is believing-trend data over time and prove your point.



#### Lock down your data

The Fluke Cloud™ storage infrastructure has been built to be one of the most flexible and secure cloud computing environments available today. Our cloud service provider uses state-of-the art electronic surveillance, multi-factor access controls and 24/7 data centre staffing to make Fluke Cloud one of the most flexible and secure cloud computing environments available.





# Fluke Connect® Selection Guide

The Fluke Connect App displays readings from up to ten modules on the iPhone and six modules on an Andriod device. A vast range of Fluke Infrared Cameras display their own measurements plus readings from up to five wireless modules. The 3000 FC Wireless Digital Multimeter displays its own readings plus measurements from up to three wireless modules. The 173X Power Loggers and 174X Power Quality Loggers display their own measurements plus readings from up to two wireless modules.

|  | Fluke Connect App − iOS and Android™ | TiX580/501 Infrared Cameras | Ti300+/Ti401PRO/Ti480PRO Infrared Cameras | PT1120/TiSxx Series Infrared Cameras | 3000 FC Digital Multimeter | 902 FC True-RMS HVAC Clamp Module | 376/375/374 FC True-RMS Clamp Module | a3000 FC/a3001 FC AC Current Clamp Module | a3002 FC AC/DC Current Clamp Module | a3003 FC/a3004 FC DC Current Clamp Module | v3000 FC AC Voltage Module | v3001 FC DC Voltage Module | 3000 FC Temperature Module | 1555/1550C Insulation Resistance Testers | 1742/1746/1748 Power Quality Loggers | 1732/1734/1736/1738 Electrical Loggers | 729 FC Automatic Pressure Calibrator | 787B/789 ProcessMeter™ | 1587 FC Insulation Multimeter | 1664 FC Multifunction Installation Tester | 805 FC Vibration Tester | 125B/124B/123B ScopeMeters* | 279 FC Digital Thermal Multimeter | 1630–2 FC Earth Ground Clamp | 368/369 FC Leakage Current Clamps |
|--|--------------------------------------|-----------------------------|---|--------------------------------------|----------------------------|-----------------------------------|--------------------------------------|---|-------------------------------------|---|----------------------------|----------------------------|----------------------------|--|--------------------------------------|--|--------------------------------------|------------------------|-------------------------------|---|-------------------------|-----------------------------|-----------------------------------|------------------------------|-----------------------------------|
| Fluke Connect™ tools                         | Flu                                  | TiX                         | Ti3                                       | PŢ                                   | 300                        | 300                               | 376                                  | a3(                                       | a3(                                 | a3(                                       | v3(                        | v3(                        | 130                        | 156                                      | 174                                  | 173                                    | 728                                  | 78.                    | 158                           | 16(                                       | 80                      | 12                          | 278                               | 163                          | 368                               |
| Fluke Connect App – iOS and Android™         | •                                    | •                           | •   | •                                    | •                          | •                                 | •                                    | •   | •                                   | •   | •                          | •                          | •                          | •  | ٠                                    | •                                      | •                                    | •                      | •                             | •   | •                       | •                           | •                                 | •                            | •                                 |
| TiX580/501<br>Infrared Cameras               | •                                    |                             |   |                                      | •                          | •                                 | •                                    | •   | •                                   | •   | •                          | •                          | •                          |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| Ti300+/Ti401PRO/Ti480PRO<br>Infrared Cameras | •                                    |                             |   |                                      | •                          | •                                 | •                                    | •   | •                                   | •   | •                          | •                          | •                          |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              | ı                                 |
| PTI120/TiSxx Series<br>Infrared Cameras      | •                                    |                             |   |                                      | •                          | •                                 | •                                    | •   | •                                   | •   | •                          | •                          | •                          |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 3000 FC Digital Multimeter                   | •                                    | •                           | •   |                                      |                            |                                   |                                      | •   | •                                   | •   | •                          | •                          | •                          |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| a3000 FC/a3001 FC AC Current<br>Clamp Module | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 902 FC True-RMS HVAC<br>Clamp Meter          | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 376/375/374 FC True-RMS<br>Clamp Meters      | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| a3002 FC AC/DC Current Clamp<br>Module       | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| a3003 FC/a3004 FC DC Current<br>Clamp Module | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| v3000 FC AC Voltage Module                   | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| v3001 FC DC Voltage Module                   | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| t3000 FC Temperature Module                  | •                                    | •                           | •   | •                                    | •                          |                                   |                                      |   |                                     |   |                            |                            |                            |  | •                                    | •                                      |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 1555/1550C Insulation<br>Resistance Testers  | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 1742/1746/1748 Power Quality<br>Loggers      | •                                    |                             |   |                                      | •                          | •                                 | •                                    | •   | •                                   | •   | •                          | •                          | •                          |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 1732/1734/1736/1738 Electrical<br>Loggers    | •                                    |                             |   |                                      | •                          | •                                 | •                                    | •   | •                                   | •   | •                          | •                          | •                          |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 787B/789 ProcessMeter™                       | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 1587 FC Insulation Multimeter                | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 1664 FC Installation Tester                  | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 805 FC Vibration Tester                      | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 125B/124B/123B ScopeMeters®                  | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 279 FC Thermal Multimeter                    | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 1630-2 FC Earth Ground Clamp                 | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| 368/369 FC Leakage Current<br>Clamps         | •                                    |                             |   |                                      |                            |                                   |                                      |   |                                     |   |                            |                            |                            |  |                                      |  |                                      |                        |                               |   |                         |                             |                                   |                              |                                   |
| ir3000 FC Wireless Connector                 | •                                    |                             |   |                                      |                            | Con                               | nect                                 | ada                                       | pter                                | to: F                                     | luke                       | 787                        | B, 78                      | 39, 2                                    | 89, 2                                | 287,                                   | 1550                                 | OC, 1                  | 555                           |   |                         |                             |                                   |                              |                                   |

# Fluke a3000 FC, a3001 FC, a3002 FC **Wireless Current Clamp Modules**



**Recommended Accessories** 



a3000 FC Wireless AC Current Clamp Module

A true RMS Current Clamp Meter that wirelessly relays measurements to other Fluke Connect® enabled master units.

- Measure up to 400 A AC
- Logging function: record and save up to 65,000 readings
- Use as a standalone meter or as part of a system
- Inrush function
- Weight: 0.22 kg
- Three year warranty







Fluke a3000 FC



Fluke a3001 FC

#### a3001 FC Wireless iFlex™ AC Current Module

A iFlex™ AC Current Module that wirelessly relays measurements to other Fluke Connect enabled master-units. It allows you to measure around awkward sized conductors or get into tight spaces and makes wire access easier.

- Measure up to 2500 A AC
- Logging function: record and save up to 65,000 readings
- Use as a standalone meter or as part of a system
- Inrush function
- Weight: 0.22 kg
- Three year warranty









Fluke a3002 FC

#### a3002 FC Wireless AC/DC Current Module

For use with the i410 or i1010 AC/DC current clamps (sold separately). Wirelessly relay measurements from the i410 or i1010 clamp accessory to other Fluke Connect™ enabled master units.

- Measure up to 400 A AC or 400 A DC with i410
- Measure up to 600 A AC or 1000 A DC with i1010
- Use as a meter alone or as part of a system
- Record and save up to 65,000 readings
- Weight: 0.255 kg
- Three year warranty







| Specifications            | a3000 FC   | a3001 FC   | a3002 FC   |  |  |  |
|---------------------------|--|--|--|--|--|--|
| Range                     | 0.5 A to 400.0 A AC  | 0.5 A to 2500 A AC   | up to 600 A AC and<br>1000 A DC<br>(with I1010 Current<br>Clamp) |  |  |  |
| Resolution                |  | 0.1 A  |  |  |  |  |
| Accuracy                  | 400.0 A: 2 % ± 5 digits<br>(10Hz to 100Hz), 2.5 % ±<br>5 digits (100Hz to 500Hz) | 3 % ± 5 digits<br>(5Hz to 500Hz)   | AC: 1.0% + 3<br>DC: 0.5% + 3<br>(45Hz to 1000Hz)                 |  |  |  |
| Inrush                    | Max displayed reading: 999.9A  |  |  |  |  |  |
| Crest Factor (50Hz/60Hz)  | 3 at 500 Å, 2.5 at 600 Å,<br>1.42 at 1000 Å, add 2 %<br>for C.F. > 2             | 3.0 at 1100 A, 2.5 at<br>1400 A, 1.42 at 2500<br>A, add 2 % for C.F. > 2 |  |  |  |  |
| LCD w/backlight           | 3½ di  | gits   | 3 ½ digits, 6000 counts,<br>4/sec update rate                    |  |  |  |
| Log rate/interval         |  | imum/adjustable by PC o  |  |  |  |  |
| Battery type/life         | 2 AA, NEDA 15 A, IEC LR6 / 400 hours   |  |  |  |  |  |
| RF communications         |  | 2.4 GHZ ISM Band   |  |  |  |  |
| RF communication range    | Open air, unobstructed: Up<br>Obstructed, concrete                               | o to 20 m. Obstructed, sh<br>wall or steel electrical er                 |  |  |  |  |
| Operating & Storage temp  | -10 °C   | C to $+50$ °C $/$ $-40$ °C to $+$  | 60 °C  |  |  |  |
| Temperature coefficient   | Add 0.1 X (spec  | cified accuracy)/ °C (<18  | 3 °C or >28 °C)  |  |  |  |
| Operating humidity        |  | C to 35 °C), 0 % to 75 %<br>% to 45 % (40 °C to 50 °                     |  |  |  |  |
| EMC                       |  | EN 61326-1:2006  |  |  |  |  |
| Safety compliance         | IEC 61010-1, 600 V CAT<br>III, 3rd edition Pollution<br>Degree 2                 |  | CAT IV/1000 V CAT III,<br>ollution Degree 2                      |  |  |  |
| Safety rating             | CAT III 600 V CAT IV 600 V, CAT III 1000 V                                       |  |  |  |  |  |
| Certifications            | CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE  |  |  |  |  |  |
| Ingress Protection rating | IP30   | I  | P42  |  |  |  |
| Jaw Opening               | 64 mm  | 25.4 cm coil   |  |  |  |  |
| Size (HxWxD in cm)        | 16.5 x 6.35 x 3.56   | 16.5 x 6.35 x 1.4  | 16.0 x 6.6 x 3.8   |  |  |  |
| Save and record           |  | Up to 65,000 readings  |  |  |  |  |

# I410/I1010 PC ADAPTER Fluke Connect® Wireless PC Adapter See page 155 Current Clamp (for a3002 FC) See page 150 **Recommended Kits** Buy more, Save more Fluke Wireless a3000 FC **Current Clamp Kit** Fluke Wireless a3001 FC iFlex™ AC Current Kit

#### **Included Accessories**

For more details see page 167

iFlex™ i2500 Flexible Current Probe (a3001FC), Magnetic Hanging Strap (a3002FC).

| Ordering Info       | ormation                               |
|---------------------|--|
| FLK-A3000 FC        | Wireless AC<br>Current Clamp<br>Module |
| FLK-A3001 FC        | Wireless iFlex AC<br>Current Module    |
| FLK-A3002 FC        | Wireless AC/DC<br>Current Module       |
| FLK-A3000 FC<br>KIT | Wireless AC<br>Current Clamp<br>Kit    |

Contact your local distributor for price and availability. www.fluke.com/au/wtb

FLK-A3001 FC

Wireless iFlex **AC Current Kit** 

# Fluke a3003 FC and a3004 FC **Wireless Current Clamp Modules**



Fluke a3003 FC

#### a3003 FC Wireless 2000 A DC Current Clamp Module

The a3003 is the tool of choice for high current DC ammeter applications that require measurements up to 2000 A DC.

The extra-wide jaw easily clamps around large conductors, typically found in mining, utility, marine, rail or other heavy manufacturing industries where large DC currents or large current carrying cables are

The a3003's unique jaw construction allows for a wide measurement range meaning that you can accurately make measurements from 10 Å DC to 2000 A DC.

- Measures from 10 A to 2000 A DC
- Large jaw size (64 mm) for measuring large, high current conductors
- Logging function: record and save up to 65,000 readings
- Weight: 0.65 kg
- Three year warranty







Fluke a3004 FC

#### a3004 FC Wireless 4-20 mA DC Clamp Module

A fully functional current clamp meter the a3004 tests or troubleshoots 4-20 mA control loops used with drive systems, PLC's, or building energy management systems. Now you can troubleshoot and repair 4-20 mA loops without breaking the loop or bringing down the system and save time.

- Send data to your laptop and go from logging to analysis and
- Use the Fluke Connect® wireless USB adapter to collect logged data from remote modules by walking past a working module and downloading logged data
- Logging function: record and save up to 65,000 readings
- Perform for analysis with your PC and share the results using Fluke Cloud™ storage and ShareLive™ video call
- Weight: 0.299 kg
- Three year warranty





| Specifications            | a3003 FC  | a3004 FC   |
|---------------------------|---|--|
| Range                     | 1.0A to 999.9 A DC<br>1000 A to 2000 A DC                 | 0.05 mA to 20.99 mA DC<br>21.0 mA to 99.9 mA DC                                |
| Resolution                | 0.1 A<br>1 A  | 0.01 mA<br>0.1 A   |
| Accuracy                  | $2\% \pm 5$ digits $2.5\% \pm 5$ digits                   | $0.2\% \pm 5$ digits $1.0\% \pm 5$ digits                                      |
| LCD w/backlight           | 31  | ⁄2 digits  |
| Log rate/interval         | 1 sec minimum/adjus                                       | table by PC or front pannel  |
| Battery type              | 2 AA, NED   | A 15 A, IEC LR6  |
| Battery life              | 120 hours   | 45 hours   |
| Memory                    | Record up to  | 65,000 readings  |
| RF communications         | 2.4 GH  | z ISM Band   |
| RF communication range    |   | Obstructed, sheetrock wall: Up to 6.5 m, eel electrical enclosure: Up to 3.5 m |
| Operating Temperature     | -10°C   | C to +50°C   |
| Storage Temperature       | -40°C   | C to +60°C   |
| Temperature coefficient   | Add 0.1 X (specified acc                                  | uracy) /°C (< 18°C or > 28°C)  |
| Operating humidity        | 90% at 35°C, 75%  | 6 at 40°C, 45% at 50°C   |
| Altitude                  | Operating 2,000   | m, Storage 12,000 m  |
| EMC                       | EN 613  | 326-1:2013   |
| Safety compliance         | IEC 61010-1, CAT IV 600 V, CAT III<br>1000 V, 3rd edition |  |
| Safety rating             | CAT IV 600 V, CAT III 1000V                               |  |
| Certifications            | cCSAus, CE, FCC: T6                                       | 68-FBLE IC: 6627A-FBLE   |
| Ingress Protection rating |   | IP42   |
| Jaw Opening               | 64 mm   | 4.5 mm   |
| Size (HxWxD in cm)        | 16.5 x 6.35 x 3.56  | 16.5 x 6.35 x 1.4  |
| Size (HxWxD in cm)        | 16.5 x 6.35 x 3.56  | 16.5 x 6.35 x 1.4  |



#### **Recommended Accessories**



PC ADAPTER Fluke Connect® Wireless PC Adapter See page 155

#### Download the **FREE Fluke Connect App** today





#### **Included Accessories**

2000 A Clamp Attachment (a3003), 4-20 mA Clamp Attachment (a3004), Batteries, Hanging Strap, Ouick Start Guide.

#### **Ordering Information**

FLK-A3003 FC Wireless 2000 AMP DC Module

FLK-A3004 FC Wireless 4-20 mA

DC Module

# Fluke v3000 FC AC and v3001 FC **DC Wireless Voltage Modules**



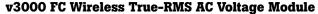
Fluke v3000 FC











A fully functional True-RMS Voltage Meter that wirelessly relays AC voltage measurements to other Fluke Connect® enabled master units.

- True-RMS AC Voltage Module
- Measure up to 1000 V
- Use as a standalone meter or as part of the system
- Record and save up to 65,000 readings
- Weight: 0.22 kg
- · Three year warranty

| AC Voltage         |            |                 |                         |  |
|--------------------|------------|-----------------|-------------------------|--|
| Range <sup>1</sup> | Resolution | Acc             | curacy <sup>2,3,4</sup> |  |
| nange              | resolution | 45 Hz to 500 Hz | 500 Hz to 1 kHz         |  |
| 6.000 V            | 0.001 V    |                 |                         |  |
| 60.000 V           | 0.01 V     | 1.0 % + 3       | 2.0 % + 3               |  |
| 600.0 V            | 0.1 V      | 1.0 % + 3       | 2.0 % + 3               |  |
| 1000 V             | 1 V        |                 |                         |  |

- $^1$  All AC voltage ranges are specified from 1 % of range to 100 % of range.  $^2$  Crest factor of  $\le 3$  at full scale up to 500 V, decreasing linearly to crest factor  $\le 1.5$  at 1000 V.  $^3$  For non-sinusoidal waveforms, add –(2 % of reading + 2 % full scale) typical, for crest factor up to 3.
- 4 Do not exceed 106 V-Hz.

Fluke v3001 FC







#### v3001 FC Wireless DC Voltage Module A fully functional DC Voltage Meter that wirelessly relays DC voltage

measurements to other Fluke Connect enabled master units.

- Measure up to 1000 V DC
- Use as a standalone meter or as part of the system
- Record and save up to 65,000 readings
- Weight: 0.255 kg
- · Three year warranty

| DC Voltage |          |            |            |
|------------|----------|------------|------------|
| Function   | Range    | Resolution | Accuracy   |
| mV DC      | 600.0 mV | 0.1 mV     | 0.09 % +3  |
|            | 6.000V   | 0.001 V    |            |
| MDG        | 60.00 V  | 0.01 V     | 0.09 % +3  |
| V DC       | 600.0 V  | 0.1 V      |            |
|            | 1000 V   | 1 V        | 0.15 % + 2 |

| a                              | 2000 77 / 2001 77  |
|--------------------------------|--|
| Specifications                 | v3000 FC / v3001 FC  |
| LCD w/backlight                | 3½ digits, 6000 counts, updates 4/sec  |
| Battery type                   | 2 AA, NEDA 15 A, IEC LR6   |
| Log rate/Interval              | Adjustable by PC from 1 sec to 1 hr, default 1 min   |
| Battery life                   | 400 hours  |
| Memory                         | Record up to 65000 readings  |
| RF communications              | 2.4 GHZ ISM Band   |
| RF communication range         | Open air, unobstructed: Up to 20 m, Obstructed, sheetrock wall: Up to $6.5\ m$ , Obstructed, concrete wall or steel electrical enclosure: Up to $3.5\ m$ |
| Operating temperature          | -10 °C to +50 °C   |
| Storage temperature            | -40 °C to +60 °C   |
| Temperature coefficient        | 0.1 X (specified accuracy)/°C (< 18 °C or > 28 °C)   |
| Operating humidity             | 90 % at 35 °C, 45 % at 40 °C, 45 % at 50 °C  |
| Altitude                       | Operating: 2,000 m, Storage: 12,000 m  |
| EMC                            | EN 61326-1:2006  |
| Safety compliance              | ANSI/ISA 61010-1 / (82.02.01): 3rd edition, CAN/CSA-C22.2 No 61010-1-12: 3rd edition, UL 61010-1: 3rd edition, IEC/EN 61010-1:2010                       |
| Safety rating                  | CAT IV 600 V, CAT III 1000 V   |
| Certifications                 | CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE  |
| Ingress Protection (IP) rating | IP42   |
| Pollution Degree               | 2  |
| Size (HxWxD)                   | 16.5 cm x 6.35 cm x 1.4 cm   |



#### **Recommended Accessories**





AC87 Heavy Duty Bus Bar Clip Set See page 141

AC220



PC ADAPTER Fluke Connect® Wireless PC Adapter See page 155

#### **Recommended Kits**

Buy more, Save more



#### Fluke Wireless v3000 FC **AC Voltage Kit**



Fluke Wireless v3001 FC DC Voltage Kit



Fluke Wireless v3003 FC **AC-DC Voltage Measurement** 

For more details see page 167

#### **Included Accessories**

v3000 FC: TL224 Test Leads, AC285 Alligator Clips, Magnetic Hanging

v3001 FC: TL222 Test Leads, AC220 Alligator Clips, Magnetic Hanging Strap

#### **Ordering Information**

FLK-V3000 FC Wireless AC Voltage Module

FLK-V3001 FC Wireless DC

Voltage Module

FLK-V3000 FC Wireless AC Voltage Kit

FLK-V3001 FC Wireless DC Voltage Kit

FLK-V3003 FC Wireless AC-DC Voltage Measurement Kit

# Fluke t3000 FC Wireless K-Type **Temperature Module**





Fluke t3000 FC



The Fluke t3000 FC Wireless K-Type Temperature Module is one member of a family of wireless test tools that let you share test data using the Fluke Connect® app with ShareLive™ video call.

Fluke Connect Wireless Test Tools put tools, not your body, near live electrical panels. It's simple. Connect the t3000 FC wireless temperature module, or any of the other Fluke Connect remote modules, and read the results on the Fluke Connect Wireless Multimeter or a portable PC from a safe distance. Better still, the Fluke Connect test tools can send measurement data to your smartphone, so you can save and share measurements from

#### the field with your team anytime, from anywhere. Using t3000 FC temperature modules, you can:

- Spot temperature differences between three phases in 1/3 the time of previous methods.
- Send data to your laptop and go from logging to analysis and diagnosis
- Record over time to monitor circuit load changes for an hour, a shift or a week
- Use the Fluke Connect wireless USB adapter to collect logged data from remote modules by walking past a working module and downloading logged data
- Perform for analysis with your PC and share the results using Fluke Cloud™ storage and ShareLive™ video call. View data or graphs to get input from team members
- Logging function: record up to 65,000 readings
- Three year warranty

| Specifications            | t3000 FC  |
|---------------------------|---|
| Range                     | K-type: -200 °C to 1000 °C (Temperature probe dependant)  |
| Resolution                | 0.1 °C  |
| Accuracy                  | ± [0.5 % + 0.3 °C] counts   |
| Input terminals           | K-type mini   |
| LCD w/backlight           | 3 ½ digits  |
| Log rate/interval         | 1 sec minimum/adjustable by PC and FC app on smart phone  |
| Battery type              | 2 AA, NEDA 15 A, IEC LR6  |
| Battery life              | 400 hours   |
| Memory                    | Record up to 65,000 readings  |
| RF communications         | 2.4 GHZ ISM Band  |
| RF communication range    | Open air, unobstructed: Up to 20 m, Obstructed, sheetrock wall: Up to 6.5 m, Obstructed, concrete wall or steel electrical enclosure: Up to 3.5 m |
| Operating temperature     | -10 °C to +50 °C  |
| Storage temperature       | -40 °C to +60 °C  |
| Temperature coefficient   | 0.01 % of reading +0.03 °C per °C   |
| Temperature scale         | ITS-90  |
| Operating humidity        | 90 % at 35 °C, 75 % at 40 °C, 45 % at 50 °C   |
| Altitude                  | Operating: 2,000 m, Storage: 12,000 m   |
| EMC                       | EN 61326-1:2006   |
| Safety compliance         | IEC 61010-1, CAT I, 3rd edition Pullution Degree 2  |
| Certifications            | CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE   |
| Ingress Protection rating | IP42  |
| Pullution Degree          | 2   |
| Size (HxWxD) and Weight   | 16.5 cm x 6.35 cm x 1.4 cm; 0.22 kg   |



#### Buy more, Save more



#### Fluke Wireless t3000 FC **Temperature Kit**

For more details see page 167



#### **Included Accessories**

80PK-1 K-Type Bead Thermocouple Magnetic Hanging Strap.

#### **Ordering Information**

FLK-T3000 FC Wireless K-Type

Temperature Module

FLK-T3000 FC

Wireless FC Temperature Kit

#### Fluke Connect® Accessories





Fluke Connect® ir3000FC Connector



#### Fluke Connect® ir3000 FC Connector

Connect your Fluke Test Tool with the ir3000 FC Connector and get all the benefits of the Fluke Connect mobile app. If you already have a Fluke 287/289 Digital Multimeter or Fluke 789 Process Tool in your tool box or tool belt or are considering purchasing one, add the ir3000 FC Connector so you can communicate with the Fluke Connect app.

- Fluke Connect ir3000 FC Connector allows you to wirelessly transfer data from your existing Fluke 287, 289 Digital Multimeters, Fluke 789 ProcessMeter™ and Fluke 1550C/1555 Insulation Resistance Testers to your smart phone
- Fits over the IR port of your existing Fluke tools
- Immediately enables you to graph, save, and share the tool's readings with your team from your smart phone
- · Identify and diagnose problems quickly and confidently
- Efficiently and safely capture real-time readings of the primary display from the field
- · Share results instantly with your team
- Upgradeable by USB
- Three year warranty

# Supported Fluke Tools:

DMMs: 287, 289Process Tool: 789, 787BInsulation: 1550C, 1555

#### Supported Smart Phones:

- Android<sup>™</sup> 4.4 & up
- iPhone® 4s & later



| Specifications         | ir3000 FC  |
|------------------------|--|
| Battery type           | Two AAA Alkaline batteries, ANSI-24A IEC-LRO3  |
| Battery life           | 6 hours of continuous transmission   |
| RF communications      | 2.4 GHz ISM Band   |
| RF communication range | Open air, unobstructed: Up to 20m<br>Obstructed, sheetrock wall: Up to 6.5m<br>Obstructed, concrete wall or steel electrical enclosure: Up to 3.5m |
| Temperature            | Operating: -10 °C to 50 °C<br>Storage: -20 °C to 60 °C   |
| Certifications         | CSA, FCC, CE, IC   |
| Size (HxWxL)           | 3.2cm x 7.6cm x 6.4cm  |
| Compatibility*         | Fluke 287, 289, 789, 1550C, 1555   |

\*At time of catalogue print, Fluke's ir3000 FC Connector is currently compatible with only the Fluke 287, 289 and 789 test tools. For updates on Fluke Connect test tool compatibility, go to www.fluke.com/au/connect.



Fluke Connect® PC Adapter



#### Fluke Connect® Wireless PC Adapter

Fluke 3000 FC Wireless Test Tools show real-time measurements from remote modules up to 20 metres away on your PC Fluke FC wireless test tools work together to help you troubleshoot faster.

The PC3000 FC Adapter and Software help you understand the information you measure. When you need to get information back to a PC the PC3000 FC Adapter and Software wirelessly collects up to 65,000 sets of time stamped MIN/MAX/AVG readings from FC remote modules. Software can display live readings from up to six modules simultaneously. Allows custom logging intervals and custom names for modules. Includes Windows SW3000 software.



#### **Recommended Accessories**



#### Fluke Connect Wireless SD Card

Wirelessly enable your Fluke Infrared Camera with the Fluke Connect™ Wireless SD card and you can instantly upload, share and analyse data from anywhere, with anyone on your team, at any time.

• The Wi-Fi SD Card is compatible with the following models: Former Ti models: Ti90, Ti95, Ti100, Ti105, Ti110, Ti125, TiR105, TiR110, TiR125. Current Ti models: TiX640, TiX660 and TiX1000.



#### See it. Save it. Share it. All the facts, right in the field.

Fluke Connect with ShareLive™ is the only wireless measurement system that lets you stay in contact with your entire team without leaving the field. The Fluke Connect mobile app is available for Android™ (4.3 and up) and iOS (4s and later) and works with over 50 different Fluke products—the largest suite of connected test tools in the world. There are more on the way; go to:

www.fluke.com/au/connect to find out more.

# Download the FREE Fluke Connect app at:





Smart phone not included with purchase

#### **Ordering Information**

FLUKE-IR3000 FC Fluke Connect®

ir3000 Connector

FLK-PC3000 FC Fluke Connect® Wireless PC Adapter

FLK-FC-SD CARD Fluke Connect®
Wireless SD Card



13

#### **DMM Selection Guide**

|   |                     | A decay             | Advanced Motore  |           | Mireless Meters    | Motore              | Indust              | Industrial Maintenance | nce                 |          |          | Commont Motor | , oto     |             | Aut          | e e                 | Inculation Tactore | paot.                                | 945                                  | Crossialty Matera        |                           |             |
|---|---------------------|---------------------|------------------|-----------|--------------------|---------------------|---------------------|------------------------|---------------------|----------|----------|---------------|-----------|-------------|--------------|---------------------|--------------------|--------------------------------------|--------------------------------------|--------------------------|---------------------------|-------------|
|   |                     |                     |                  |           |                    |                     | and Fie             | d Service M            | ters                |          |          | Tond Inco     |           |             | <u>~</u>     | Meters              |                    |                                      |                                      | tonal district           |                           |             |
| Models                                      | 87 V                | 87 V 87 V MAX       | 287              | 289       | 233                | 3000 FC             | 175                 | 17.7                   | 179                 | 110      | 113      | 114           | 115 11    | 116 HVAC    | 117          | 88V 1               | 1577 1587 FC       |                                      | 27 II 28                             | 28 II 28IIE              | 28IEX 279 FC              |             |
| Basic features                              |                     | 0000                |                  |           | 0000               | 0000                |                     |                        |                     |          | 0000     |               |           |             |              |                     | H                  |                                      |                                      |                          |                           |             |
| Counts                                      | 20000               | 20000               | 20,000           | 20000     | 0009               | 0009                | 0009                | 0009                   | 0009                | 0009     | 0009     | 0009          | 0009      | 0009        | 0009         | 9 00002             | 0009               | 9009                                 | N                                    | -                        | υ<br>                     |             |
| Basis DC aggreen                            | 008.00              | AC OC               | 0028             | 0075 06   | 0.25.06            | AC 000              | 0 15 06             | AC 00 00               | AC 00 00            | OR OF    | AC 00    |               | OR OF     | -5          | -5           |                     |                    | AC 0.1%                              | AC O S S                             | AC O                     | AC 0                      |             |
| AC bandwidth                                | 20 kHz              | 20 kHz              | 100 kHz          | 100 kHz   | 2 2 2 2            | 200                 | 2                   | 2000                   | 200                 | 2        | 2        | Н             | 2         | H           | H            |                     | Н                  | Н                                    | -                                    | Н                        |                           |             |
| Auto/manual ranging                         | <b>*</b>            | ÷                   | *                | <b>*</b>  | <b>*</b>           | <b>*</b>            | ·•                  | <b>*</b>               | <b>*</b>            | <b>*</b> | *        | ·•            | ·•        | *           | *            | ·•                  |                    | •                                    |                                      |                          | *                         |             |
| ATEX II 2G Eex ia IICT4 safety rating Z1/Z2 |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          |                           | )<br> <br>  |
| Measurements<br>Voltage AC/DC               | 1000 V              | V 0001              | V 0001           | V 0001    | 1000 V             | V 0001              | 1000 V              | V 0001                 | 1000 V              | V 009    | V 009    | V 009         | 009 A     | V 009       | 600 V 10     | 1000 V              | 1000 V 100         | 1000 V 100                           | V 0001 V 0001                        | V 0001 V                 | V 1000 V                  |             |
| Current AC/DC                               | 10 A                | 10 A                | 10 A             | 10 A      | 10 A               | 400 m A             | 10 A                | 10 A                   | 10 A                |          |          |               |           |             |              |                     |                    |                                      |                                      |                          |                           | _           |
|   |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           | -           |              |                     |                    |                                      | -                                    | -                        | _                         |             |
| Resistance                                  | 50 MO               | 50 MD               | 200 MO           | 200 MO    | 40 MΩ              | 50 MΩ               | 50 MO               | 50 MO                  | 20 MO               | 40 MΩ    | 60 kΩ    | 40 MO         | -         | -           | -            | -                   | 50 MO 50           | -                                    | -                                    | -                        | -                         |             |
| Frequency                                   | 200 kHz<br>9,999 µF | 200 KHZ<br>9,999 µF | 1 MHZ<br>1 pF to | 1 pF to   | 50 KHZ<br>9,999 µF | 100 kHz<br>9,999 µF | 100 KHZ<br>9,999 µF | 100 kHz<br>9,999 µF    | 100 kHz<br>9,999 µF |          | 9,999 µF | - 6           | 100 KHZ 1 | 9,999 µF 9. | 9,999 µF 9,9 | 200 KHZ<br>9,999 µF | 9,96               | 100 KHZ Z00 KHZ<br>9,999 µF 9,999 µF | 200 KHZ 200 KHZ<br>9,999 µF 9,999 µF | тнг 200 кнг<br>р. 999 рг | 1Z 100 KHZ<br>μF 9,999 μF |             |
|   |                     |                     | 100mF            | 100mF     |                    |                     |                     | Ī                      |                     | Ī        | Ī        |               |           |             |              |                     |                    |                                      |                                      | _                        |                           |             |
| Temperature                                 | -1090 °C            | 2, 060I+            | +1350°C          | +1350 °C  | +400 °C            |                     |                     |                        | +400 °C             |          |          |               | т         | +400 °C     |              |                     | +20                | 2, 00g+                              | 2-0601+                              | 2, 060I+ 2, 0            | ည                         |             |
| Conductance                                 | 50 nS               | 80 nS               | 50 nS            | 50 nS     |                    |                     |                     |                        |                     |          |          |               |           |             |              | 80 us               |                    | 09                                   | 80 09 Su 09                          | 80 ns                    | 70                        | 1           |
| Duty cycle/pulse width                      | ÷                   | -/•                 | <b>*</b>         | •         |                    |                     |                     |                        |                     |          |          |               |           |             | H            | •                   |                    | -/•                                  | H                                    | H                        | L                         |             |
| Continuity/diode test                       | •                   |                     | •                | •         | •                  | •                   | •                   | •                      | •                   | •        | •        | •             | •         | •           | •            | •                   | •                  | _                                    | •                                    | •                        | •                         |             |
| Motor Drive (ASD) Measurements              |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      | •                                    | •                        | •                         |             |
| VoltAlert™, non-contact voltage detection   |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             | •            |                     |                    |                                      |                                      |                          |                           | е           |
| VCHEK™                                      |                     |                     |                  |           |                    |                     |                     |                        |                     |          | •        |               |           |             |              |                     |                    |                                      |                                      |                          |                           |             |
| Microamps                                   |                     |                     |                  |           |                    |                     |                     | Ī                      |                     |          |          | •             |           |             | •            |                     |                    |                                      |                                      | •                        |                           |             |
| Insulation Test                             |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    | •                                    |                                      |                          |                           |             |
| Number of insulation test ranges            |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     | 2                  | 2                                    |                                      |                          |                           |             |
| Display                                     |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          |                           |             |
| Removable wireless display                  |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          |                           |             |
| Dual display                                |                     |                     | •                | •         |                    | •                   |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          |                           |             |
| Analog bargraph                             |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      | •                                    | •                        |                           |             |
|   | Two level           | Two level           | Two level        | Two level | •                  | •                   |                     | •                      | •                   | •        | •        | •             | •         | •           | •            | •                   |                    | • Two                                | Two level Two level                  | evel Two level           | vel .                     |             |
| Graphical trend display                     |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     | _                  |                                      |                                      | _                        | _                         |             |
| Min/Max recording with                      | =/•                 | =/•                 | */•              | •/•       | -/•                | -/•                 | -/•                 | /•                     | =/•                 | =/•      | -/•      | -/•           | -/•       | -/•         |              | -/•                 | _                  | -/•   -/•                            | _/•                                  | _/•                      | -/•                       |             |
| time stamp                                  |                     |                     |                  | . (       |                    |                     |                     |                        |                     |          |          |               |           |             |              | . :                 |                    |                                      |                                      | -                        |                           |             |
| Fast Min/Max                                | 250 µs              | 250 µs              | 250 µs           | 250 µs    | 7,0                | 9/0                 | 9/9                 | 7,                     | 9,0                 | _/•      | 7.       | -/-           | -/-       | 7           | 7            | 250 µs              |                    | - 7                                  | 250 µs                               | st 250 ps                | s                         |             |
| Relative reference                          |                     |                     |                  |           | 2/2                |                     |                     |                        | -                   | -/-      |          | -             | <u>.</u>  | -           | -            |                     |                    |                                      |                                      |                          | H                         |             |
| Stand alone logging                         |                     |                     | •                | •         |                    | (with app)          |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          | (with app)                | app)        |
| Trend Capture                               |                     |                     |                  |           |                    | (with app)          |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          | (with app)                | app)        |
| Readings memories                           |                     |                     | 10,000           | 10,000    |                    | (with app)          |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          | (with                     | app)        |
| USB interface                               |                     |                     | •                | •         |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          |                           |             |
| Real time clock                             |                     |                     | •                | •         |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      |                                      |                          |                           |             |
| Automatic selection, AC/                    |                     |                     |                  |           |                    |                     |                     |                        |                     |          |          |               |           |             |              | H                   |                    | H                                    | L                                    |                          | L                         |             |
| Closed case calibration                     |                     |                     | •                | •         | •                  | •                   |                     | •                      | •                   | •        | •        | •             | •         | •           | •            | •                   |                    |                                      |                                      | •                        | •                         |             |
| Separate battery/fuse access                | <u>+</u>            | *                   | <b>*</b>         | •         |                    |                     | <b>÷</b>            | ÷                      |                     |          |          |               |           |             |              |                     | •                  | •                                    | *                                    | -/•                      | Ŀ                         |             |
| Operating temperature range                 | -20°C,              | -40 °C,             | -20 °C,          | -20 °C,   | -10 °C,<br>+50 °C  | -10 °C,<br>+50 °C   | -10 °C,             | -10 °C,                | -10 °C,             | -10 °C,  | -10 °C,  | -10 °C,       | -10 °C,   | -10 °C,     | -10 °C,      |                     |                    | -40 °C,                              | °C, -40 °C,                          | °C, -15 °C,              | 7, -15°C,                 | ړ.<br>د د د |
| Warranty and electrical safety              | •                   |                     |                  |           |                    | 8                   | 200                 | 8                      | 8                   | 8        | -        | -             |           | -           |              |                     |                    |                                      | -                                    | -                        | -                         | o           |
| Input alert                                 |                     | •                   |                  | •         |                    |                     |                     |                        |                     |          |          |               |           |             |              |                     |                    |                                      | •                                    | •                        |                           |             |
| IP Rating                                   | IP30                | IP67                |                  |           |                    | IP54                |                     |                        |                     | IP42     | IP42     |               | IP42      |             | IP42         |                     |                    | IP67                                 | 7 IP67                               |                          |                           | IP40        |
| Safety rating (EN 61010) CAT III            | 1000 V              | 1000 V              | 1000 V           | 1000 V    | 1000 V             | 1000 V              | 1000 V              | 1000 V                 | 1000 V              | 009 A    | :        | 009 A         | 000 V     | 000 V       | 600 V 10     | _                   | 1000 V 100         | 1000 V 10C                           | -                                    | -                        | -                         | ΛΩ          |
| Sarety raung (EN 61010) CAT-1V              | ^ 009               | A 009               | ۸ ۵۵۹            | A 000     | A 0009             | ^ 009               | v 000               | ^ 009                  | ^ 009               |          | ^ 009    |               |           |             | ,            | v 009               |                    | 5                                    | v 000 v 000                          | ^ 009 / ^                | A 0009 /                  | >           |

www.fluke.com/au/dmm Digital Multimeters

#### Fluke 279 FC True-RMS Thermal Multimeter





Fluke 279 FC











#### Find. Repair. Validate. Report.

The industry first Fluke 279 FC is a full-featured digital multimeter with integrated thermal imaging and is designed to increase your productivity and confidence. The thermal multimeter helps you find, repair, validate, and report many electrical issues quickly so that you are confident problems are solved.

- Full-featured multimeter with built-in thermal imager
- 15 measurement functions including: AC voltage with lowpass filter, DC voltage, Resistance, Continuity, Capacitance, Diode test, Min/Max/Avg, AC current (with iFlex), Frequency
- · Thermal imaging reveals many electrical issues quickly and safely, eliminating the need for time-consuming testing and
- Two-in-one tool is designed to increase productivity no need to go back to the truck or office to retrieve a shared camera or wait for the thermographer- do more in less time
- · iFlex expands your measurement capabilities get into tight, hard to reach spaces for current measurement (up to 2500 A AC)
- Save measurements and images while communicating wirelessly with a smart phone up to 6.1 metres away (no obstructions)
- Rechargeable lithium ion battery allows for a for a full work day (10+ hours) under normal conditions
- Image resolution-80 x 60
- 3.5 in /8.89 cm colour LCD screen
- · CAT III 1000 V, CAT IV 600 V measurement category
- Three year warranty

| DMM                     |   |
|-------------------------|---|
| Basic DC accuracy       | 0.09%   |
| Bandwidth               | 1% 45 Hz to 65 Hz, full time low pass filter  |
| Voltage                 | AC/DC 1000 V  |
| Current AC              | iFlex Flexible Current Probe (included with the 279 FC/iFlex)                         |
| Resistance              | 50 ΜΩ   |
| Frequency               | 100 kHz   |
| Capacitance             | 9,999 µГ  |
| Continuity with beeper  | Yes   |
| Diode test              | Yes   |
| Min/Max recording       | Yes   |
| Display Hold            | Yes   |
| Infrared Camera         |   |
| Infrared resolution     | 80 x 60   |
| Image capture frequency | 8 Hz  |
| Field of View           | 36° (w) x 27° (h)   |
| NETD                    | ≤200 mK   |
| Infrared spectral band  | 7.5 to 14 microns   |
| Center point            | Yes (with center point temp)  |
| Focus mechanism         | Fixed focus   |
| Temperature Range       | -10 °C to 200 °C Accuracy: ±5 °C or (±5% as tested)                                   |
| Emissivity              | 0.95 fixed  |
| Background compensation | 20 °C fixed   |
| Memory storage          | Approximately 100 images (internal)   |
| File format             | Non-radiometric .is2  |
| Other                   |   |
| Battery type            | Rechargeable lithium-ion battery (charge time: 4.5 hours)                             |
| Operating temperature   | -10 °C to 50 °C   |
| Storage temperature     | -20 °C to 60 °C   |
| Relative humidity       | 0% to 90% (0 °C to 35 °C)<br>0% to 75% (35 °C to 40 °C)<br>0% to 45% (40 °C to 50 °C) |
| Altitude                | 2,000 meters (6,561 feet)   |
| Temperature coefficient | Add 0.1 x specified accuracy for each °C above 28 °C or below 18 °C                   |
| Ingress Protection      | (IP) IP40 (non-operating)   |
| Certifications          | CE, CSA, FCC  |
| Safety compliance       | IEC 61010-1: Pollution degree 2; IEC 61010-2-033: CAT III 1000 V/CAT IV 600 V         |
| EMC                     | EN 61326-1:2012   |
| Size                    | 215.9 x 93.9 x 57.1 mm  |
| Weight                  | 0.793 kg  |
| 9                       | <del> </del>  |

# **Recommended Accessories**







BC500 AC Power Charger



i2500-18

18 inch iFlex® Flexible Current Probe See page 29

BP500 Lithium-Ion Battery 3000 mAh battery



C280 Carrying Case See page 152



MC6 Fluke MeterCleaner™ Wipes See page 155

#### **Recommended Kits**

Buy more, Save more



#### Fluke 279FC I/B TRMS Combo Kit

For more details see page 168



#### **Included Accessories**

TL75 Test Leads, Rechargeable Lithium-ion Battery, Charger, 18-inch (45.72 cm) iFlex Flexible Current Probe, Hanging Strap, Soft Carrying Case.

279 FC I/B Kit also includes: Additional Lithium-ion Battery.

#### **Ordering Information**

iFlex

Fluke 279 FC/ TRMS Thermal Multimeter with iFlex

Fluke 279 FC

I/B Kit

TRMS Thermal Multimeter with iFlex and Extra **Battery Kit** 

# Fluke 3000 FC Wireless Digital Multimeter





Fluke 3000 FC









#### See it. Save it. Share it.

The Fluke 3000 FC True-RMS Wireless Multimeter and Fluke Connect® wireless test tools put tools, not your body, near live electrical panels. It's simple. Just de-energise the cabinet, open the panel while wearing PPE and connect the remote modules, whether they are voltage modules, current clamps, flexible current loops or thermometers. Then read the results on the3000 FC Wireless Multimeter from a safe distance. You can display the meter measurement, plus readings from up to 3 wireless modules, while reducing the risk of arc flash by separating yourself from hazardous measurement situations.

Better still, the Fluke 3000 FC Series Wireless Multimeter can send measurement data to your smartphone, so you can save and share measurements from the field with your team anytime, from anywhere.

# Other capabilities of Fluke Connect and the 3000 FC Multimeter.

- Connect to your PC with USB dongle (optional) for analysis and diagnosis in detail
- Perform for analysis with your smarthphone and the FC
   App and share the results using Fluke Cloud™ storage and
   ShareLive™ video call. View data or graphs to get input
   from team members

The Fluke 3000 FC Series Wireless Multimeter with the Fluke Connect app has all the essentials for convenient test and measurement troubleshooting.

- · AC and DC voltage measurements to 1000V
- AC and DC current with 0.01 mA resolution
- Continuity, resistance, diode test, capacitance and frequency measurements
- MIN/MAX Recording
- CAT III 1000 V, Cat IV 600 V; IP54
- · Three year warranty

| Functions                 | Range  | Basic Accuracy   |
|---------------------------|--|--|
| AC voltage                | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000V                       | 1.0 % + 3  |
| DC voltage                | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000V                       | 0.09 % + 2   |
| Continuity                | 600 Ω  | Meter beeps at $< 25 \Omega$ , beeper detects opens or shorts of 250 $\mu$ s or longer |
| Resistance                | 600 Ω, 600.0 Ω, 6.000 kΩ, 60.00 kΩ, 60.00 kΩ, 600.0 kΩ, 50.00 MΩ | 0.5 % + 1  |
| Diode test                | 2.000 V  | 1 % + 2  |
| Capacitance               | 1000 nF, 10.00 μF, 100.0 μF, 9999 μF <sup>1</sup>                | 1.2 % + 2  |
| mA AC (45 Hz to<br>1 kHz) | 60.00 mA, 400.0 mA <sup>3</sup>                                  | 1.5 % + 3  |
| mA DC <sup>2</sup>        | 60.00 mA, 400.0 mA <sup>3</sup>                                  | 0.5 % + 3  |
| Frequency                 | 99.99 Hz, 999.9 Hz, 9.999 kHz, 99.99 kHz                         | 0.1 % + 1  |

 $<sup>^1</sup>$  In the 9999  $\mu\text{F}$  range for measurements to 1000  $\mu\text{F},$  the measurement accuracy is 1.2 % + 2.

For all specifications: accuracy is specified for one year after calibration, at operating temperatures of 18  $^{\circ}$ C to 28  $^{\circ}$ C, with relative humidity at

0 % to 90 %. Accuracy specifications take the form of  $\pm$  ([ % of Reading ] + [ Number of least significant digits ]).

#### **Recommended Accessories**





TL238 SureGrip™ Test Lead Set See page 144

C35 Soft Carrying Case See page 152



PC ADAPTER
Fluke Connect®
Wireless PC Adapter
See page 155

#### **Recommended Kits**

Buy more, Save more

Fluke 3000 FC General Maintenance System

Fluke 3000 FC Industrial System

Fluke 3000 FC HVAC System

For more details see page 165

Fluke 3000 FC/1AC-II Wireless Multimeter and Non-Contact Voltage Detector Kit

Fluke 3000 FC/EDA2 Wireless Multimeter and Deluxe Accessories Combo Kit

Fluke 3000 FC/TPAK Wireless Multimeter and Magnetic Hanger Combo Kit

For more details see page 167

#### **Included Accessories**

TL175 Test Leads, AC175 Alligator Clips, Manual Information Pack.

#### **Ordering Information**

FLK-3000 FC FC Wireless Digital

Multimeter

FLK-3000 FC Wireless General

GM Maintenance Kit

FLK-3000 FC Wireless Industrial

IND System Kit

FLK-3000 FC Wireless HVAC HVAC System Kit

FLK-3000 FC Wireless Multimeter /1AC-II & Non-Contact

Voltage Detector

FLK-3000 FC Wireless Multimeter Deluxe Accessories

Combo Kit

FLK-3000 FC Wireless Multimeter

& Magnetic Hanger Combo Kit

Contact your local distributor for price and availability.
www.fluke.com/au/wtb

/TPAK

<sup>&</sup>lt;sup>2</sup> Input burden voltage (typical): 400 mA input 2 mV/mA.

 $<sup>^{\</sup>rm 3}$  400.0 mA accuracy specified up to 600 mA overload.

# Fluke 280 Series True-RMS Logging Multimeters





Fluke 289/FC

#### Find little problems before they become big

The Fluke 287/FC and 289/FC are the next generation in high performance industrial logging multimeters.

These high performance industrial logging multimeters are designed to solve complex problems faster in many applications. Log data and review it graphically on-screen to help minimise downtime.

Communicate wirelessly with your smart phone directly from the field with the Fluke Connect® app and get quick answers or next step authorisations faster than ever before. It's as simple as adding the Fluke ir3000 FC Connector to the standard Fluke 287 and 289 (connector sold separately).

- Large 50,000 count, 1/4 VGA dot matrix display with white backlight
- Logging function with expanded memory for unattended monitoring of signals over time. Using on-board TrendCapture, users can graphically review logged readings without needing a PC. Store up to 10,000 recorded events
- Save, name, and recall multiple logging sessions before PC download is necessary
- Field upgradeable and expandable meter lets you stay current as new capabilities are added.
- Two terminal 50 ohm range with 1 milliohm resolution, 10 mA source current. Useful for measuring and comparing differences in motor winding resistance or contact resistance (289/FC)
- Low-pass filter for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment (289/FC)
- · Limited lifetime manufacturer's warranty

| Features   | 287      | 289      |
|--|----------|----------|
| Multiple on screen displays                                    | •        | •        |
| True-RMS AC bandwidth  | 100 kHz  | 100 kHz  |
| dBV/dBm  | •        | •        |
| DC mV resolution   | 1 μV     | 1 μV     |
| Megohm range up to   | 500 MΩ   | 500 ΜΩ   |
| Conductance  | 50.00 nS | 50.00 nS |
| Continuity beeper  | •        | •        |
| Elapse time clock/time of day clock                            | •        | •        |
| Min/Max/Avg/duty cycle/pulse width                             | •        | •        |
| Isolated optical DMM interface with USB PC connection          | •        | •        |
| Auto/touch hold  | •        | •        |
| Over 200 hours logging capacity with new power saving function | •        | •        |
| Lo Ohm capability  | _        | •        |
| LoZ volts  | -        | •        |
| Lo Pass Filter   | _        | •        |

| Functions                     | Range  | Basic Accuracy                      |
|-------------------------------|--|-------------------------------------|
| AC volts or DC volts          | 50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0 V                                     | 0.025 %<br>0.4 %<br>(True-RMS) (AC) |
| AC current DC current         | 500.00 μA, 5000.0 μA, 50.000 mA, 400.00 mA, 5.0000 A, 10.000 A                                   | 0.15 %<br>0.7 %<br>(True-RMS)       |
| Temperature (excluding probe) | -200.0 °C to 1350.0 °C   | 1.0 %                               |
| Resistance                    | 50.000 Ω, $500.00$ Ω, $5.0000$ kΩ, $50.000$ kΩ, $500.00$ kΩ, $500.00$ MΩ, $500.0$ MΩ, $500.0$ MΩ | 0.05 %                              |
| Capacitance                   | 1.000 nF,10.00 nF, 100.0 nF, 1.000 μF, 10.00 μF, 100.0 μF, 1000 μF, 1000 mF                      | 1.0 %                               |
| Frequency                     | 99.999 Hz, 999.99 Hz, 9.9999 kHz, 99.999 kHz, 999.99 kHz   | .005 %                              |



#### **Recommended Kits**

Buy more, Save more

Fluke 287 FlukeView® Forms Combo Kit

Fluke 287 FlukeView® Forms Combo Kit with ir3000FC Connector

Fluke 289 FlukeView® Forms Combo Kit

Fluke 289 FlukeView<sup>®</sup> Forms Combo Kit with ir3000FC Connector

For more details see page 168

#### **Included Accessories**

TL175 Test Leads, AC175 Alligator Clips, Probe Holder, Six AA Batteries (installed), Calibration Certificate Sheet.

#### **Ordering Information**

| 0.409      |   |
|------------|---|
| FLUKE-287  | True-RMS Industrial<br>Logging Multimeter<br>with TrendCapture  |
| FLUKE-289  | True-RMS Electronics<br>Logging Multimeter<br>with TrendCapture |
| FLUKE-287/ | FlukeView Forms   |
| FVF Kit    | Combo Kit   |
| FLUKE-289/ | FlukeView Forms   |
| FVF Kit    | Combo Kit   |
| FLUKE-287/ | Industrial Logging  |
| FVF/IR3000 | Multimeter and  |
| Kit        | Software Combo Kit  |
| FLUKE-289/ | Industrial Logging  |
| FVF/IR3000 | Multimeter and  |
| Kit        | Software Combo Kit  |
| FLUKE      | Fluke Connect®  |
| IR3000 FC  | ir3000 Connector  |

# Fluke 83V, 87V & 87V MAX Digital Multimeters



# Performance and accuracy for maximum industrial productivity

Fluke 80-V Series is equipped with improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in plant automation, power distribution, and electro-mechanical equipment.

The Fluke 87V and new 87V Max offers a unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment. A built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument.

#### **Electrical safety**

All inputs are protected to CAT III 1000 V and CAT IV 600 V. They can withstand impulses in excess of 8,000 V to help protect you from arc blast resulting from surges and spikes. Limited lifetime manufacturer's warranty.

19998

Fluke 87V



| Features  | 83 <b>V</b> | 87V   | 87V MAX   |
|---|-------------|-------|-----------|
| True-RMS AC voltage and current for accurate measurements on non linear signals   | _           | •     | •         |
| Selectable filter for accurate voltage and frequency measurements on motor drives | -           | •     | •         |
| 6000 counts, 3-3/4 digits   | •           | •     | •         |
| 4-1/2 digit mode for precise measurements (20,000 counts)                         | -           | •     | •         |
| Measure up to 10 A, 20 A for up to 30 seconds                                     | •           | •     | •         |
| Built in thermometer lets you carry one less tool (TC probe included)             | -           | •     | •         |
| Frequency to 200 kHz and % duty cycle   | •           | •     | •         |
| Resistance, continuity and diode test   | •           | •     | •         |
| 10,000 $\mu\text{F}$ capacitance range for components and motor caps              | •           | •     | •         |
| Min/Max-Average recording with Min/Max Alert to capture variations automatically  | •           | •     | •         |
| Battery Life with Backlight off   | 400         | hours | 800 hours |

| Functions                 | <b>-</b>   | Basic Accuracy |                     |  |
|---------------------------|--|----------------|---------------------|--|
| runctions                 | Range  | 83V            | 87V 87 MAX          |  |
| DC volts                  | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V                | 0.1 %          | 0.05 %              |  |
| AC volts                  | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V                | 0.5 %          | 0.7 %<br>(True-RMS) |  |
| DC current                | 600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A    | 0.4 %          | 0.2 %               |  |
| AC current                | 600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A    | 1.2 %          | 1.0 %<br>(True-RMS) |  |
| Temperature (excl. probe) | -200 °C to 1090 °C   | _              | 1.0 %               |  |
| Temperature<br>Probe      | -40 °C to 260 °C   | _              | 2.2 °C or 2 %       |  |
| Resistance                | 600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50.00 MΩ  | 0.4 %          | 0.2 %               |  |
| Capacitance               | 10.00 nF, 100.0 nF, 1.000 μF, 10.00 μF, 100.0 μF, 9,999 μF | 1.0 %          | 1.0 %               |  |
| Frequency                 | 199.99 Hz, 1.9999 kHz, 19.999 kHz, 199.99 kHz              | 0.005 %        | 0.005 %             |  |







For more details see page 168

#### **Included Accessories**

TL175 Test Leads, AC175 Alligator Clips, Yellow Holster (H80M excl. TPAK), 80BK-A Temperature Probe (87V/MAX only), 9 V Battery Installed (83V and 87V Only), Three AA Batteries Installed (87V MAX only), User Manual and Technical Notes.

#### **Ordering Information**

| FLUKE-83V         | Industrial Multimeter                     |
|-------------------|---|
| FLUKE-87V         | True RMS Industrial<br>Multimeter         |
| FLUKE-87V<br>/E2  | Industrial Electrician<br>Combo Kit       |
| FLUKE-87V<br>-MAX | 87V Max True RMS<br>Industrial Multimeter |
|                   |   |

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#### Fluke 88V Automotive Multimeter



Fluke 88V









#### The right meter for auto-electric diagnosis

The Fluke 88V Automotive Multimeter is the most powerful automotive multimeter ever offered by Fluke. In addition to having all standard multimeter features like the ability to measure voltage, current, continuity, and resistance, the 88V can perform diode test and pulse width measurements.

This meter can take current measurements up to 20 A for 30 seconds and 10 A continuously. The optional magnetic hanger lets you attach the meter to most steel surfaces for easy set-up and viewing. The 88V is designed to be used in high energy environments like those found on hybrid vehicles.

- 0.1 % DC accuracy
- 4-1/2 digit mode for precise measurements (20,000 counts)
- Measure up to 1000 V AC and DC
- Current measurements up to 10 A, 20 A for up to 30 seconds
- Built-in thermometer for temperature measurements when you need them (temperature probe included)
- · Resistance, continuity and diode test
- RPM measurements with inductive pickup (included)
- Millisecond pulse width measurements for fuel injectors
- Magnetic hanger to attach meter to the vehicle and free your hands for other tasks
- Min/Max/Average recording with Min/Max Alert to capture variations automatically
- Peak Min/Max to record transients as fast as 250 μs
- Relative mode to remove test lead resistance from low ohms measurements
- · Auto and manual ranging for maximum flexibility
- Autohold™ to capture stable readings with only one touch of the leads
- Large display digits and two-level bright white backlight for increased visibility
- · Analogue bar-graph to track changing or unstable signals
- Input Alert provides audible warning against wrong use of input jacks
- Limited lifetime manufacturer's warranty

| Specifications          | 88V   |
|-------------------------|---|
| DCV                     | Maximum Voltage: 1000 V<br>Accuracy: Fluke 88 V: ± (0.1 % + 1)<br>Best Resolution: Fluke 88 V: 0.01 mV                        |
| ACV                     | Maximum Voltage: 1000 V<br>Accuracy: Fluke 88 V: ± (0.5 % + 2)<br>AC Bandwidth: Fluke 88 V: 5 kHz<br>Best Resolution: 0.01 mV |
| DC Current              | Maximum Amps: 10 A<br>Amps Accuracy: Fluke 88 V: ± (0.4 % + 2)<br>Best Resolution: Fluke 88 V: 0.001 mA                       |
| AC Current              | Maximum Amps: 10 A Amps Accuracy: Fluke 88 V: ± (1.2 % + 2) Best Resolution: 0.001 mA   |
| Resistance              | Maximum Resistance: 50 M $\Omega$ Accuracy: Fluke 88 V: $\pm$ (0.4 % + 1) Best Resolution: 0.1 $\Omega$                       |
| Capacitance             | Maximum Capacitance: 9,999 μF<br>Accuracy: ± (1 % + 2)<br>Best Resolution: 0.01 nF  |
| Frequency               | Maximum Frequency: 200 KHz<br>Accuracy: ± (0.005 % + 1)<br>Best Resolution: 0.01 Hz   |
| Duty Cycle              | Maximum Duty Cycle: 99.9 %<br>Accuracy: within 2 % per KHz + 0.1 %<br>Best Resolution: 0.1 %                                  |
| Temperature Measurement | -200.0 °C to 1090 °C, 1.0 % excluding probe   |
| 80BK Temperature Probe  | -40 °C to 260 °C, 2.2 °C or 2 % whichever is greater  |
| Conductance             | Maximum Conductance: 60.00 nS<br>Accuracy: ± (1.0 % + 10)<br>Maximum Resolution: 0.01 nS                                      |
| Operating Range         | Operating Temperature: -20 °C to 55 °C<br>Storage Temperature: -40 °C to 60 °C  |
| Size and Weight         | 5.2 cm x 9.8 cm x 20.1 cm, 624 g  |



#### **Included Accessories**

High-impact Holster, Test Leads, User Manual and Quick Reference Guide.

#### **Ordering Information**

FLUKE-88-5

Automotive Multimeter

FLUKE-88-5/A KIT

Automotive Multimeter Combo Kit

## Fluke 170 Series Digital Multimeters

Versatile meters for field service or bench repair



Fluke 179

LIFETIME

The three models of the Fluke 170 Series True-RMS Digital Multimeters (179,177,175) have the features needed to find most electrical, electro-mechanical and heating and ventilation problems. They are simple to use and have significant improvements over Fluke's standards, and a much larger display that's easier to view.

- · True RMS voltage and current measurements
- 0.09% basic accuracy (177, 179)
- 6000 count resolution
- Digital display with analog bargraph and backlight (177, 179)
- Manual and automatic ranging
- Display Hold and Auto Hold
- Frequency and capacitance measurements
- Resistance, continuity and diode measurements
- Temperature measurements (179)
- Min-max-average recording
- Smoothing mode allows filtering of rapidly changing inputs
- Easy battery exchange without opening the case
- Closed case calibration through front panel
   Ergonomic case with integrated protective holster
- EN61010-1 CAT III 1000V / CAT IV 600V
- Measures twice as fast as other multimeters
- Battery life: 200 hours typical for alkaline.
- Size (HxWxL): 4.3 cm x 9.0 cm x 18.5 cm
- Limited lifetime manufacturer's warranty



Fluke 177



Fluke 175

**Electrical safety** 

All inputs are protected to measurement CAT III 1000 V and CAT IV 600 V. These meters can withstand transient impulses in excess of 8000 V to help protect you from arc blasts resulting from surges and spikes.

| Features   | 179    | 177    | 175    |
|--|--------|--------|--------|
| Max voltage AC/DC                                      | 1000   | 1000   | 1000   |
| True-RMS   | •      | •      | •      |
| Temperature  | •      | _      | _      |
| Basic DC accuracy                                      | 0.09 % | 0.09 % | 0.15 % |
| Backlight  | •      | •      | -      |
| Min/Max/Avg  | •      | •      | •      |
| Compatible with ToolPak™ meter hanging kit with magnet | •      | •      | •      |
| Limited lifetime warranty                              | •      | •      | •      |

| Functions                  | Range   | Best accuracy                         |
|----------------------------|---|---------------------------------------|
| DC voltage                 | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V               | ± 0.09 % (177 and 179) ± 0.15 % (175) |
| AC voltage <sup>1</sup>    | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V               | ± 1.0 % of reading                    |
| DC current                 | 60.00 mA, 400.0 mA, 6.000 A, 10.00 A <sup>2</sup>         | ± 1.0 % of reading                    |
| AC current <sup>2</sup>    | 60.00 mA, 400.0 mA, 6.000 A, 10.00 A <sup>2</sup>         | ± 1.5 % of reading                    |
| Resistance                 | 600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50.00 MΩ | ± 0.9 % of reading                    |
| Capacitance                | 1000 nF, 10.00 μF, 100.0 μF, 9999 μF                      | ± 1.2 % of reading                    |
| Frequency <sup>3</sup>     | 99.99 Hz, 999.9 Hz, 9.999 Hz, 99.99 kHz                   | ± 0.1 % of reading                    |
| Temperature<br>(Model 179) | -40 °C to +400 °C   | 1.0 % of reading                      |

<sup>&</sup>lt;sup>1</sup> All AC voltage and AC current ranges are specified from 5 % of range to 100 % of range.

#### **Recommended Accessories**





TPAK Magnetic Meter Hanger See page 154

TL81A
Deluxe Electronic
Test Lead Set
See page 144





**TL175** TwistGuard™ Test Leads See page 140

**I410** AC/DC Current Clamp See page 150





AC220 SureGrip™ Alligator Clips See page 141

**TP220** SureGrip™ Industrial Test Probes See page 141





FOM Fiber Optic Meter See page 155







C35 Soft Carrying Case See page 152

CAMO C25 Camouflage Carrying Case See page 152

#### **Recommended Kits**

Buy more, Save more



Fluke 179/EDA2 Industrial Digital Multimeter Combo Kit

For more details see page 168

#### **Included Accessories**

Test Leads with 4mm Lantern Tips, 9V Battery (installed) and User Manual, 80BK Temperature Probe (179 only).

#### **Ordering Information**

FLUKE-175

True RMS Digital Multimeter

FLUKE-177

True RMS Digital Multimeter

FLUKE-179

True RMS Digital Multimeter

FLUKE-179/ EDA2 Electronic's Combo Kit

<sup>&</sup>lt;sup>2</sup> 10 A continuous, 20 A for up to 30 seconds.

 $<sup>^3</sup>$  Voltage frequency is specified from 2 Hz to 100 kHz. Current frequency is specified from 2 Hz to 30 kHz.

# Fluke 233 Remote Display Digital Multimeter





Fluke 233

The Fluke 233 Remote Display Digital Multimeter allows you to be in two places at once. The removable display solves several problems. First, you no longer have to hold both the meter and the test leads to make a measurement. It also allows you to measure where the measurement point is separated from controls or where the operator can't stay close to the meter during measurements due to various hazards or moving machinery.

- Wireless technology allows the display to be carried up to 9.1 metres away from the point of measurement for added flexibility
- The removable magnetic display can be conveniently mounted where it is easily seen
- Low-power 802.15.4 wireless technology does not interfere with measurement accuracy
- Use as a conventional multimeter when the display is connected
- True-RMS AC voltage and current
- Built-in thermometer
- Auto power off maximises battery life (400 hours)
- Radio transmitter automatically turns off when the display is connected to the meter
- Record signal fluctuations using the Min/Max function
- · Three year warranty











| Features   | 233                        |
|--|----------------------------|
| Removable magnetic display   | •                          |
| True-RMS measurement   | •                          |
| Digital display counts   | 6000                       |
| Display backlight  | •                          |
| Built in thermometer   | •                          |
| Resistance, continuity and diode test  | •                          |
| Min/Max and average recording  | •                          |
| Auto power off maximises battery life  | •                          |
| Radio transmitter automatically turns off when the display is connected to the meter | •                          |
| Use as conventional multimeter when the display is connected                         | •                          |
| Safety rating  | CAT IV 600V/CAT III 1000 V |
| Auto and manual ranging  | •                          |
| Display Hold and AutoHold®   | •                          |
| Unsafe voltage alert warns for voltages above 30V                                    | •                          |
| 2 Low batteries indication   | •                          |
| Ergonomic case with integrated holster   | •                          |
| Selectable sleep mode preserves battery life   | •                          |

| Specifications |          |   |  |
|----------------|----------|---|--|
| DC voltage     | Range    | 0.1 mV to 1000 V  |  |
|                | Accuracy | 0.25 % + 2  |  |
| AC voltage     | Range    | 0.1 mV to 1000 V  |  |
|                | Accuracy | 1.0 % + 3   |  |
| DC current     | Range    | 0.001 A to 10 A   |  |
|                | Accuracy | 1.0 % + 3   |  |
| AC current     | Range    | 0.001 A to 10 A   |  |
|                | Accuracy | 1.5 % + 3   |  |
| Resistance     | Range    | 0.1 Ω to 40 MΩ  |  |
| Capacitance    |          | 1000 nF to 9999 μF                                      |  |
| Frequency      |          | 0.1 Hz to 50.00 kHz                                     |  |
| Temperature    |          | -40 °C to +400 °C                                       |  |
| Power          |          | 3 AA batteries main body, 2 AA batteries display module |  |
| Battery life   |          | 400 hours   |  |
| Compliance     |          | CAT IV 600 V , CAT III 1000 V                           |  |
| Size (HxWxL)   |          | 5.3 cm x 5.3 cm x 19.3 cm                               |  |
| Weight         |          | 604 g   |  |



#### **Included Accessories**

Test Leads with 4mm Lantern Tips, AC175 Alligator Clips, 80BK-A Temperature Probe, CD, AA Batteries and User Manual.

#### **Ordering Information**

FLUKE-233

Remote Display Digital Multimeter

# Fluke 110 Series True-RMS **Digital Multimeters**



Fluke 117











#### **Dependable Digital Multimeters for Electrical and HVAC purposes**

All the models in the Fluke 110 Series are True-RMS Multimeters with a large 3-1/2 digit / 6,000 count display. The Fluke 117 includes integrated VoltAlert™ non-contact voltage detector and LoZ ghost voltage detector features to get the job done faster. The Fluke 116 is the HVAC/R Multimeter with temperature, microamps, and LoZ to quickly troubleshoot problems with HVAC/R equipment. The Fluke 115 is a compact meter for a wide variety of electrical/electronic testing applications, while the Fluke 114, 113 and 110 are basic electrical troubleshooting meters designed for "go/no-go" testing.

- VoltAlert<sup>™</sup> technology for integrated non-contact voltage detection (117)
- AutoVolt feature for automatic AC/DC voltage selection (117, 116, 114)
- Built in thermometer for HVAC applications (116)
- Microamps to test flame sensors (116)
- VCHEK<sup>™</sup> LoZ low impedance measurement function to simultaneously test for voltage/continuity (113)
- LoZ: Low input impedance prevents false readings due to "ghost voltage" (117, 116, 114)
- Large display and white LED backlight to work in poorly lit areas more effectively
- Three year warranty

| Specifications   | 117 | 115 | 113 | 110 |
|--|-----|-----|-----|-----|
| VoltAlert™ detector                                    | •   | _   | _   | _   |
| AutoVolt/LoZ   | •   | _   | LoZ | _   |
| Analogue bargraph                                      | •   | •   | •   | •   |
| True-RMS for accurate measurements on non-linear loads | •   | •   | •   | •   |
| Min/Max recording                                      | •   | •   | •   | •   |
| Display hold   | •   | •   | •   | •   |
| 3-1/2 digits   | •   | •   | •   | •   |
| 6000 counts  | •   | •   | •   | •   |
| CAT III 600 V safety rated                             | •   | •   | •   | •   |
|  |     |     | 116 | 114 |
| Temperature  |     |     | •   | _   |
| Microamps  |     |     | •   | _   |
| Frequency  | •   | _   |     |     |
| Capacitance  | •   | _   |     |     |
| Diode test   | •   | _   |     |     |
| AutoVolt/LoZ   | •   | •   |     |     |
| Analogue bargraph                                      | •   | •   |     |     |
| True-RMS for accurate measurements o                   | ads | •   | •   |     |
| Min/Max recording                                      |     | •   | •   |     |
| Display hold   |     |     | •   | •   |
| 3-1/2 digits   |     |     | •   | •   |
| 6000 counts  |     |     | •   | •   |
|  |     |     |     |     |

| Functions     | 117                  | 116                  | 115                  | 114              | 113              | 110              |
|---------------|----------------------|----------------------|----------------------|------------------|------------------|------------------|
| AC/DC voltage | 600 V                | 600 V                | 600 V                | 600 V            | 600 V            | 600 V            |
| AC/DC current | 10 A                 | 600.0 μΑ             | 10 A                 | -                | -                | -                |
| Resistance    | 40 MΩ                | 40 MΩ                | 40 MΩ                | 40 MΩ            | 60 kΩ            | 40 ΜΩ            |
| Capacitance   | 9,999 μF             | 9,999 μF             | 9,999 μF             | -                | 9,999 μF         | -                |
| Diode test    | •                    |                      | •                    | -                | •                | -                |
| Frequency     | 5 Hz to<br>99.99 kHz | 5 Hz to<br>99.99 kHz | 5 Hz to<br>99.99 kHz | -                | -                | -                |
| Temperature   |                      | +400 °C              |                      | -                | -                | -                |
| Safety rating | CAT III<br>600 V     | CAT III<br>600 V     | CAT III<br>600 V     | CAT III<br>600 V | CAT III<br>600 V | CAT III<br>600 V |







TL175 TwistGuard™ Test I See page 140

80PK-27 SureGrip™ Industrial Surface Probe (Fluke 116) See page 146

#### **Recommended Kits**

Buy more, Save more



#### Fluke 116/323 HVAC Combo Kit



#### IB117K FLUKE 117 Multimeter + **Insulated Hand Tools Starter Kit**

For more details see page 170

#### **Included Accessories**

TL75 Test Leads, Holster, 80BK **Integrated Temperature Probe** (116), User's Manual and 9 V Battery (installed).

#### **Ordering Information**

| Ordering init          | oi mation   |
|------------------------|---|
| FLUKE-110              | Basic True RMS<br>Digital Multimeter                                      |
| FLUKE-113              | Utility True RMS<br>Digital Multimeter                                    |
| FLUKE-114              | Electrical True RMS<br>Digital Multimeter                                 |
| FLUKE-115              | True RMS Digital<br>Multimeter  |
| FLUKE-116              | HVAC True RMS<br>Digital Multimeter                                       |
| FLUKE-117              | Adv. Electrical<br>True RMS Multimeter                                    |
| FLUKE-116/323          | HVAC and Clamp<br>Meter Combo Kit   |
| FLUKE-116/<br>62 MAX + | HVAC Multimeter<br>and Infrared<br>Thermometer Kit                        |
| FLUKE-117/323          | Electrical Combo Kit  |
| IB117K                 | 117 Multimeter +  |
| 62 MAX + FLUKE-117/323 | HVAC Multimeter<br>and Infrared<br>Thermometer Kit<br>Electrical Combo Ki |

**Insulated Hand Tools** 

21

Starter Kit

# Fluke 27 II, 28 II and 28 IIEx **Industrial IP67 Digital Multimeters**



are designed for tough work environments. All three meters have IP 67 waterproof and dustproof rating. They both have an extended operating temperature range of -15 °C to + 55 °C and 95 %

The 27 II, 28 II and 28 IIEx-AU Digital Multimeters

- · Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment (28 II, 28 IIEx)
- Built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument (28 II, 28 IIEx)
- Hi-resolution 20,000 count display mode (28 II,
- Resistance and continuity. Relative mode to remove test lead resistance from low ohms measurements
- Large digit display with bright, two-level backlight
- Backlit keypad buttons allow for easy visibility in low-lit areas
- Optional magnetic hanger for easy setup and viewing freeing your hands for other tasks
- Intrinsically safe certifications from the world's leading certification bodies (28 IIEx)
- Limited lifetime manufacturer's warranty















| Features  | 27 II | 28 II | 28 II Ex |
|---|-------|-------|----------|
| Tested to withstand a 3 m drop  | •     | •     | •        |
| Wide 1000 V measurement range   | •     | •     | •        |
| True-RMS AC voltage and current for accurate measurements on non-linear signals | _     | •     | •        |
| Low pass filter   | -     | •     | •        |
| Temperature   | _     | •     | •        |
| Average responding voltage and current measurements                             | •     | -     | -        |
| 10 A continuous (20 A for 30 seconds)   | •     | •     | •        |
| Frequency and capacitance   | •     | •     | •        |
| Record signal fluctuations using the Min/Max function                           | •     | •     | •        |

|             | 27 II  | 28 II                        | 28 II Ex  |  |  |
|-------------|--|------------------------------|---|--|--|
| Range       |  | 0.1 mV to 1000 V             |   |  |  |
| Accuracy    | 0.05 % +1  | 0.05 % + 1                   | 0.05 % + 1  |  |  |
| Range       |  | 0.1 mV to 1000 V             |   |  |  |
| Accuracy    | 0.5 % +3   | 0.7 % +4                     | 0.7 % +4  |  |  |
| Range       |  | 0.1 μA to 10 A               |   |  |  |
| Accuracy    | 0.2 % + 4  | 0.2 % + 4                    | 0.2 % + 4   |  |  |
| Range       |  | 0.1 μA to 10 A               |   |  |  |
| Accuracy    | 1.5 % + 2  | 1.0 % + 2                    | 1.0 % + 2   |  |  |
| Range       |  | $0.1~0$ to $50~M\Omega$      |   |  |  |
|             | 6000   | 6000/19,999                  | 6000/19,999   |  |  |
|             | 1 nF to  | 9999 μF                      | 10 nF to 9999 μF  |  |  |
| Frequency   |  | 0.5 Hz to 199.99 kHz         |   |  |  |
| Temperature |  | -200 °C to +1090 °C          | -200 °C to +1090 °C   |  |  |
| ment on     |  | Yes                          | Yes   |  |  |
| Compliance  |  | CAT IV 600 V, CAT III 1000 V |   |  |  |
|             | Avg. responding  | True-RMS                     | True-RMS  |  |  |
|             |  | Two AAA batteries            |   |  |  |
|             | 800 1  | nours                        | 400 hours   |  |  |
|             | 6.3  | 5 cm x 10.0 cm x 19.81       | cm  |  |  |
|             |  | 698.5 g                      |   |  |  |
| <i>!</i>    | Accuracy Range Accuracy Range Accuracy Range Accuracy Range Accuracy Range | Accuracy                     | CACT IV 600 V, CAT III 1000 Avg. responding   True-RMS   Two AAAA batteries   S00 hours   CACT IV 600 V Cm x 19.81   Cacmacy   Cacmac |  |  |

#### **Specialty Models**

#### Fluke 28 IIEx-AU **Intrinsically** Safe True-ŘMS Multimeter

CAT III 1000V/CAT IV 600V electrical safety rating



















See page 135 for more information.

#### **Recommended Accessories**





TLK-225

Magnetic Meter Hanger See page 154





PV350 Pressure-Vacuum Module See page 155







CXT80 Extreme Hard Case See page 153

Meter Case See page 152





TI.175 TwistGuard™ Test Leads See page 140

12000 FLEX AC Current Clamp Test Lead Kit See page 148

#### **Included Accessories**

TL175 Test Leads, AC175 Alligator Clips, 80BK-A Temperature Probe (28 II), Holster, User Manual, and Three AA Batteries (installed).

#### **Ordering Information**

FLUKE-27II

Industrial Multimeter

FLUKE-28II

Industrial Multimeter

Multimeter

FLUKE-28IIEx/AU

**Intrinsically Safe** Industrial

Contact your local distributor for price and availability.

www.fluke.com/au/wtb

# Fluke 77IV Digital Multimeter



Fluke 77IV

# Versatile multimeter for field service or bench repair

The Fluke 77IV Digital Multimeter has the features needed to repair most electrical and electronic problems. This meter is simple to use and has significant improvements over Fluke's original 70 Series with more measurement functions, conformance to the latest safety standards, and a much larger display that is easier to view.

- · Wide 1000 V measurement range
- Average responding AC measurements
- 0.3 % accuracy
- 10 amps continuous
- Frequency and capacitance
- · Resistance and continuity
- · Large display
- Backlight for work in dim areas
- Min/Max to record signal fluctuations
- Integral holster with probe holders
- Free your hands with the optional TPAK magnetic hanger
- Auto and manual ranging
- Battery Life: 400 hours typical
- Weight: 0.42 kg
- Size (HxWxD): 185 mm x 90 mm x 43 mm
- Limited lifetime manufacturer's warranty









| Function    | Maximum   | Max. resolution | Accuracy  |
|-------------|-----------|-----------------|-----------|
| Voltage DC  | 1000 V    | 1 mV            | ±(0.3%+1) |
| Voltage AC  | 1000 V    | 1 mV            | ±(2.0%+2) |
| Current DC  | 10 A      | 0.01 mA         | ±(1.5%+2) |
| Current AC  | 10 A      | 0.01 mA         | ±(2.5%+2) |
| Resistance  | 50 ΜΩ     | 0.1 Ω           | ±(0.5%+1) |
| Capacitance | 9,999 μF  | 1 nF            | ±(1.2%+2) |
| Frequency   | 99.99 kHz | 0.01 Hz         | ±(0.1%+1) |

Accuracies are best accuracies for each function.

#### **General Specifications**

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 °C to 28 °C, with relative humidity at 0 % to 90 %. Accuracy specifications take the form of  $\pm [[$  % of Reading ] + [ Counts ]).

| Specifications  | 77IV  |
|---|---|
| V Maximum voltage between any terminal and earth ground | 1000 V  |
| Surge protection  | 8 kV peak per IEC 61010   |
| W Fuse for mA input                                     | 440 mA, 1000 V FAST Fuse  |
| W Fuse for A input                                      | 11 A, 1000 V FAST Fuse  |
| Display   | Digital: 6,000 counts, updates 4/sec  |
| Bar Graph   | 33 segments, updates 32/sec   |
| Frequency   | 10,000 counts   |
| Capacitance   | 1,000 counts  |
| Operating altitude                                      | 2,000 metres  |
| Storage altitude  | 12,000 metres   |
| Operating temperature                                   | -10 °C to + 50 °C   |
| Storage temperature                                     | -40 °C to + 60 °C   |
| Temperature coefficient                                 | 0.1 X (specified accuracy/°C (< 18 °C or > 28 °C)   |
| Electromagnetic compatibility (EN 61326-1:1997)         | In an RF field of 3 V/M, accuracy = specified accuracy except in temperature: specified accuracy ± 5 °C                   |
| Relative humidity (maximum non-condensing)              | 90 % to 35 °C; 75 % to 40 °C; 45 % to 50 °C   |
| Battery life  | 400 hours   |
| Size (HxWxL) and Weight                                 | 185mm x 90mm x 43mm; 420 grams  |
| Safety compliance                                       | ANSI/ISA S82.02.01, CSA C22.2-1010.1, IE<br>61010 to 1000 V Measurement Category III,<br>600 V<br>Measurement Category IV |
| Certifications  | CSA, TÜV (EN61010), UL, [], (N10140), VDE   |

# Recommended Accessories 1400 AC Current Clamp See page 148 TPAK Magnetic Meter Hanger See page 154 TL225 SureGrip™ Stray Voltage Adapter Test Lead Kit See page 144 TLK-225 SureGrip™ Master Accessory Kit See page 144

#### **Included Accessories**

Test Leads with 4mm Lantern Tips, 9V Battery (installed), Manual Information Pack.

#### **Ordering Information**

FLUKE-77-4 Digital Multimeter

# Fluke PRV240 and PRV240FS Proving Units



#### Fluke PRV240 Proving Unit

The Fluke PRV240 Proving Unit is a portable, pocket-sized, battery-powered voltage source. It is unique in that it sources stable AC and DC voltages for both LoZ and HiZ instruments.

- Sources both AC and DC steady-state voltage supplies 240 V DC/AC
- A single LED indicates functionality, making this unit a simple-to-use solution for verification of your test tool
- Compatible with both high impedance or low impedance multimeters, clamp meters or two pole testers
- Voltage is sourced through recessed contacts that are activated when tested probes are inserted to avoid accidental contact
- Includes Magnetic Hanging Strap
- Long battery life 5,000 tests per set of four AA batteries
- One year warranty



#### Fluke PRV240FS Proving Unit

The Fluke PRV240FS Proving Unit is specifically built to prove the functionality of the FieldSense measurement on the Fluke T6 Electrical Testers. It also provides AC and DC voltages for other HiZ instruments in your tool box.

- Reduces the risk of shock and arc flash by validating the functionality of test tools without placing yourself in a potentially hazardous electrical environment
- Can prove functionality of the FieldSense measurement on the T6 Electrical Testers
- Sources both AC and DC steady-state voltage—supplies 240 V DC/AC
- A single switch and a set of LEDs indicate functionality of both the FieldSense "no-test-lead" voltage measurement capability, plus standard AC and DC measurements with test leads
- Compatible with high impedance multimeters or clamp meters
- Voltage is sourced through a central hub designed to test the T6 FieldSense open fork, as well as through recessed contacts that are activated when test probes are inserted to avoid accidental contact
- Long battery life 2,000 tests per set of four AA batteries
- One year warranty



Fluke PRV240 FS

| Specifications        | PRV240  | PRV240FS   |
|-----------------------|---|--|
| Output voltage        | 240 V AC RMS or DC $\pm$ 10 % $\geq$ 1 MΩ LoZ >3 kΩ load  | 240 V AC RMS or DC<br>± 10 % ≥ 1 MΩ                          |
|                       | 60 V AC typical<br>50 V AC RMS minimum  |  |
| LED power indicator   | Turns on when output voltage is present   | Turns on when output voltage present                         |
| Battery               | 4 AA Alkaline batteries NEDA<br>24 A IEC LR03   | 4 x AA Alkaline batteries NEDA<br>15 A IEC LR6               |
| Battery life          | 5000 (5-second duration) test cycles with >1 M $\Omega$ load, 300 tests minimum with >3 k $\Omega$ load | 2000 (10–second duration) test cycles with >1 $M\Omega$ load |
| Operating temperature | -10 °C to +50 °C  | -10 °C to +50 °C   |
| Operating altitude    | 2000 m  | 2000 m   |
| Dimensions            | 11.7 cm x 7.4 cm x 2.8 cm,<br>Pollution Degree 2  | 11.7 cm x 7.4 cm x 4.5 cm                                    |
| Weight                | 0.23 kg includes batteries  | 0. 32 kg includes batteries                                  |
| Safety                | IEC61010-1, IEC61010-2-030  | IEC61010-1, IEC61010-2-030                                   |





# Fluke T6-1000 + PRV240FS Proving Unit Kit

For more details see page 169

#### Fluke PRV240/FS Applications





#### **Included Accessories**

TPAK Hanging Strap, Four AA Batteries, Instruction Sheet.

#### **Ordering Information**

PRV240 Proving Unit
PRV240FS Proving Unit

**T6-1000** T6-1000 & PRV240FS / PRV240FS Proving Unit Kit

# Fluke 8846A, 8845A and 8808A Precision Bench Multimeters



Fluke 8846A



Fluke 8845A



Fluke 8808A





#### Fluke 8846A/8845A 6.5 Digit Precision Multimeters

These digital multimeters perform the functions you would expect to see in a multifunction DMM, including measuring volts, ohms and amps. Basic V DC accuracy of up to 0.0024 %, 10 A current range, and a wide ohms range give you an unbeatable combination of measurement capability.

Extend the meters' utility even more with their graphical display modes, including Trendplot™ paperless recorder mode, statistics and histograms—features you won't find on other multimeters

- 6.5 digit resolution
- Up to 0.0024 % accuracy
- Graphical analysis modes: TrendPlot, Histogram and Statistics
- Dual measurement inputs: front/rear
- Dual measurement display
- Wide measurement ranges
- IEEE, LAN, RS-232 interfaces
- USB memory device port (8846A)
- TL2X4 wire measurement technique
- 17025 accredited report of calibration included
- · Three year warranty

#### Fluke 8808A 5.5 Digit Multimeter

The Fluke 8808A multimeter has a broad range of functions, measuring volts, ohms and amps with a basic V DC accuracy of 0.015 %. The meter is easy to use and include innovative functions to simplify routine testing and precision 4 wire resistance measurements.

- 5.5 digit resolution
- Up to 0.015 % accuracy
- Dual measurement display
- Sensitive DC leakage current ranges
- Front panel setup keys
- TL2X4 wire measurement technique
- Three year warranty

| Specifications                                  | 8808A   | 8845A  | 8846A  |  |
|---|---|--|--|--|
| Display   | Dual  | Dual, gr                                       | raphical   |  |
| Resolution (digits)                             | 5.5   | 6.   | .5   |  |
| Measurements                                    | V AC, V DC, I DC, I AC, Ω,<br>Cont, Diode                 | V AC, V DC, I DC, I                            | AC, Ω, Cont, Diode   |  |
| Basic V DC accuracy<br>(% Reading + %<br>Range) | 0.015 + 0.003   | 0.0035 + 0.0005                                | 0.0024 + 0.0005  |  |
| Advanced<br>measurements/<br>functions          | 2x4 wire ohms, freq,<br>i-Leakage<br>dedicated setup keys | 2x4 wire ohms, freq,<br>period                 | 2x4 wire ohms, freq,<br>period, capacitance,<br>temp (RTD) |  |
| Math  | Null, dBm, dB, Min, Max                                   | Null, dBm, dB, Min, Max,                       | Ave, Std Deviation, MX+B                                   |  |
| Analysis  | Limit Compare   | Limit Compare, TrendPlot, Histogram, Statistic |  |  |
| USB memory device port                          | No  | No   | Yes  |  |
| Interfaces                                      | RS-232, USB via optional adapter                          | RS-232, IEEE-488.2, LAN                        | , USB via optional adapter                                 |  |
| Safety rating                                   | CAT I 1000 V, CAT II<br>600 V                             | CAT I 1000 V                                   | . CAT II 600 V   |  |

#### **Recommended Accessories**



TL2X4W-TWZ 2x4-Wire Ohms Tweezers Test Leads

TL2X4W-PTII 2x4-Wire Ohms Test Lead



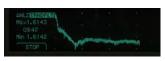


Y8846D Rack Mount Kit Dual

884X-CASE Molded Plastic Case

#### **Sample Screens**

#### Fluke 8846A/8845A



Built-in TrendPlot graphically plots extent of drift and intermittent events.



Critical measurement statistics are conveniently displayed together.

#### **Included Accessories**

LCI Line Power Cord, Test Lead Set, Spare Line Power Fuse, Programmers Manual/ User Manual on CD-ROM, 884X-USB USB to RS232 Cable Adapter, FVF-BASIC FlukeView® Forms Software Basic Version.

#### **Ordering Information**

**FLUKE 8808A** 5.5 Digit Multimeter

FLUKE 8808A/SU 5.5 Digit Multimeter

(Software + Cable)

**FLUKE 8845A** 6.5 Digit Precision

Multimeter

FLUKE 8845A/SU 6.5 Digit Precision

Multimeter (Software + Cable)

**FLUKE 8846A** 6.5 Digit Precision

Multimeter

FLUKE 8846A/SU 6.5 Digit Precision

Multimeter (Software + Cable)

Calibration & Service Agreement units also available.





# Clamps Selection Guide

# Clamp Meters

| 1  |  | Residen                        | Residential/Commercial Electrical | ectrical                       |                   | General Purnose                | Irnose                              |                                 | Industrial Electrical                  | lectrical                              | HVAC/R              | High-End Industrial Iltility                    | strial Iltility                                 | Leakade                           | Wireless            | SSS                            |
|--|--|--------------------------------|-----------------------------------|--------------------------------|-------------------|--------------------------------|-------------------------------------|---------------------------------|--|--|---------------------|---|---|-----------------------------------|---------------------|--------------------------------|
| 1  | Fluke Clamp Meters                             | 323                            | 324                               | 326                            | 298               | 373                            | 34 476                              | 376 PC                          | 276 PC                                 | 281                                    | 24 200              | 283   | 388   | 24 09c/24 89c                     | 23000 50            | 23001 PC                       |
| 1  | Measurements                                   | 923                            | 324                               | 223                            | 5005              | 515                            | 21410                               | 31310                           | 21916                                  | 100                                    | 302 10              | ccc   | 666   | 2695/21995                        | asonoric            | 43001 FC                       |
| 1  | AC current                                     | •                              | •                                 | •                              | •                 | •                              |                                     | ٠                               | •                                      | •                                      | •                   | •   | •   | •                                 | •                   | •                              |
| The control of the co | AC voltage                                     |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| The control of the co | Resistance                                     | •                              | •                                 | •                              | •                 | •                              | •                                   | •                               | •                                      | •                                      | •                   |   | •   |                                   |                     |                                |
| Company   Comp   | Continuity                                     | •                              |                                   | •                              |                   | •                              |                                     | •                               |  |  |                     |   |   |                                   |                     |                                |
| The contract of the contract o | DC volts                                       | •                              | •                                 | •                              | •                 | •                              | •                                   | •                               |  |  | •                   |   |   |                                   |                     |                                |
| 1  | De cultem                                      | •                              |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| Part      | True-KWS                                       | •                              | •                                 | •                              | •                 | •                              | •                                   | •                               | •                                      | •                                      | •                   | •   | •   | •                                 | •                   | •                              |
| Control   Cont   | Frequency                                      |                                |                                   | •                              |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| Part      | AC + DC voltage                                |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   | •   |                                   |                     |                                |
| A control both   A co   | AC + DC current                                |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| Company   Comp   | Min/Max/Avg                                    |                                |                                   | •                              |                   |                                | •                                   | •                               | •                                      | •                                      | •                   | •   | •   |                                   |                     |                                |
| Part      | 4-20 mA (0.01 mA resolution)                   |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| Part      | Temperature                                    |                                | •                                 | •                              |                   |                                |                                     |                                 |  |  | •                   |   |   |                                   |                     |                                |
| Particle    | Capacitance                                    |                                |                                   |                                |                   | •                              |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
|  | Measurement logging                            |                                |                                   |                                |                   |                                |                                     | •                               | •                                      |  |                     |   |   | •                                 | •                   | •                              |
|  | Special Features                               |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
|  | Inrush current mode                            |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
|  | Low Pass filter for VFD's                      |                                |                                   |                                |                   |                                |                                     | •                               | •                                      |  |                     |   | •   |                                   |                     |                                |
|  | 18-inch (45.7 cm) iFlex Flexible Current Probe |                                |                                   |                                |                   |                                | Optional                            | Optional                        | Included                               | Included                               |                     |   |   |                                   |                     | Included                       |
| 1   1   1   1   1   1   1   1   1   1  | Remote display                                 |                                |                                   |                                |                   |                                | in phone app                        | in phone app                    | in phone app                           | •                                      | in phone app        |   |   | in phone app                      | in phone app        | in phone app                   |
| 1   1   1   1   1   1   1   1   1   1  | Wireless                                       |                                |                                   |                                |                   |                                | •                                   | •                               | •                                      |  |                     |   |   | •                                 | •                   |                                |
| 1.15      | Display  |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| 30 mm    30 mm    30 mm    1.18 mm    1.18 mm    1.28 mm    3.8 mm    3.9 mm    3.0    | Display hold                                   | •                              | •                                 | •                              | •                 | •                              | •                                   | •                               | •                                      | •                                      | •                   | •   | •   | •                                 | in phone app        | in phone app                   |
| y         30 mm         130 mm   | Backlight                                      |                                | •                                 | •                              | •                 | •                              | •                                   | •                               | •                                      | •                                      | •                   | •   | •   | •                                 | •                   |                                |
| 11.18   11.1   | Graphing display                               |                                |                                   |                                |                   |                                | in phone app                        | in phone app                    | in phone app                           |  | in phone app        |   |   | in phone app                      | in phone app        | in phone app                   |
| 300 mm²   300    | Specifications                                 |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| CRMS         300 mm²         300 mm²         300 mm²         400 mm²         4   | Jaw opening                                    | 30 mm<br>(1.18 in)             | 30 mm<br>(1.18 in)                | 30 mm<br>(1.18 in)             | 18 mm<br>(0.7 in) | 32 mm<br>(1.26 in)             | 34 mm<br>(1.33 in)                  | 34 mm<br>(1.33 in)              | 34 mm<br>(1.33 in)                     | 34 mm<br>(1.33 in)                     | 30 mm<br>(1.2 in)   | 58 mm<br>(2.3 in)                               |   | 40 mm (1.5 in)/<br>61 mm (2.4 in) | 34 mm<br>(1.33 in)  | 254 mm<br>(10 in) coil         |
| CEMAS         Our 4000 AA         Our 4000 AA         Our 4000 AA         Our 4000 AA         Our 6000 AA <t< td=""><td>Max wire size</td><td>300 mm<sup>2</sup></td><td>300 mm<sup>2</sup></td><td>300 mm<sup>2</sup></td><td>17 mm (0.67 in)</td><td>400 mm<sup>2</sup></td><td>400 mm<sup>2</sup></td><td>400 mm<sup>2</sup></td><td>400 mm<sup>2</sup></td><td>400 mm<sup>2</sup></td><td>300 mm<sup>2</sup></td><td>400mm<sup>2</sup> or<br/>3x 240 mm<sup>2</sup></td><td>400mm<sup>2</sup> or<br/>3x 240 mm<sup>2</sup></td><td></td><td>400 mm<sup>2</sup></td><td></td></t<>  | Max wire size                                  | 300 mm <sup>2</sup>            | 300 mm <sup>2</sup>               | 300 mm <sup>2</sup>            | 17 mm (0.67 in)   | 400 mm <sup>2</sup>            | 400 mm <sup>2</sup>                 | 400 mm <sup>2</sup>             | 400 mm <sup>2</sup>                    | 400 mm <sup>2</sup>                    | 300 mm <sup>2</sup> | 400mm <sup>2</sup> or<br>3x 240 mm <sup>2</sup> | 400mm <sup>2</sup> or<br>3x 240 mm <sup>2</sup> |                                   | 400 mm <sup>2</sup> |                                |
| True-RMS   15 %   15    | Current range AC RMS                           | 0 to 400.0 A                   | 0 to 40.00 A/<br>400.0 A          | 0 to 40.00 A/<br>400.0 A       | 0 to 200.0 A      | 0 to 600.0 A                   | 0 to 600.0 A<br>(2500 A with iFlex) | _                               | 0 to 999.9 A<br>(2500 A with<br>iFlex) | 0 to 999.9 A<br>(2500 A with<br>iFlex) | 0 to 600.0 A        | 0 to 1400 A                                     | 0 to 1400 A                                     | 0 to 60 A                         | 0 to 400A           | 0 to 2500A                     |
|  | Accuracy AC current (50/60 Hz)                 | 2 %<br>± 5 counts              | 2 %<br>± 5 counts                 | 2 %<br>± 5 counts              | 2 %<br>± 5 counts | 2 %<br>± 5 counts              | 2 %<br>± 5 counts                   | 2 %<br>± 5 counts               | 2 %<br>± 5 counts                      | 2 %<br>± 5 counts                      | 2 %<br>± 5 counts   | 1.5 %<br>± 5 counts                             | 1.5 %<br>± 5 counts                             | 1 %<br>± 5 counts                 | 2 %<br>± 5 counts   | 3 %<br>± 5 counts              |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $  | AC Response                                    | True-RMS                       | True-RMS                          | True-RMS                       | True-RMS          | True-RMS                       | True-RMS                            | True-RMS                        | True-RMS                               | True-RMS                               | True-RMS            | True-RMS  | True-RMS  | True-RMS                          | True-RMS            | True-RMS                       |
| Figure   F   | Current range DC                               |                                |                                   | 0 to 40.00 A/<br>400.0 A       | 0 to 200 A        |                                | 0 to 600.0 A                        | 0 to 600.0 A                    | 0 to 999.9 A                           | 0 to 999.9 A                           | 0 to 200 µA         | 0 to 2000 A                                     | 0 to 2000 A                                     |                                   |                     |                                |
| C   C   C   C   C   C   C   C   C   C  | Accuracy DC current                            |                                |                                   | 2 %<br>± 5 counts              | 2 %<br>± 5 counts |                                | 2 %<br>± 5 counts                   | 2 %<br>± 5 counts               | 2 %<br>± 5 counts                      | 2 %<br>± 5 counts                      | 1 %<br>± 5 counts   | 1.5 %<br>± 5 counts                             | 1.5 %<br>± 5 counts                             |                                   |                     |                                |
| 1.5 %   1.5    | Voltage range AC                               | 0 to 600.0 V                   | 0 to 600.0 V                      | 0 to 600.0 V                   | 0 to 600.0 V      | 0 to 600.0 V                   | 0 to 1000 V                         | 0 to 1000 V                     | 0 to 1000 V                            | 0 to 1000 V                            | 0.009               |   | 0 to 600.0 V                                    |                                   |                     |                                |
| C   C   C   C   C   C   C   C   C   C  | Accuracy AC voltage                            | 1.5 %<br>± 5 counts            | 1.5 %<br>± 5 counts               | 1.5 %<br>± 5 counts            | 2 %<br>± 5 counts | 1 %<br>± 5 counts              | 1.5 %<br>± 5 counts                 | 1.5 %<br>± 5 counts             | 1.5 %<br>± 5 counts                    | 1.5 %<br>± 5 counts                    | 1 %<br>± 5 counts   |   | 1 %<br>± 5 counts                               |                                   |                     |                                |
| 1.0 %   1.0    | Voltage range DC                               | 0 to 600.0 V                   | 0 to 600.0 V                      | 0 to 600.0 V                   | 0 to 600.0 V      | 0 to 600.0 V                   | 0 to 1000 V                         | 0 to 1000 V                     | 0 to 1000 V                            | 0 to 1000 V                            | 0 to 600.0 V        |   | 0 to 1000 V                                     |                                   |                     |                                |
| Parameter angle   Parameter    | Accuracy DC voltage                            | 1.0 %<br>± 5 counts            | 1.0 %<br>± 5 counts               | 1.0 %<br>± 5 counts            | 2 %<br>± 5 counts | 1 %<br>± 5 counts              | 1 %<br>± 5 counts                   | 1 %<br>± 5 counts               | 1 %<br>± 5 counts                      | 1 %<br>± 5 counts                      | 1 %<br>± 5 counts   |   | 1 %<br>± 5 counts                               |                                   |                     |                                |
| STACLEY         S. D. D. D. D. L. D. S. D. H.Z.         S. D. D. D. H.Z.         S. D. D. D. D. D. H.Z.         S. D. D. D. D. H.Z.         S. D.  | Resistance range                               | 0 to 4000 Ω                    | 0 to 4000 n                       | 0 to 40 kΩ                     | 0 to 6000Ω        | 0 to 6000 n                    | 0 to 6000 Ω                         | 0 to 6000 n                     | 0 to 60 kΩ                             | 0 to 60 kΩ                             | 0 to 9999 Ω         |   | 0 to 400 kΩ                                     |                                   |                     |                                |
| STACKY   2   | Frequency measurement range                    |                                |                                   | 5 Hz to 500 Hz                 |                   |                                |                                     | 200 Hz                          | 200 Hz                                 | 500 Hz                                 |                     | 5 to 1000 Hz                                    | 5 to 1000 Hz                                    | 40 to 1000 Hz                     |                     |                                |
| 3   3   3   3   3   3   3   3   3   3  | Warranty and Safety                            |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |
| CAT IV 300 V, CAT IV 300 V, CAT III 600 V CAT IV 600  | Warranty (years)                               | 2                              | 2                                 | 2                              | 3                 | 3                              | 3                                   | 3                               | 8                                      | 3                                      | 3                   | 3   | 3   | 1                                 | 3                   | е                              |
|  | Safety rating (EN 61010)                       | CAT IV 300 V,<br>CAT III 600 V | CAT IV 300 V,<br>CAT III 600 V    | CAT IV 300 V,<br>CAT III 600 V | CAT III 600 V     | CAT III 600 V,<br>CAT IV 300 V |                                     | CAT III 1000 V,<br>CAT IV 600 V | CAT III 1000 V,<br>CAT IV 600 V        | CAT III 1000 V,                        |                     | CAT III 1000 V,<br>CAT IV 600 V                 | CAT III 1000 V,<br>CAT IV 600 V                 |                                   |                     | CAT III 1000 V<br>CAT IV 600 V |
|  | Fluke Connect                                  |                                |                                   |                                |                   |                                |                                     |                                 |  |  |                     |   |   |                                   |                     |                                |

# Fluke 381 Remote Display True-RMS AC/DC Clamp Meter with iFlex™



Fluke 381









#### The world's most advanced clamp meter

The Fluke 381 True-RMS AC/DC Clamp Meter combines iFlex flexibility with remote reading capability for the ultimate in innovation and safety. Now one technician can do jobs that would otherwise require two people. Clamp the Fluke 381 around a conductor, remove the display and walk across the room to operate controls or remove protective equipment, all while watching real-time readings.

The iFlex™ Flexible Current Probe (included) expands the measurement range to 2500 A AC while providing increased display flexibility. With a cord that runs 6 feet, you can finally measure those tight spaces, awkward sized conductors and disorganised wires.

- Remote display reads measurements up to 9.1 metres away
- iFlex Flexible Current Probe included, 18 inch circumference
- 2500 A AC current measurement with iFlex
- 999.9 A AC and DC current measurement with fixed jaw
- 1000 V AC and DC voltage measurement
- Frequency measurement to 500 Hz
- $60 \text{ k}\Omega$  resistance measurement
- Min/Max/Avg and inrush recording
- CAT IV 600 V, CAT III 1000 V
- Three year warranty

# Fluke 365 Detachable Jaw True-RMS AC/DC Clamp Meter



Fluke 365









#### Where rugged meets reliable

The Fluke 365 True-RMS AC/DC Clamp Meter offers a small, detachable jaw with 1.2 metres of coil that makes it easy to take and read measurements in tight or hard-to-reach places.

- 200 A AC and DC current measurement with detachable jaw
- 600 VAC and DC voltage measurement
- Detachable jaw makes accessing wires and viewing the display easier
- Built in flashlight/torch allows for easy illumination and identification of wires
- CAT III 600 V
- Compact design fits in your hand and can be used while wearing protective equipment
- State of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement
- · Three year warranty

See detailed specifications chart on page 27.



#### **Included Accessories**

18-inch iFlex™ Flexible Current Probe (Fluke 381 only), Test Leads, Soft Carrying Case, Instruction Card, Safety Information Sheet, Two AA Alkaline Batteries.

#### **Ordering Information**

FLUKE 381

Remote Display True-RMS AC/DC Clamp Meter with iFlex™

FLUKE 365

Detachable Jaw True-RMS AC/DC Clamp Meter

## Fluke 370 Series Clamp Meters





## Fluke 376 FC with iFlex™







#### Be ready for anything

The Fluke 370 Series of True-RMS Clamp Meters provides a range of state of-the-art features to meet even the most demanding job requirements.

All four of the clamp meters have improved base features such as a large, backlit display, true-RMS standard, CAT IV safety rating and a durably constructed body. Additionally, the 376 FC, 375 FC and 374 FC are a part of the Fluke Connect® family of wireless test tools and are compatible with the iFlex™ Flexible Current Probe (included with the 376 FC, sold separately for the 375 FC and 374 FC), and provide increased measurement readings to 1000 A and 1000 V AC and DC. Three year warranty.



Fluke 375 FC Fluke 374 FC Fluke 373

| Functions                   | Range        | 373              | 374 FC             | 375 FC             | 376 FC          |
|-----------------------------|--------------|------------------|--------------------|--------------------|-----------------|
| Current AC                  | 0 to 600.0 A | 2% ± 5<br>counts | 2% ± 5<br>counts   | 2% ± 5<br>counts   | -               |
|                             | 0 to 999.9 A | -                | -                  | -                  | 2% ± 5 counts   |
| Current DC                  | 0 to 600.0 A | -                | 2% ± 5<br>counts   | 2% ± 5<br>counts   | -               |
|                             | 0 to 999.9 A | -                | -                  | -                  | 2% ± 5 counts   |
| Voltage AC                  | 0 to 600.0 V | 1% ± 5<br>counts | 1.5% ± 5<br>counts | 1.5% ± 5<br>counts | 1.5% ± 5 counts |
| Voltage DC                  | 0 to 600.0 V | 1% ± 5<br>counts | 1% ± 5<br>counts   | 1% ± 5<br>counts   | -               |
|                             | 0 to 1000 V  | -                | -                  | -                  | 1% ± 5 counts   |
| Resistance range            | -            | 0 to 6000 Ω      | 0 to 6000 Ω        | 0 to 6000 Ω        | 0 to 60 kΩ      |
| Jaw opening                 | -            | 32 mm            | 34 mm              | 34 mm              | 34 mm           |
| Max. wire size              | -            | 750 MCM          | 750 MCM            | 750 MCM            | 750 MCM         |
| Frequency measurement range | _            | _                | _                  | 500 Hz             | 500 Hz          |

#### Fluke iFlex™ Flexible Current Probe



#### **Unprecedented measurement flexibility**

The iFlex Flexible Current Probe expands the measurement range of select Fluke Clamp Meters to 2500 A AC while providing increased display flexibility, improved wire access and the ability to measure awkward-sized conductors. Available in 18 inch and 10 inch coil sizes.

- Compatible to Fluke 374 FC, 375 FC, 376 FC and 381
- CAT IV 600 V, CAT III 1000 V
- 7.5 mm coil diameter allows measurement in tight spaces
- 1.8 m cable
- Three-year warranty

Visit www.fluke.com/au/clamps for additional specifications.

#### **Recommended Accessories**





**TL223-1**SureGrip™ Electrical
Test Lead Set
See page 144

**TL224** SureGrip™ Silicone Insulated Test Leads See page 141





**TL175** TwistGuard™ Test Leads See page 140

AC285 SureGrip™ Alligator Clips See page 141





**12500-18** 18 inch iFlex™ Flexible Current Probe See page 29

C43 Small Soft Case See page 152

#### Fluke Connect® Enabled



The Fluke 376 FC, 375 FC, and 374 FC are a part of the Fluke Connect family of wireless test

- Trend measurements, pinpoint intermittent faults and transmit results wirelessly by connecting your meter to your phone via Fluke Connect Measurements app
- Create and send reports right from the field
- Stay safely away from the arc flash zone through Bluetooth connectivity

#### **Included Accessories**

18-inch iFlex™ Flexible Current Probe (Fluke 376FC only), Test Leads, Soft Carrying Case, Instruction Card, Safety Information Sheet, Two AA Alkaline Batteries.

#### **Ordering Information**

FLUKE 373 True-RMS AC Clamp Meter

FLUKE 374 FC True-RMS AC/DC FC Clamp Meter

FLUKE 375 FC True-RMS AC/DC FC Clamp Meter

FLUKE 376 FC True-RMS AC/DC

FC Clamp Meter with iFlex™

**i2500-10 iFlex™** Flexible Current Probe 25 cm

**i2500-18 iFlex™** Flexible Current Probe 45 cm

# Fluke 902 FC True-RMS HVAC **Clamp Meter**





Fluke 902 FC







#### Improve productivity in the field

The Fluke 902 FC delivers the features necessary to diagnose and repair HVAC systems. Additionally, with Fluke Connect® you can trend measurements, create and send reports right from the field, safely stay away from live equipment.

#### **Applications for HVAC**

- 200 µA DC current measurements to measure flame rod
- Extended resistance range to measure thermistors up to 60kΩ
- Capture flue gas temperature
- Measure start and run motor capacitors
- Measure performance of variable frequency drives
- Temperature measurement from -10 °C to 400 °C
- 1000 μF capacitance measurement
- CAT III 600V, CAT IV 300V safety rating
- Three year warranty

| Functions              | Range                  | Resolution      | Accuracy   |
|------------------------|------------------------|-----------------|--|
| A AC (via Jaw)         | 60/600 A               | 0.01/0.1 A      | 2.0 % ± 5 digit (45-65 Hz)<br>2.5 % ± 5 digit (65-400Hz) |
| VAC                    | 600 V                  | 0.1 V           | 1.5 % ± 5 digit (45-400Hz)                               |
| V DC                   | 600 V                  | 0.1 V           | 1 % ± 5 digits   |
| Ohms                   | 600/6,000<br>/60,000 Ω | 0.1/1/10        | 1 % ± 5 digits   |
| μA                     | 200 μΑ                 | 0.1 μΑ          | 1 % ± 4 digits   |
| Contact<br>Temperature | 10 to 400 °C           | 0.1 C/F         | 1 % ± 8 digits   |
| Capacitance            | 100.0/1000μF           | 0.1/1 <b>μF</b> | 1 % +/- 4 digits   |
| Continuity Beep        | per                    |                 |  |
| Beep Volume            | 75 dBA nom. 15         | cm from case    | front  |
| On Threshold           | <=30 Ω                 |                 |  |

# **Recommended Accessories** Fluke 902 FC **AC220** SureGrip™ Alligator Clips See page 141 SureGrip™ Insulated Test Leads See page 141 80PK 8 80AK-A Pipe Clamp Temperature Probe See page 146 Thermoo ocouple Ada ee page 146 TPAK C781 Magnetic Hanging Strap See page 154

# Fluke 368 FC/369 FC AC True-RMS **Leakage Current Clamp Meter**

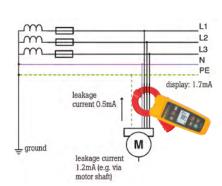
# Inn Fluke 369 FC

### Measure leakage current to track small problems, avoid large problems

The Fluke 360 Series of True-RMS Leakage Current Clamp Meters help users detect, document, record and compare leakage current readings over time as a means of preventing unplanned downtime, and identifying intermittent GFCI and RCD trips, without taking equipment offline.

- True-RMS measurements for accuracy when measuring complex, non-sinusoidal waveforms
- Jaw size: 40 mm (368 FC) and 61 mm (369 FC)
- Current resolution 1  $\mu$ A/0.01 mA and 0.01 A/0.1 A
- Frequency range 40 Hz to 1 kHz
- Selectable filter 40 Hz to 70 Hz or wideband 40 Hz to 1 kHz
- Highest resolution of 1  $\mu\text{A}\text{,}$  measure up to 60 A
- Forward-facing LED worklight for use in dark wiring cabinets
- Backlit display; auto backlight off and auto power off for extended battery life.
- Wireless data connectivity via Fluke Connect
- CAT III 600V safety rating
- Three year warranty

| Specifications       |  |
|----------------------|--|
| Measurement Function | Alternating current  |
| AC Ampere Range      | 3 mA, 30 mA, 300 mA, 3 A, 30 A, 60 A   |
| Range Selection      | mA A: manual selection<br>3 mA, 30 mA, 300 mA: automatic selection<br>3 A, 30 A, 60 A: automatic selection |
| Frequency            | 40 Hz to 1 kHz   |
| Crest Factor         | Three  |



#### **Included Accessories**

Fluke 902 FC: TL75 Test leads, 80BK Integrated DMM Temperature Probe, Two AA Alkaline Batteries, Soft Carrying Case, Statement of Calibration Practices and User

Fluke 368 FC/369 FC: Soft Case, Two AA Batteries, Safety Manual.

#### **Ordering Information**

FLUKE 902 FC HVAC Clamp Meter

FLUKE 368 FC AC Leakage Current Clamp Meter

FLUKE 369 FC AC Leakage Current Clamp Meter

Contact your local distributor for price and availability.

www.fluke.com/au/wtb

Fluke 368 FC

# Fluke 320 Series True-RMS Clamp Meters



Fluke 325









#### Go to work with the best

True-RMS measurements and optimised ergonomics make the Fluke 320 Series True-RMS Clamp Meters the best general troubleshooting tools for commercial and residential electricians. The 323, 324 and 325 are designed to verify the presence of load current, AC voltage and continuity of circuits, switches, fuses and contacts. These small and rugged clamp meters are ideally suited for current measurements up to 400 A in tight cable compartments. The Fluke 325 also offers DC current and frequency measurements.

- 400 A AC current measurement (AC and DC current; 325 only)
- · 600 V AC and DC voltage measurement
- True-RMS AC voltage and current for accurate measurements on non-linear signals
- Resistance measurement to up to 40 k $\Omega$  with continuity detection
- Temperature and capacitance measurement (324 and 325 only)
- Frequency measurement (325 only)
- Slim, ergonomic design
- Large, easy to read backlight display (324 and 325 only)
- CAT IV 300 V/CAT III 600 V safety rating
- Hold button
- Two year warranty

| Recommende  | d Accessories  |
|---|--|
|   | The state of the s |
| <b>C43</b><br>Small Soft Case<br>See page 152             | Ca7<br>Camouflage<br>Carrying Case<br>See page 152   |
|   |  |
| <b>TL175</b><br>TwistGuard™<br>Test Leads<br>See page 140 | <b>TL223-1</b> SureGrip™ Electrical Test Lead Set See page 144   |
| <b>&gt;</b> //  |  |
| <b>L210</b> Probe Light and Extender See page 154         | MC6<br>MeterCleaner™<br>Wipes<br>See page 155  |

| Specifications                 | Residential/Com  | mercial Electrical | Light Industrial |  |
|--------------------------------|------------------|--------------------|------------------|--|
| specifications                 | 323              | 324                | 325              |  |
| Measurements                   |                  |                    |                  |  |
| AC current                     | •                | •                  | •                |  |
| AC voltage                     | •                | •                  | •                |  |
| Resistance                     | •                | •                  | •                |  |
| Continuity                     | •                | •                  | •                |  |
| DC volts                       | •                | •                  | •                |  |
| DC current                     | -                | -                  | •                |  |
| True-RMS                       | •                | •                  | •                |  |
| Frequency                      | -                | -                  | •                |  |
| Min/Max/Avg                    | -                | -                  | •                |  |
| Temperature                    | -                | •                  | •                |  |
| Capacitance                    | -                | •                  | •                |  |
| Display                        |                  |                    |                  |  |
| Display hold                   | •                | •                  | •                |  |
| Backlight                      | -                | -                  | •                |  |
| Specifications                 |                  |                    |                  |  |
| Jaw opening                    |                  | 30 mm              |                  |  |
| Max wire size                  | 600 MCM          |                    |                  |  |
| Current range AC RMS           |                  | 0 to 400.0 A       |                  |  |
| Accuracy AC current (50/60 Hz) | 2.0 % ± 5 digits | 1.5 % ± 5 digits   | 2.0 % ± 5 digits |  |
| AC response                    |                  | True-RMS           |                  |  |
| Current range DC               | -                | -                  | 0 to 400 A       |  |
| Accuracy DC current            | -                | -                  | 2.0 % ± 5 digits |  |
| Voltage range AC               |                  | 0 to 600.0 V       |                  |  |
| Accuracy AC voltage            | 1.5 % ± 5 digits |                    |                  |  |
| Voltage range DC               | 0 to 600.0 V     |                    |                  |  |
| Accuracy DC voltage            | 1 % ± 5 digits   |                    |                  |  |
| Resistance range               | 0 to 4           | 000 Ω              | 0 to 40 kΩ       |  |
| Frequency measurement range    | -                | -                  | 500 Hz           |  |



#### **Included Accessories**

Test Leads, Soft Case, User Manual.

#### **Ordering Information**

FLUKE-323 True RMS Clamp Meter
FLUKE-324 True RMS Clamp Meter
FLUKE-325 True RMS Clamp Meter

# Fluke 350 Series AC/DC True-RMS **Clamp Meters**



#### Versatile, professional and accurate

Confidently take reliable readings with the True-RMS Fluke 353 and 355 Clamp Meters-the tools of choice for high current clamp-on amp meter measurements up to 2000 A.

- Reliably handle a wide range of high-current applications with 2000 A AC+DC True-RMS, 1400 A AC, and 2000 A DC
- Large 58 mm jaw
- Inrush current measurement
- High voltage measurement of 1000 V AC+DC True-RMS, 600 V AC, and 1000 V DC (355 only)
- Resistance to 400 K $\Omega$  (355 only)
- Continuity beeper (355 only)
- Frequency measurement to 1 KHz
- Selectable low-pass filter mode
- Min/Max/Avg
- Large display with backlight
- Three year warranty







Fluke 355

| Features                           | 353 | 355 |
|------------------------------------|-----|-----|
| True-RMS measurements              | •   | •   |
| Display backlight                  | •   | •   |
| Motor start-up current             | •   | •   |
| Min/Max/Average                    | •   | •   |
| Voltage AC/DC                      | -   | •   |
| Resistance measurement             | -   | •   |
| Continuity measurement with beeper | -   | •   |

| Range                 | 353  | 355   |
|-----------------------|--|---|
| 0-40.00 A             | 1.5% ± 15 counts   | 1.5% ± 15 counts  |
| 0-400.0 A             | 1 F0/. + F counts  | 1.5% ± 5 counts   |
| 0-2000 A; 1400 AC RMS | 1.5% ± 5 counts  | 1.5% ± 5 counts   |
|                       | 2.4  | 2.4   |
| 0-4.000 V             |  | 1% ± 10 counts  |
| 0-40.00 V             |  |   |
| 0-400.0 V             |  | 10/   5   |
| 0-600 V AC RMS        |  | 1% ± 5 counts   |
| 0-1000 V DC           |  |   |
| 0-400.0 Ω             |  |   |
| 0-4.000 kΩ            |  |   |
| 0-40.00 kΩ            |  | 1.5% ± 5 counts   |
| 0-400.0 kΩ            |  |   |
| Appr. ≤ 30 Ω          |  |   |
| 5.0Hz to 100.0Hz      |  | 0.2% ± 2 counts   |
| 100.1Hz to 999Hz      |  | 0.5% ± 5 counts   |
|                       | 0-40.00 Å 0-400.0 Å 0-2000 Å; 1400 ÅC RMS  0-4.000 V 0-40.00 V 0-600 V ÅC RMS 0-1000 V DC 0-400.0 Ω 0-4.000 $\Omega$ 0-4.000 $\Omega$ 0-40.00 $\Omega$ 0-40.00 $\Omega$ 5.0Hz to 100.0Hz | $\begin{array}{c} 0\text{-}40.00 \text{ A} & 1.5\% \pm 15 \text{ counts} \\ \\ 0\text{-}400.0 \text{ A} & 1.5\% \pm 5 \text{ counts} \\ \\ 0\text{-}2000 \text{ A}; 1400 \text{ AC RMS} & 2.4 \\ \\ 0\text{-}4.000 \text{ V} & 0\text{-}40.00 \text{ V} \\ 0\text{-}600 \text{ V AC RMS} & 0\text{-}1000 \text{ V DC} \\ 0\text{-}400.0 \text{ V} & 0\text{-}40.00 \text{ kΩ} \\ 0\text{-}40.00 \text{ kΩ} & 0\text{-}40.00 \text{ kΩ} \\ 0\text{-}400.0 \text{ kΩ} & 0\text{-}400.0 \text{ kΩ} \\ \text{Appr.} \leq 30 \text{ Ω} \\ 5.0\text{Hz to } 100.0\text{Hz} \\ \\ \end{array}$ |

| Power Supply | 6 x 1.5V AA NEDA 15A or 1EC LR6               |
|--------------|---|
| Battery life | 100 hours (with typical usage, backlight off) |
| Size (HxWxD) | 300 mm x 98 mm x 52 mm                        |
| Jaw opening  | 58 mm   |
| Weight       | 0.814 kg                                      |



#### **Included Accessories**

Fluke 353: C43 Soft Meter Case, Six AA Batteries, User Manual.

Fluke 355: C43 Soft Meter Case, Six AA Batteries, TL224 SureGrip™ Silicone Test Lead Set, TP2 Slim Reach Test Probe Set (2 mm), AC285 SureGrip™ Alligator Clip Set, User Manual.

#### **Ordering Information**

True RMS AC/DC FLUKE-353

Clamp Meter

True RMS AC/DC FLUKE-355

Clamp Meter



# Fluke BT500 Series Battery Analysers



Fluke BT521

Fluke BT510





#### More battery tests. Less time.

Fluke's BT500 Series Battery Analysers cover a broad range of battery test functions ranging from DC voltage and resistance tests to full condition testing using an automated string function testing and the test probe integrated infrared temperature measurement system. 500 Series Battery Analysers are designed for measurements on stationary batteries of all types.

- The world's fastest battery measurements- reduce time of a typical battery measurement with 50% from 8 seconds to 4 seconds.
- Unique CATIII 600V safety rating
- Key measurements: Battery resistance, DC and AC voltage, DC and AC current, ripple voltage, frequency and battery temp.
- Sequence measurement mode: Automatic or manual sequence testing of battery strings with automatic measurement storage including voltage, resistance and temperature (with BTL21 intelligent test probe).
- Optimised user interface: Quick, guided setup ensures you're capturing the right data every time.
- Intelligent test probe set (BT520 and BT521): Integrated LCD display, infrared temperature measurement (BT521 only), verbal audio feedback and captures voltage readings and temperature logging automatically or via integrated save button.
- Three year warranty

| Functions  | Range   | Resolution    | Accuracy    | BT510      | BT520*       | BT521* |
|--|---|---------------|-------------|------------|--------------|--------|
| Battery resistance <sup>1</sup>                        | 3 mΩ  | 0.001 mΩ      | 1 % + 8     | •          | •            | •      |
|  | 30 mΩ   | 0.01 mΩ       | 0.8 % + 6   | •          | •            | •      |
|  | 300 mΩ  | 0.1 mΩ        | 0.8 % + 6   | •          | •            | •      |
|  | 3000 mΩ   | 1 mΩ          | 0.8 % + 6   | •          | •            | •      |
|  | 6 V   | 0.001 V       | 0.09 % + 5  | •          | •            | •      |
| V DC   | 60 V  | 0.01 V        | 0.09 % + 5  | •          | •            | •      |
| V DC   | 600 V   | 0.1 V         | 0.09 % + 5  | •          | •            | •      |
|  | 1000 V  | 1 V           | 0.09 % + 5  | -          | -            | •      |
| V AC<br>(45 Hz to 500 Hz with 800 Hz filter)           | 600 V   | 0.1 V         | 2 % + 10    | •          | •            | •      |
| Frequency<br>(displayed with Vac and Aac) <sup>2</sup> | 500 Hz  | 0.1 Hz        | 0.5 % + 8   | •          | •            | •      |
| AC voltage ripple                                      | 600 mV  | 0.1 mV        | 3 % + 20    | •          | •            | •      |
| (20 KHz Max)   | 6000 mV   | 1 mV          | 3 % + 10    | •          | •            | •      |
| A DC/A AC<br>(with accessory Fluke i410)               | 400 A   | 1 A           | 3.5 % + 2   | -          | -            | •      |
| Temperature  | 0 °C to 60 °C   | 1 °C          | 2 ℃         | -          | -            | •      |
| Meter mode   | 999 red   | ords for each | measurement | position w | ith time sta | amp    |
| Sequence mode  | Up to 100 profiles and 100 profile templates<br>(Each profile stores up to 450 batteries) with time stamp |               |             |            |              |        |

<sup>\*</sup>BT520ANG and BT521ANG for angled probe models

| Specifications                           |   |
|--|---|
| Size (HxWxD) and Weight                  | 220 x 103 x 58 mm, 850 g  |
| Screen dimensions                        | 77 x 56 mm  |
| Interface                                | USB mini  |
| Operating temperature                    | 0 °C to 40 °C   |
| Lithium-ion battery charging temperature | 0 °C to 40 °C   |
| Operating humidity                       | Non-condensing (10 °C), <=80 % RH (at 10 °C to 30 °C), <=75 % RH (at 30 °C to 40 °C)                      |
| IP rating                                | IP40  |
| Radio                                    | FCC Class A   |
| Vibration requirements                   | MIL-PRF-28800F: Class 2   |
| Drop test requirements                   | 1 metre   |
| Temperature coefficients                 | Add 0.1 x specified accuracy for each degree C above 28 $^{\circ}\text{C}$ or below 18 $^{\circ}\text{C}$ |
| Safety compliance                        | 600 V CAT III   |
|  |   |

The measurement is based on  $\mbox{AC}$  injection method. The injected source signal is <100 mÅ, 1 kHz.



#### **Included Accessories**

4-Wire Test Pin (set), BTL10 Basic Test Lead (set), TL175 TwistGuard™ Test Leads with Adapter, L300 Attachable LED Flashlight (2) (BT520 and BT521 only), BTL20 Intelligent Test Probe Set with Extender (no Temperature Sensor)(BT520 only), BTL21 Intelligent Test Probe Set with Extender and Temperature Sensor (BT521 only), i410 AC/DC Current Clamp (BT521 only), BP500 Lithium-ion Battery, BC500 AC Charger, Mini-USB Cable, Shoulder Strap, Belt Strap, Magnetic Hanging Strap, FlukeView<sup>®</sup> Battery Management Software, Soft Carrying Case, Spare Fuses (2), Battery Tags (BT520 and BT521 only).

#### **Ordering Information**

| •                |  |
|------------------|--|
| FLK-BT510        | Basic Battery Analyser                 |
| FLK-BT520        | Battery Analyser                       |
| FLK-BT521        | Advanced Battery<br>Analyser           |
| FLK-BT520<br>ANG | Battery Analyser with<br>Angled Probes |
| FLK-BT521<br>ANG | Battery Analyser with<br>Angled Probes |

<sup>&</sup>lt;sup>2</sup> Trigger level V AC: 10 mV, A AC: 10 Å



#### Fluke T6 Series Electrical Testers with FieldSense



#### Measure voltage without test leads

Measure voltage up to 1000 V AC through the open fork, without test lead contact to live voltage. Without opening covers or removing wire nuts; on wires up to 4/0 (120 mm<sup>2</sup>), carrying as much as 200 A. It will change your job.

- FieldSense technology for AC voltage, current and frequency measurement without making electrical contact to live voltage+
- Simultaneous voltage and current display (T6-1000) - shows all power supply measurements at a glance for efficient troubleshooting
- 1 to 1000 V AC or DC (T6-1000); 600 V AC or DC (T6-600)
- 0.1 to 200 Å AC
- Resistance 1  $\Omega$  to 100 k $\Omega$  (T6-1000), 1  $\Omega$  to 2000 Ω (T6-600)
- Frequency measurement 45 Hz to 66 Hz (T6-1000)
- Works wire up to AWG 4/0 (17.8 mm jaw opening)
- HOLD button temporarily freezes the reading for easy viewing
- Easy to read display with backlight
- Accepts optional Fluke TPAK Magnetic Meter Hanger for convenient operation
- Two year warranty

+ Voltage measurement requires capacitive path to ground, provided through user in most applications. Ground connection via test lead may be required in some situation:









| Specifications                      |                        | T6-600        | T6-1000                        |            |  |
|-------------------------------------|------------------------|---------------|--------------------------------|------------|--|
| Function                            | Requires<br>Test Leads | Range         | Range                          | Resolution | Accuracy <sup>[1]</sup>                    |
| FieldSense AC voltage               | No                     | 600 V         | 1000 V                         | 1 V        | ±(3 % + 3 counts) [2] [3]<br>45 Hz - 66 Hz |
| FieldSense AC current               | No                     | 200.0 A       | 200.0 A                        | 0.1 A      | ±(3 % + 3 counts)<br>45 Hz - 66 Hz         |
| FieldSense<br>frequency (Hz)        | No                     |               | 45 Hz – 66 Hz                  | 1 Hz       | ±(1 % + 2 counts) [3]                      |
| Volts AC                            | Yes                    | 600 V         | 1000 V                         | 1 V        | ±(1.5 % + 2 counts)<br>45 Hz - 66 Hz       |
| Volts DC                            | Yes                    | 600 V         | 1000 V                         | 1 V        | ±(1 % + 2 counts)                          |
| Resistance                          | Yes                    | 2000 Ω        | 2000 Ω                         | 1 Ω        | ±(1 % + 2 counts)                          |
|                                     | Yes                    |               | 20.00 kΩ                       | 0.01 kΩ    | ±(1 % + 2 counts)                          |
|                                     | Yes                    |               | 100.0 kΩ                       | 0.1 kΩ     | ±(1 % + 2 counts)                          |
| Safety<br>(measurement<br>category) |                        | 600 V CAT III | 1000 V CAT III<br>600 V CAT IV |            |  |

 $Accuracy^{(i)}: \pm \ (\ [\ \% \ of \ reading] + [number \ of \ least \ significant \ digits] \ ]. \ Accuracy \ is \ specified for \ 1 \ year \ after \ calibration, at \ 18 \ ^{\circ}C \ to \ 28 \ ^{\circ}C \ [64 \ ^{\circ}F \ to \ 82 \ ^{\circ}F] \ with \ relative \ humidity \ to \ 90 \ \%. \ AC \ conversions \ are \ ac-coupled, RMS$ responding.

Accuracy [2]: Add 3 % without an external ground connection. External ground connection required for user wearing insulated gloves, standing on an insulated ladder and otherwise insulated from earth ground.

Accuracy (3): FieldSense specified from 16V to 100% of range

| <b>General Specifications</b> |   |
|-------------------------------|---|
| Calibration                   | 1-year calibration cycle  |
| Dimensions                    | 61.1 mm x 259.3 mm x 43.8 mm  |
| Weight                        | 0.35 kg   |
| Fork opening                  | 17.8 mm   |
| Battery Type and Life         | 2 x AA (IEC LR6); 360 hours continuous, typical; 200 hours using Field-Sense function |

# **Recommended Accessories** H-T6 Belt Holste See page 154

SureGrip

Alligator Clips See page 141

See page 24

Proving Unit

#### **Recommended Kits**

Buy more, Save more



#### Fluke T6-600/62MAX+/1AC **Combo Kit**



Fluke T6-1000/ H-T6 Holster/ 1AC-A1 Combo Kit



Fluke T6-1000/PRV240FS **Proving Unit Combo Kit** 

For more details see page 169

#### **Included Accessories**

Attached Test Leads with removable 4 mm Probe Cap and **User Documentation** 

#### **Ordering Information**

T6-600 **Electrical Tester** T6-1000 **Electrical Tester** T6-600 Tester, T6-600 /62MAX+/1AC 62MAX+ & 1AC-II Kit T6-1000 Tester, H-T6 T6-HT6-1AC Holster & 1AC Kit

T6-1000/ PRV240FS

T6-1000 & PRV240FS Proving Unit Kit

#### Fluke T5 Series Electrical Testers



#### Fluke T5 Series Voltage, **Continuity and Current Testers**

The Fluke T5 Electrical Testers let you check voltage, continuity and current with one compact tool. OpenJaw™ current lets you check current up to 100A - without breaking the circuit. Its tough test leads stow neatly in the back of the tester, making it easy to tote the T5 in your tool pouch. Detachable SlimReach™ test probes are customised for national electrical standards. The test leads accept optional accessories such as clips and specialty probes. Available in 600V and 1000V models.

- · Excellent front-line troubleshooting and measurement tool
- Available in 600 V and 1000 V models
- Digital display
- OpenJaw<sup>™</sup> current measurement Rotary switch selects volts, amps and ohms functions

VoltAlert™ AC non-contact voltage testers from Fluke are easy to use - just place the tip to a terminal strip, outlet, or supply cord. When the tip glows red, you know there's

Fluke now offers three models of noncontact voltage detectors, making sure you

have the right tool for the job.

- Heavy-duty test leads
- · Two year warranty



| Functions   | T5-1000                    | T5-600                    |
|---|----------------------------|---------------------------|
| Measure AC/DC voltage                                 | 1000 V                     | 600 V                     |
| Measure AC current (average)                          | 100 A                      | 100 A                     |
| Measure continuity                                    | < 25 Ω                     | < 25 Ω                    |
| Measure resistance                                    | 1000 Ω                     | 1000 Ω                    |
| DC polarity indicator                                 | Yes                        | Yes                       |
| Detachable probe tips with optional probe tips styles | Yes                        | Yes                       |
| Safety rating   | 1000 V Overvoltage CAT III | 600 V Overvoltage CAT III |

<sup>\*</sup>Voltage levels will vary depending on country of intended use.

# Fluke VoltAlert™ Family



Fluke 1AC-II







voltage present.

Two year warranty.





Fluke LVD2

| Functions          | 1AC-A1-II            | LVD1A               | LVD2                |
|--------------------|----------------------|---------------------|---------------------|
| Voltage            | 90 V AC to 1000 V AC | 40 V AC to 300 V AC | 90 V AC to 900 V AC |
| CAT Rating         | CAT IV 1000V         | CAT IV 600V         | CAT IV 600V         |
| Voltage Detection  | •                    | •                   | •                   |
| Batteries Included | •                    | •                   | •                   |
| On/Off Button      | •                    | •                   | •                   |
| Voltbeat™          | •                    |                     |                     |
| Audible/Silent     | •                    |                     |                     |
| LED Flashlight     |                      | •                   | •                   |

#### **Recommended Accessories** Fluke T5 Series



**H5** Electrical Tester Holster See page 154



T5-RLS

TP1 Slim Reach Test Probes See page 141

T5 Replacement Test Leads

#### **Included Accessories**

Fluke T5-600 & T5-1000: Detachable Probes and Instruction Sheet.

#### **Ordering Information**

| FLUKE T5-600    | Electrical Tester              |
|-----------------|--------------------------------|
| FLUKE T5-1000   | Electrical Tester              |
| FLUKE 1AC-A1-II | VoltAlert™<br>Voltage Detector |
| FLUKE LVD1A     | Volt Light                     |
| FLUKE LVD2      | Volt Light                     |
|                 |                                |

# Fluke T Series Voltage and **Continuity Testers**

bit more.



Fluke T130







Fluke T90





designed for any work situation. Enhanced ergonomic design feels good in your hand, is easy to use (even with gloves on) and quick, secure probe docking.

Rugged, high-quality testers for fast test

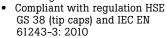
Fluke's family of Two-Pole Voltage Testers are built with state-of-the art measurement and safety technology. These testers offer everything you expect from Fluke and a little

Rugged, high-quality construction is built to last. This

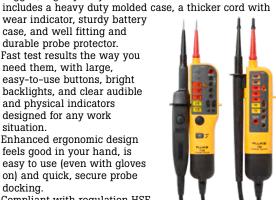
results the way you need them

wear indicator, sturdy battery case, and well fitting and durable probe protector.

Fast test results the way you need them, with large, easy-to-use buttons, bright backlights, and clear audible and physical indicators



· Three year warranty



Fluke T110 Fluke T90

| Features                                  | T90 | T110        | T130             | T150             |
|---|-----|-------------|------------------|------------------|
| Backlit LED indicator                     | •   | •           | •                | •                |
| Backlit LCD Digital Display               | -   | -           | LCD              | LCD              |
| Continuity test - visual results          | •   | •           | •                | •                |
| Continuity test - audible results         | •   | with on/off | with on/off      | with on/off      |
| Vibratory indicator under load            | -   | with on/off | •<br>with on/off | •<br>with on/off |
| Display Hold                              | -   | -           | •                | •                |
| Voltage Test                              | •   | •           | •                | •                |
| Indication of polarity                    | •   | •           | •                | •                |
| Resistance measurement                    | -   | -           | -                | •                |
| Switchable Load                           | -   | •           | •                | •                |
| Single pole test for phase detection      | •   | •           | •                | •                |
| Rotary field indicator                    | -   | •           | •                | •                |
| Probe tip protection                      | •   | •           | •                | •                |
| Voltage display with discharged batteries | •   | •           | •                | •                |
| Electrical torch function                 |     | •           | •                | •                |
| Wear indicator test lead wire             | •   | •           | •                | •                |

| Specifications   | <b>T90</b>   | T110                     | T130          | T150         |  |
|--|--|--------------------------|---------------|--------------|--|
| Voltage AC/DC  | 12V - 690V   | 12V - 690V               | 6V - 690V     | 6 V - 690 V  |  |
| Continuity   | 0 - 400 kΩ   |                          |               |              |  |
| Frequency  | 0 - 60 Hz  |                          | 0 - 400 Hz    |              |  |
| Phase rotation   | -  |                          | 100 V - 690 V | V            |  |
| Resistance measurement                                   | -  | -                        | -             | Up to 1999 Ω |  |
| Response time (LED ladders)                              | < 0.1 s  |                          |               |              |  |
| 200 $k\Omega$ input impedance                            | Current draw 3,5 mA @ 690 V, Current draw 1,15 mA @ 230 V                |                          |               |              |  |
| $7k\ \Omega$ input impedance (with load buttons pressed) | - current draw 30 mA @ 230 V   |                          |               |              |  |
| Safety rating  | CAT II 690V<br>CAT III 600V  |                          |               |              |  |
| IP rating  | IP54   | IP64                     | IP64          | IP64         |  |
| Battery type   | Alkaline supplied. usable with 1.2 V NiCD or NiMH rechargeable batteries |                          |               |              |  |
| Size (HxWxD)   |  | 100 mm x 250 mm x 125 mm |               |              |  |
| Weight   | 1.3 kg   |                          |               |              |  |

# **Recommended Accessories** H15 Holster Continuity Tester Holster See page 154 C150 Soft Case See page 152

#### **Fluke T Series Applications**



| Two AA Batteries and Instruction Sheet. |   |  |  |  |
|---|---|--|--|--|
| Ordering 1<br>FLUKE-T90                 | I <b>nformation</b> Voltage/Continuity Tester             |  |  |  |
| FLUKE-T110                              | Voltage/Continuity<br>Tester with<br>Switchable Load      |  |  |  |
| FLUKE-T130                              | Voltage/Continuity<br>Tester with LCD<br>Switchable Load  |  |  |  |
| FLUKE-T150                              | Voltage/Continuity Tester with LCD, OHMS, Switchable Load |  |  |  |

## Fluke 1000FLT Fluorescent Light Tester



#### Fluke 1000FLT

#### The most complete lamp tester helps save you time, reduce costs

The Fluke 1000FLT allows you to perform 5 tests with one compact tool. If your job requires keeping large numbers of fluorescent lights shining, the Fluke 1000FLT is an indispensable tool. This tester is a real time and money saver.

- Saves time and reduces costs: Perform all 5 essential lighting tests in under 30 seconds to pinpoint problems and verify operation when done
- Survives on-the-job handling: Drop-tested to survive from a two metre ladder
- Easy to use: Bright indicator light plus audible alert
- Built to last, easy to maintain: The Fluke 1000FLT's extendable test rod is all metal and very rugged. But should the need arise, this test rod is easily replaced
- Three year warranty

#### Save time, reduce costs.

The Fluke 1000FLT offers 5 essential lighting tests:

- 1 Lamp test: test bulb without removing from fixture.
- **2** Ballast test: easily determine if ballast is working.
- 3 Non-contact voltage: quickly check for voltage presence.
- 4 Pin continuity test: tests if filaments have continuity.
- 5 Ballast-type test: determine if ballast is electronic or magnetic without taking fixture apart- identify energy wasting ballasts.





| <b>Test Specifications</b> |  |
|----------------------------|--|
| Lamp Test Max Output       | 3000 V peak-peak                                     |
| Ballast Test               | 20 kHz   |
| Ballast Type Discriminator | ≤3 m distance  |
| Pin Continuity Test        | < 1 kΩ   |
| NCV (VoltAlert™)           | 85 to 277 V AC, 45 to 67 Hz, ≤10 cm distance         |
| Temperature                | Operating -10 °C to +50 °C, Storage -40 °C to +60 °C |
| Relative Humidity          | 85 % maximum   |
| Safety rating              | IEC 61010-1, pollution degree 2                      |

| <b>Mechanical &amp; General Specifications</b> |   |
|--|---|
| Size   | 21.5 cm x 3.0 cm x 6.5 cm   |
| Weight   | 0.37 kg   |
| Battery type                                   | 4 x AA alkaline IEC LR6   |
| Battery life                                   | 40 hours  |
| Auto Power Off                                 | 20 minutes after non-use  |
| Low Battery Indicator                          | Power button light blinks when power is low (typically 85 % of capacity depleted) |
| Operating altitude                             | < 2000 m  |
| Electromagnetic Environment                    | EN 61326-1: Portable  |
| Resistance to impact                           | 2 metre drop  |

#### Fluke 1000FLT **Applications**



Lamp test: Test bulb without removing from fixture



Non-contact voltage: Quickly check for voltage presence



Pin continuity test: Test if filaments have continuity

#### **Included Accessories**

Four AA Alkaline Batteries, H1000 Holster, Quick Reference Guide.

#### **Ordering Information**

FLUKE-1000FLT Fluorescent Light Tester

#### Fluke 2042 Cable Locator



Receiver





# The multipurpose solutions to cable location

The Fluke 2042 is a professional general purpose cable locator. It is ideal for tracing cables in walls and underground, locating fuses/breakers on final circuits and locating interruptions and short-circuits in cables and electrical floor heating systems.

It can also be used for tracing metallic water and heating pipes. The unit is supplied as a complete kit comprising of a transmitter and receiver in a purposemade carry case. The receiver also incorporates a torch function for working in dimly lit locations.

- For all applications (live or dead cables) without additional instruments
- Set includes a transmitter and a receiver
- Proven digitally coded sender signal guarantees clear signal identification
- Transmitter with LCD-display for transmitting level, transmitting code and external voltage
- Receiver with a backlight LCD-display for level of receiving signal, code of receiving signal and live voltage indication
- · Automatic or manual adjustment of receiving signal sensitivity
- Switchable acoustic receiving signal
- Auto-Power-Off
- Additional torch lamp function for working in dark environments
- Additional transmitters are available for extension or to distinguish between several signals.
- Two year warranty

| Specifications                  | Transmitter               | Receiver              |
|---------------------------------|---------------------------|-----------------------|
| Voltage Measurement Range       | 12V, 50V,120V, 230V, 400V |                       |
| Frequency Range                 | 060 Hz                    |                       |
| Output signal                   | 125 kHz                   |                       |
| Voltage                         | Up to 400V AC/DC          |                       |
| Main voltage detection          |                           | 00.4m                 |
| Operating Temperature           | 0 to 40°C                 | 0 to 40°C             |
| Storage Temperature             | -20°C to +60°C            | -20°C to +60°C        |
| Humidity (Without Condensation) | Max. 80% relative         | Max. 80% relative     |
| Operating Altitude              | Up to 2000 m              | Up to 2000 m          |
| Electrical Safety               | EN 61010-1                |                       |
| Overvoltage Category            | Cat. III 300 V            |                       |
| Voltage Test                    | •                         | •                     |
| Indication of polarity          | •                         | •                     |
| Resistance measurement          |                           |                       |
| Batteries                       | 6 pc Batteries 1.5V       | 1 pc Battery 9V       |
| Size (HxWxD)                    | 190 mm x 85 mm x 50 mm    | 250 mm x 65 mm x 45mm |
| Weight                          | 0.45 kg                   | 0.36 kg               |

#### **Recommended Accessories**



2042T

#### **Fluke 2042 Applications**



Location of fuses/breakers and assignment to circuits



Precise location of cable interruptions with additional transmitter

#### **Included Accessories**

TL27 Heavy Duty Test Lead Set (2), TP74 Lantern Tip Test Probe Set, AC285 Alligator Clip Set, Soft Carrying Case, Hard Case.

#### **Ordering Information**

FLUKE-2042

Cable Locator (Transmitter & Receiver)

FLUKE-2042T Cable Locator

Transmitter

Contact your local distributor for price and availability.

www.fluke.com/au/wtb

#### Fluke 9040 and 9062 Phase Rotation Indicators

Take the guesswork out of phase/motor rotation measurements



#### Fluke 9040 Phase Rotation Indicator

The Fluke 9040 is effective for measuring phase rotation in all areas where three-phase supplies are used to feed motors, drives and electrical systems. The Fluke 9040 is a rotary field indicator and can provide clear indication of the 3 phase via an LCD display and the phase rotation direction to determine correct connections. It allows rapid determination of phase sequence and has a voltage (up to 700 V) and frequency range suitable for commercial and industrial applications. Test probes supplied with the instrument have a variable clamping range for safe contact, especially in industrial sockets.

- 3 phase indication
- Indication of phase rotation
- Clear LCD display
- · No battery required
- Two year warranty

# Fluke 9062 Motor and Phase Rotation Indicator

The unique Fluke 9062 provides rotary field and motor rotation indication with the benefits of contactless detection.

- 3 phase indication
- Indication of phase rotation
- Indication of motor rotation direction
- Contact free determination of the rotation direction of running motors
- Two year warranty

Made for commercial and industrial environments, the Fluke 9062 provides rapid indication of 3 phase rotation using test leads supplied or can be used to determine motor rotation on synchronous and asynchronous 3 phase motors. The contactless detection is ideal for use on motors where the shaft is not visible. Test probes supplied with the instrument have a variable clamping range for safe contact, especially in industrial sockets.

| Specifications  | 9040                   | 9062                   |
|-----------------|------------------------|------------------------|
| Voltage range   | 40 - 700 V             | Up to 400 V            |
| Phase display   | -                      | 120 - 400 V AC         |
| Frequency range | 15 - 400 Hz            | 2-400 Hz               |
| Operating time  | Continuous             | Continuous             |
| Size (HxWxD)    | 124 mm x 61 mm x 27 mm | 124 mm x 61 mm x 27 mm |
| Power supply    | from unit under test   | 1 x 9V                 |
| Weight          | 0.20 kg                | 0.15 kg                |

#### **Recommended Accessories**





TLK290 Flexible Socket Probe Set See page 142

TLK291
Fused Test
Probe Set
See page 142



C25 Meter Case See page 152

#### **Fluke 9062 Applications**



Determine the presence of phase sequence of multiphase electrical supplies.



Determine the rotation of running motors by placing the instrument on the motor casing.



Check the correct rotation of motors prior to connection.

#### **Included Accessories**

Fluke 9040: Alligator Clips - Black (3), Standard Test Probes - Black (3), Flexible Test Probes - Black (3), User Manual.

Fluke 9062: Alligator Clips - Black (3), Flexible Test Probes - Black (3), Test Leads - Black (3), 9V Battery, User Manual.

#### **Ordering Information**

FLUKE-9040

Phase Rotation

Indicator

FLUKE-9062 Motor and Phase Rotation Indicator



# PLS

#### **PLS Laser Levels**



PLS 3G

#### Point Laser (3R/G, 5R/G)

The professional self-leveling three-point (3R/G) and five-point (5R/G) laser level, available in red or green laser, allows for fast, accurate layout of reference points.

#### Combo Line Laser (6R/G)

Plumb, level, and square with one tool. This professional self-leveling combination point and cross line laser level, available in red or green laser, includes vertical and horizontal modes with lines and points combined.

#### Line Laser (180R/G)

Plumb, level, and square with one tool. This professional self-leveling cross line laser level, available in red or green laser, includes vertical and horizontal modes allowing for fast, accurate, level and plumb reference lines.

#### **SLD Laser Line Detector**

Laser line detector compatible with the PLS 6 and PLS 180 laser levels, for use in outdoor, or in an area with bright overhead lighting. Visual and audible indicators for ease of use. Includes mounting clamp for quick and steady positioning.



PLS 180R



| Models                     | PLS 3R/G KIT    | PLS 5R/G KIT    | PLS 6R/G KIT    | PLS 180R/G KIT  |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| Laser Function             | _               |                 |                 |                 |
|                            |                 |                 |                 |                 |
| Laser type                 | 3-point         | 5-point         | Crossline       | Crossline       |
| Laser colour               | Red / Green     | Red / Green     | Red / Green     | Red / Green     |
| Accuracy                   | < 3 mm @ 10 m   |
| Batteries                  | (3) AA alkaline | (3) AA alkaline | (3) AA alkaline | (3) AA alkaline |
| Included in Box            |                 |                 |                 |                 |
| Laser level                | 3R/G Z          | 5R/G Z          | 6R/G Z          | 180R/G Z        |
| Canvas pouch               | •               | •               | •               | •               |
| PLSBP5 alkaline pack       | •               | •               | •               | •               |
| FS floor stand             | •               | •               | •               | •               |
| PLSMLB wall bracket        | •               | •               | •               | •               |
| Reflective target          | •               | •               | •               | •               |
| PLSC18 carrying case       | •               | •               | •               | •               |
| UB9 wall/ceilng<br>bracket |                 |                 |                 | •               |
| <b>Application Guide</b>   |                 |                 |                 |                 |
| Electrical                 | •               | •               | •               | •               |
| HVAC                       | •               | •               | •               | •               |
| Framing                    | •               | •               | •               | •               |
| Carpentry                  |                 |                 | •               | •               |
| Foundations                |                 |                 | •               | •               |
| Floor and tile             |                 |                 | •               | •               |
| Acoustic ceiling           |                 |                 | •               | •               |
| Painting                   |                 |                 | •               | •               |
| Window and glass           | •               | •               | •               | •               |
| Other Configuration        |                 |                 |                 |                 |
| Tools and pouch only       | 3R/G Z          | 5R/G Z          | 6R/G Z          | 180 R/G Z       |
| Kit with detector          |                 |                 |                 | 180 R/G SYS     |

# TPOD500 Elevating Tripod PLS RBP5 Single Pk Li-lon Battery Pack PLS RBC5 Charging Cable PLS C18 Laser Level Tool Box

#### **Included Accessories**

Bare Tool: Canvas Pouch Kit: Canvas Pouch, Carry Case, Three AA Batteries, Floor Stand, Wall Bracket, Reflective Target, Wall/Ceiling Bracket (180R/G Only) System: (6R/G and 180R/G Only) Canvas Pouch, Carry Case, Three AA Batteries, Floor Stand, Wall Bracket, Reflective Target, Wall/ Ceiling Bracket (180R/G Only), Line Detector

#### **Ordering Information**

| Oraering in                  | iormation   |
|------------------------------|---|
| PLS 3R Z<br>PLS 3G Z         | Red/Green<br>3-Point Laser Level<br>Bare Tool             |
| PLS 3R KIT<br>PLS 3G KIT     | Red/Green<br>3-Point Laser Level<br>Kit                   |
| PLS 5R Z<br>PLS 5G Z         | Red/Green<br>5-Point Laser Level<br>Bare Tool             |
| PLS 5R KIT<br>PLS 5G KIT     | Red/Green<br>5-Point Laser Level<br>Kit                   |
| PLS 6R Z<br>PLS 6G Z         | Red/Green<br>Combo Point<br>Laser Level Bare Tool         |
| PLS 6R KIT<br>PLS 6G KIT     | Red/Green<br>Combo Point<br>Laser Level Kit               |
| PLS 6R SYS<br>PLS 6G SYS     | Red/Green<br>Combo Point<br>Laser Level System            |
| PLS 180R Z<br>PLS 180G Z     | Red/Green<br>Combo Point<br>Line Laser Level<br>Bare Tool |
| PLS 180R KIT<br>PLS 180G KIT | Red/Green<br>Combo Point<br>Line Laser Level Kit          |
| PLS 180R SYS<br>PLS 180G SYS | Red/Green<br>Combo Point<br>Line Laser Level<br>System    |

Contact your local distributor for price and availability. www.fluke.com/au/wtb

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www.pls.com Laser Levels

#### PLS H2, HV2R and HV2G Rotary Lasers



PLS HV2G



#### Designed for any construction job site

These professional-grade tools offer the accuracy and durability you can expect from PLS, a Fluke Company. The PLS Rotary range is ideal for use by general contractors, electricians, plumbers and landscapers in both interior and exterior applications.

#### **H2 Rotary Laser Level**

The PLS H2 model is a horizontal only rotary laser that offers a simple one button operation.

- The H2 is a horizontal-only rotary laser. The H2 is easy-to-use and fully self-leveling, designed for interior and exterior layout projects.
- This fully automatic unit offers one-button operation and is ideal for large exterior layout applications which include concrete forms, slabs, and other horizontal leveling applications.

#### HV2R (Red Laser) and HV2G (Green Laser)

Offering a rugged ergonomic design and simplified controls, the PLS HV2R/G emits a laser line in the horizontal or vertical plane. The HV2R/G rotary lasers also emit a point from the top when placed in the vertical position.

 The HV2G rotary laser level emits a self-leveling horizontal laser plane and can be used in the vertical position to emit a vertical laser plane. Applications include setting foundations and footings, concrete pours, drywall terracing, contour framing and suspended ceiling installation.

| Specifications      | H2   | HV2R   | HV2G   |
|---------------------|--|--|--|
| Laser               | Class II Red   | Class II Red   | Class II Green   |
| Laser axis          | Horizontal Only  | Horizontal and Vertical  | Horizontal and Vertical  |
| Accuracy            | ≤ 2.2 mm @ 30m   | ≤ 2.2 mm @ 30m   | ≤ 2.2 mm @ 30m   |
| Auto-leveling range | ± 5 degrees  | ± 5 degrees  | ± 5 degrees  |
| Manual slope range  | ± 5 degrees  | ± 5 degrees  | ± 5 degrees  |
| Working range       | ≤ 30 m without XLD<br>laser detector<br>≤ 300 m with XLD<br>laser detector | ≤ 30 m without XLD laser<br>detector<br>≤ 300 m with XLD laser<br>detector | ≤ 30 m without XLD laser<br>detector<br>≤ 300 m with XLD laser<br>detector |
| IP Rating           | IP67   | IP67   | IP67   |
| Battery Life        | > 60 hours   | > 60 hours   | > 60 hours   |

#### **Recommended Accessories**







TPOD500 Elevating Tripo



PLS RBP10 NiMH Rechargeable Battery



PLS C19 Rotary Laser Level Carrying Case

#### **Recommended Kits**

Buy more, Save more



PLS HV2G KIT, Manual Slope Green Rotary Laser Kit



PLS HV2R SYS, Manual Slope Red Rotary Laser System

For more details see page 171

#### **Included Accessories**

PLS BP10 Alkaline Battery Tray, 4 x D Batteries, Safety Sheet and Quick Reference Guide.

#### **Ordering Information**

PLS H2 Z
Horizontal Red Rotary
Laser Bare Tool

PLS H2 SYS
Horizontal Red Rotary
Laser System
Horizontal Red Rotary
Laser System
Horizontal Red Rotary
Laser Kit

PLS HV2R Z
PLS HV2R Z
Rotary Laser Bare Tool

PLS HV2R SYS
Manual Slope R/G

PLS HV2R SYS Manual Slope R/G PLS HV2G SYS Rotary Laser System

PLS HV2R KIT Manual Slope R/G
PLS HV2G KIT Rotary Laser Kit

#### Fluke 417D, 419D and 424D Laser Distance Meters



Fluke 424D





Complies with FDA 21 CFR 1040.10,11 except for deviations pursuant to Laser Notice No 50.

#### Professional grade distance measuring tools that are fast, easy to use and fit in your pocket

Measure farther, with greater accuracy, in more situations.

- Instant measurements up to 100m: measure up to 40 m (417D), 80 m (419D) and 100 m (424D)
- Measure with greater accuracy: Up to ± 1mm, no scales to interpret or misread
- Do the work of two: Instead of holding the tape, your helper can do other jobs
- The most advanced 2 laser technology for distance measurement
- Speed up the job: Easily measure hardto-access areas, like high ceilings, without climbing a ladder
- Keep it on the level: New inclination sensor on the Fluke 424D helps with leveling, height tracking, measuring around obstacles
- Reduce estimating errors let the meters do the math: Find area and volume. Easily add and subtract distances. Use Pythagoras calculations for height
- Improved battery life: Automatic shut-off feature
- · Improved visibility with backlit screen
- Three year warranty

#### The Fluke 424D and 419D Laser Distance Meters additionally offer:

- · Improved visibility with backlit screen
- Ability to measure up to 80 m for 419D, 100 m for 424D
- Tripod mode allows you to mount to a tripod for measuring long distances
- Stake out function
- Enhanced Pythagoras calculation for determining distance indirectly from three other measurements
- · Audible keypad feedback
- Storage of the last twenty measurements for quick recall of distance
- Strong environmental protection with IP54 (water spray and dust proof) sealing

#### The Fluke 424D Laser Distance Meter additionally offers:

- · Inclination sensor for taking measurements in hard to reach areas
- Compass provides a "heading" for distance measurement
- Automated end-piece correction: when measuring from an edge or corner, a built-in sensor detects the position of this bracket and automatically changes the reference point

| Key Features                          | 424D                 | 419D                 | 417D   |
|---------------------------------------|----------------------|----------------------|--------|
| Maximum measurement distance          | 100 m                | 80 m                 | 40 m   |
| Accuracy                              | ± 1 mm               | ± 1 mm               | ± 2 mm |
| Battery life (number of measurements) | 5000                 | 5000                 | 3000   |
| Area measurement                      | Yes                  | Yes                  | Yes    |
| Volume measurement                    | Yes                  | Yes                  | -      |
| Pythagoras calculations               | Full                 | Full                 | -      |
| Plus and minus calculations           | Yes                  | Yes                  | -      |
| Measurement storage                   | 20 complete displays | 20 complete displays | -      |
| Backlight                             | Yes                  | Yes                  | -      |
| Minimum/Maximum                       | Yes                  | Yes                  | -      |
| Audible keypad feedback               | Yes                  | Yes                  | _      |
| Tripod mount                          | Yes                  | Yes                  | -      |
| Corner angle measurement              | Yes                  | _                    | _      |
| Stake out                             | Yes                  | Yes                  | -      |
| Dust and splash proof                 | IP54                 | IP54                 | IP54   |
| Compass                               | Yes                  | -                    | -      |
| Inclination sensor                    | Yes                  | _                    | _      |
| Display                               | 4 line               | 3 line               | 2 line |
| Automated end-piece correction Yes    |                      | _                    | _      |

#### **Recommended Accessories**





C1600 Meter Gear Box See page 153

C550 Premuim Tool Box See page 153





**L206** Deluxe LED Hat Light See page 154

**MC6** fleterCleaner™ Wipes, 6 & 50 Pack See page 155

#### **Recommended Kits**

Buy more, Save more



#### Fluke 417D/62MAX+ Laser Distance Meter/Infrared Thermometer Combo Kit

For more details see page 172

#### Fluke 419D Application



#### **Included Accessories**

Two AAA Batteries, User Manual on CD, Quick Reference Guide, Vinyl Carrying Pouch and Lanyard.

#### **Ordering Information**

FLUKE-417D Laser Distance Meter, 40m

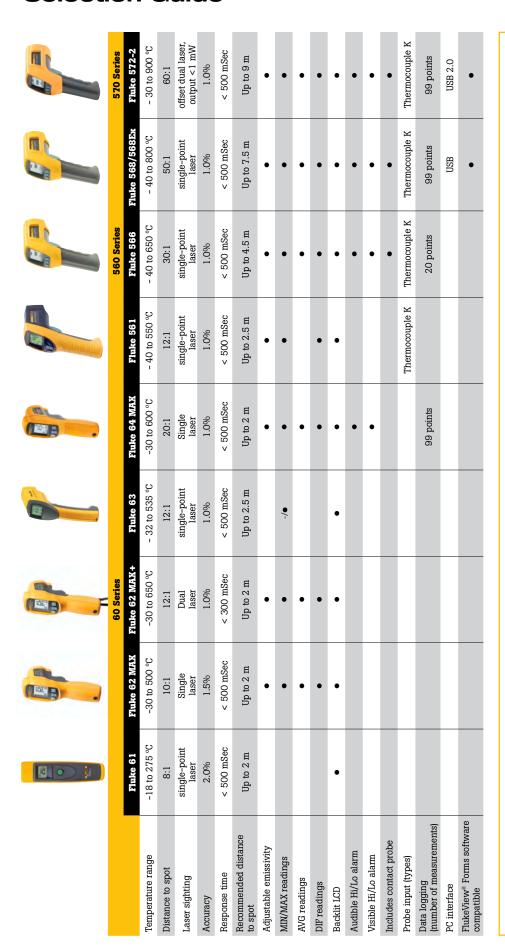
FLUKE-419D Laser Distance Meter,

FLUKE-424D Laser Distance Meter, 100m

FLUKE-417D Laser Distance Meter/
62 MAX+ KIT Infrared Thermometer
Combo Kit



# Digital Infrared Thermometer Selection Guide



#### **Recommended Applications**



#### Plant/Facilities Maintenance

Preventive and Predictive Maintenance Energy Eudits Vehicle and Fleet Maintenance Programs Faulty Electrical/Circuit Connections Petrochemical/Hazardous Locations Motors, Pumps and Bearings



# Heating/Ventilation/Air Conditioning/Refrigeration

Leaky Ductwork Thermostats Temperature Balancing Steam Distribution Systems Compressor Lines



#### **Manufacturing Processes**

Molding Temperature Measurement Printing, Paper and Converting Thermoforming Plastics Electronics Paint Curing/Drying Food Chemical and Pharmaceutical



#### **Safety and protection**

Fire Localisation
Hazardous Materials
Faulty Ballasts
Search and Rescue
Smoldering Embers
Equipment Maintenance

#### Fluke 560 and 570 Series Infrared **Thermometers**



#### Fluke 561, 566 and 568 Infrared and **Contact Thermometers**

With a straight-forward user interface and soft-key menus, the Fluke 561, 566 and 568 make even complex measurements easy. With just a few pushes of a button you can easily adjust emissivity, start data logging, or turn on and off alarms. With a rugged, easy-to-use design, the Fluke 561, 566 and 568 can stand up to tough industrial, electrical, and mechanical environments.

- Confidently measure more surfaces, with adjustable emissivity and built-in materials table
- Log and download measurements for reporting (568)
- Two levels of backlight (566, 568)
- Audible and visual alarms
- Min/Max/Dif functions
- Includes KTC bead probe and compatible with any k-type thermocouple
- Two year warranty

| Specifications                        | 561                                   | 566                                   | 568/568 Ex       |  |
|---------------------------------------|---------------------------------------|---------------------------------------|------------------|--|
| Infrared temperature range            | -40 °C to 535 °C                      | -40 °C to 650 °C                      | -40 °C to 800 °C |  |
| Accuracy                              |                                       | Greater of ± 1 % or ± 1 °C            |                  |  |
| Distance to Spot (D:S)                | 12:1                                  | 30:1                                  | 50:1             |  |
| Sighting                              | Laser point                           |                                       |                  |  |
| Typical distance to target            | Up to 2.5 m                           | Up to 4.5 m                           | Up to 7.5 m      |  |
| Contact temperature range             | -40 °C to 550 °C                      |                                       | o 1372 °C        |  |
| Number of on-board memory locations   | _ 20                                  |                                       | 99               |  |
| PC download and software              | -                                     | -                                     | FlukeView® Forms |  |
| Material type adjustment (emissivity) | Hi/Med/Lo                             | Material table or 0.1 to 1.00 by 0.01 |                  |  |
| High and low alarms                   | <ul><li>High and low alarms</li></ul> |                                       | ow alarms        |  |



Fluke 572-2



#### Fluke 572-2 High Temperature **Infrared Thermometer**

The Fluke 572-2 Infrared Thermometer is the one product you can use in high temperature industrial environments all around the world. This is the best choice for when you need accurate results for high temperature readings from a long distance.

- Measure -30 °C to 900 °C
- 60:1 distance to spot ratio with dual laser sighting for fast, accurate targeting
- Last reading Hold (20 seconds)
- High and low temperature alarm
- Data storage and review (99 data sets)
- Compatible with standard mini-connector K-type thermocouples, including ones you already own
- Current Temperature plus MAX, MIN, DIF, AVG displays
- Adjustable emissivity and predefined emissivity table
- FlukeView® Forms documenting software
- · Two year warranty

| Specifications   | 572-2  |
|--|--|
| Infrared temperature range   | -30 °C to 900 °C   |
| Infrared accuracy (calibration geometry with ambient temperature 23 °C $\pm$ 2 °C) | $\geq$ 0 °C: $\pm$ 1 °C or $\pm$ 1 % of the reading, whichever is greater $\geq$ -10 °C to <0 °C: $\pm$ 2 °C <-10 °C: $\pm$ 3 °C |
| Distance:Spot  | 60:1   |
| Laser sighting   | Offset dual laser, output < 1 mW   |
| Hi/Low alarms  | Audible and two-colour visual  |
| Min/Max/Avg/Dif  | Yes  |
| Trigger lock   | Yes  |
| Data storage   | 99 points  |
| K-type thermocouple input temperature range  | -270 °C to 1372 °C   |
| K-type thermocouple input accuracy (with ambient temperature 23 °C $\pm$ 2 °C)     | < -40 °C: $\pm$ (1 °C + 0.2 °/1 °C) $\geq$ -40 °C: $\pm$ 1 % or 1 °C, whichever is greater                                       |

#### **Speciality Model**

#### Fluke 568Ex Intrinsically Safe Infrared **Thermometer**

- Measure -40 °C to 800 °C
- 50:1 distance to spot ratio with dual laser sighting for fast, accurate targeting
- Display resolution 0.1 °C of reading
- Adjustable emissivity and predefined emissivity table
- Safety Certification ATEX/ IECEx for Class1. Div 1 and Div 2 or Zone 1 and 2 hazardous environments

See Intrinsically Safe products on page 135

#### **Recommended Accessories**







80PK-8



**80PK-27** SureGrip™ Surface Temperature Probe *See page 146* 

Clamp Probe e page 146



80PK-18 Pipe Clamp Probe Kit See page 146



Gear Tool Box See page 153

#### **Included Accessories**

560 Series: Thermocouple K-type Velcro Pipe Probe (561 only), K-type Thermocouple Bead Probe (566 & 568 only), FlukeView® Forms Software (568 only), USB Cable (568 only), Hard Carrying Case, Two AA Batteries and User Manual with Measurement Guide.

**572-2:** K-type Thermocouple Bead Probe, USB 2.0 Computer Interface Cable, FlukeView® Forms Documenting Software, Hard Carrying Case, Getting Started Guide and User Manual (CD)

| Ordering Information |                                      |  |
|----------------------|--------------------------------------|--|
| FLK-572-2            | Infrared<br>Thermometer              |  |
| FLUKE-561            | HVACPro Infrared<br>Thermometer      |  |
| FLUKE-566            | IR Thermometer                       |  |
| FLUKE-568            | IR Thermometer                       |  |
| FLUKE-568 Ex         | Intrinsically Safe<br>IR Thermometer |  |

# Fluke 60 Series Infrared Thermometers



Fluke 62 MAX



# Fluke 62 MAX, 62 MAX+ and 64 MAX IR Thermometers

The Fluke 62 MAX, 62 MAX+ and new 64 MAX IR Thermometers have the precision you need to do your job accurately and will not break the budget. Designed and tested to survive a 3 metre drop, you can count on these lightweight, compact infrared thermometers to work when you need them to work–even in the harshest environments and when you're not able to be there.

- Precise laser technology for more accurate and repeatable measurements
- Temperature accuracy of up to ≥ 0 °C: ± 1 °C or ± 1 % of reading whichever is greater with 20:1 distance to spot ratio (64 MAX)
- Flashlight (64 MAX) and large, easy-to-read backlit LCD display for easy viewing even in dark environment
- IP54 rated for extra protection against airborne contaminants
- Get your tool to work when you can't-set time and desired interval between measurements and Auto Capture will capture spot temperatures unattended (64 MAX)
- 99 data point logging (64 MAX)
- Displays the minimum, maximum or average temperature, or the difference between two measurements
- Hi and Lo alarms for rapid display of measurements outside set limits
- Dual rotating lasers to help you identify area to be measured (62 MAX+)
- Small and lightweight, fits easily into your tool box
- Three year warranty

| Specifications     | 62 MAX   | 62 MAX+  | 64 MAX  |
|--------------------|--|--|---|
| Temperature range  | -30 °C to 500 °C   | -30 °C to 650 °C   | - 30 °C to 600 °C   |
| Accuracy           | $\pm$ 1.5 °C or $\pm$ 1.5 % of reading, whichever is greater -10 °C to 0 °C: $\pm$ 2.0 -30 °C to -10 °C: $\pm$ 3.0 | ± 1.0 °C or ± 1.0 % of<br>reading, whichever is<br>greater<br>-10 °C to 0 °C: ± 2.0 -30<br>°C to -10 °C: ± 3.0 | $\pm$ 1.0 °C or $\pm$ 1.0 % of<br>reading, whichever is<br>greater<br>$\pm$ 2.0°C at -10 °C to 0 °C<br>$\pm$ 3.0°C at -30 °C to<br>-10 °C |
| Emissivity         | 0.10 to 1.00   |  |   |
| Optical resolution | 10:1 (calculated at 90<br>% energy)  | 12:1 (calculated at 90 % energy)   | 20 : 1 (calculated at 90% energy)   |
| Compliance         | EN/IEC 61010-1: 2001   |  |   |
| Laser safety       | FDA and EN 60825-1 Class II  |  |   |





luke 61 Fluke 63

#### Fluke 61 and 63 IR Thermometers

Reach for a rugged Fluke 61 or 63 IR Thermometer for measuring surface temperatures of rotating, hard-to-reach, electricity live or dangerously hot targets like electrical motors, panels and heating and ventilation systems.

- · Laser guided sighting system with 1% accuracy
- Up to 12:1 optical resolution
- Backlit display for easy reading in the dark
- Temperatures up to 535°C
- Warranty: Fluke 61 One year, Fluke 63 Two years

| Specifications             | 61  | 63  |
|----------------------------|---|---|
| Measurement<br>Accuracy    | -18 °C to -1 °C ± 3 °C above -1 °C to 275 °C ± 2% of reading or 2°C (With the instrument stable between 23-25 °C) | $ \begin{array}{llllllllllllllllllllllllllllllllllll$ |
| Holds temperature readings | •   | •   |
| Range                      | -18 to 275 °C   | -32 to 535 °C   |
| MIN/MAX/AVG                | N/A   | MAX   |
| Distance to spot ratio     | 8:1   | 12:1  |
| Hi-Lo Alarm                | N/A   | Yes   |
| Emissivity                 | Fixed at 0.95   | Fixed at 0.95   |

#### **Recommended Accessories**





H6 Electrical Tester Holster See page 154

**FLK-TI-TRIPOD**Tripod Mounting
Accessory for 64 MAX
See page 157

#### **Recommended Kits**

Buy more, Save more

#### Fluke T6-600/62 MAX+/1AC-II Infrared Thermometer and Electrical Tester Kit

For more details see page 169

#### Fluke 116/62 MAX+ Technician's Combo Kit

For more details see page 168

#### Fluke 417D/62MAX+ Laser Distance Meter/Infrared Thermometer Combo Kit

For more details see page 172

#### **Included Accessories**

Fluke 64 MAX, 62 MAX and 62 MAX+: Two AA Batteries and Instruction Sheet.

Fluke 61 and 63 IR Thermometers: 9V Battery and Hard Carrying Case.

#### **Ordering Information**

| 014011119 1111                  |  |
|---------------------------------|--|
| FLUKE-61                        | IR Thermometer   |
| FLUKE-62 MAX                    | Single Laser IR<br>Thermometer,<br>10:1 Spot                   |
| FLUKE-62 MAX<br>PLUS (+)        | Dual Laser IR<br>Thermometer,<br>12:1 Spot                     |
| FLUKE 62 MAX+<br>/323/1AC       | IR Thermometer<br>Clamp Meter and<br>Voltage Detector<br>Kit   |
| FLUKE-63                        | IR Thermometer   |
| FLUKE-64 MAX                    | IR Thermometer   |
| FLUKE-T6-<br>600/62MAX+<br>/1AC | T6-600 Tester,<br>62MAX+ &<br>1AC-II Combo<br>Kit              |
| 1587KIT/62<br>MAX+              | 2-in-1 ADV Elec<br>Kit with 62MAX+<br>i400 AC Current<br>Clamp |

#### Fluke 50 Series II Thermometers

#### Lab accuracy in a field thermometer



Fluke 53 II B





The Fluke 50 Series II Contact Thermometers offer fast response and laboratory accuracy in a rugged handheld test tool.

- Laboratory accuracy: ± (0.05 % + 0.3 °C)
- · Large backlit dual display
- Min/Max/Avg
- Electronic offset function maximises overall accuracy
- Supports a wide range of thermocouple types
- Temperatures displayed in °C, °F, or Kelvin (K)
- Three year warranty

# Powerful data logging capabilities

The Fluke 53 II B and 54 II B can log up to 500 points of data to internal memory.

- User-adjustable recording intervals
- Real-time clock captures the exact event time
- Recall function lets logged data be easily reviewed
- Download data to optional FlukeView® PC software



Fluke 52 II

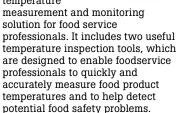
| Specifications                         | 51 II                  | 52 II         | 53 II B       | 54 II B       |
|--|------------------------|---------------|---------------|---------------|
| Thermocouple types                     | J,K,T,E                | J,K,T,E       | J,K,T,E,N,R,S | J,K,T,E,N,R,S |
| Number of inputs                       | Single                 | Dual          | Single        | Dual          |
| Time stamp                             | Relative Time          | Relative Time | Time of Day   | Time of Day   |
| Splash/Dust resistant                  | •                      | •             | •             | •             |
| Dual display with backlight            | •                      | •             | •             | •             |
| Min/Max/Avg recording                  | •                      | •             | •             | •             |
| $(T_1-T_2)$ True differential          | -                      | •             | -             | •             |
| Data logging up to 500 points          | -                      | -             | •             | •             |
| IR data port for interface to PC       | -                      | -             | •             | •             |
| Compatible with FlukeView®<br>Software | -                      | -             | •             | •             |
| Battery life                           | 1000 hours typical, AA |               |               |               |
| Size (HxWxD)                           | 173 x 86 x 38 mm       |               |               |               |
| Weight                                 |                        | 0.4           | ł kg          |               |

| Temperature range and accuracy     |                     |  |
|------------------------------------|---------------------|--|
| J-type Thermocouples               | -210°C to 1200°C    |  |
| K-type Thermocouples               | -200°C to 1372°C    |  |
| T-type Thermocouples               | -250°C to 400°C     |  |
| E-type Thermocouples               | -150°C to 1000°C    |  |
| N-type** Thermocouples             | -200°C to 1300°C    |  |
| R** and S-type** Thermocouples     | 0°C to 1767°C       |  |
| Temperature accuracy above -100°C: |                     |  |
| J, K, T, E, and N-type**           | ± [ 0.05% + 0.3°C ] |  |
| R** and S-type**                   | ± [ 0.05% + 0.4°C ] |  |
| Temperature accuracy below -100°C: |                     |  |
| J, K, E, and N-types               | ± [ 0.20% + 0.3°C ] |  |
| T-type                             | ± [ 0.50% + 0.3°C ] |  |

#### **Speciality Model**

# FlukeFoodPro<sup>™</sup> and FoodPro Plus Food Safety Thermometers

The Fluke FoodPro Thermometer Series provides a complete temperature



The Fluke FoodPro non-contact thermometer is the first line of defense against improper receiving, storage and holding temperatures. Using an infrared measurement technique, the highly accurate FoodPro quickly reads surface temperatures, allowing workers to make rapid and frequent temperature measurements – faster than contact units and without fear of cross contamination. The easy-to-see illumination light shows you the measurement area.

#### **Included Accessories**

Fluke 50 Series Thermometers: Impact Absorbing Holster, Two

Bead Probe Thermocouples 80PK-1 (54 and 52 only), One Bead Probe Thermocouple, 80PK-1 (51 and 53 only).

**Fluke FoodPro (FP):** AA Battery and Ouick Start Guide.

FoodPro Plus (FPP): Built in Contact Probe, 9V Alkaline Battery, Quick Start Guide, Operator's Guide, Soft Carry Pouch

#### **Ordering Information**

| _             |  |
|---------------|--|
| FLUKE-51 II   | Single Input Digital<br>Thermometer                    |
| FLUKE-52 II   | Dual Input Digital<br>Thermometer                      |
| FLUKE 53 II B | Single Input Digital<br>Thermometer w/<br>Data Logging |
| FLUKE 54 II B | Dual Input Digital<br>Thermometer                      |
| FLUKE FP      | FoodPro™ Food<br>Safety Thermometer                    |
| FLUKE FP PLUS | FoodPro™ Plus Food                                     |

Contact your local distributor for price and availability. www.fluke.com/au/wtb

Safety Thermometer

#### Fluke VT04 and VT04A Visual Infrared Thermometers



Fluke VT04



#### **Detect Issues Instantly**

Fluke Visual Infrared Thermometers combine the convenience of a spot thermometer with the visual advantage of an infrared camera creating a brand new tool category.

Compact and intuitive, the Fluke VTO4A and VTO4 Visual Infrared Thermometers blend a visual image with a heat map overlay, to help quickly identify the location of issues. Two year warranty.

Breakthrough affordability: Half the cost of infrared cameras that require training and software.

Built-in digital camera: Every Fluke Visual Infrared thermometer has a built-in digital camera.

Exclusive thermal heat map blending overlay: Blend digital and thermal images to instantly show the exact location of the issue. Blend between 0 %, 25 %, 50%, 75 %, and full thermal with one button.

NEAR and FAR mode: Align the visual and thermal lenses to correctly identify the location of the issue

Centre measurement box: See the exact area of temperature measurement right on the screen

Temperature alarms and automated monitoring features: Identify intermittent problems by monitoring equipment over time or get alerts when a temperature is outside the expected range

SmartView® reporting software: Store up to 10,000 images per GB on included SD card and make professional reports on included professional software.

No training required: Fully automatic with built-in intelligence. True pocket size design: Forty percent smaller than entry-level infrared cameras. Hot and cold spot trackers: Automatically identifies hottest and coldest spots within field of view.

| Key features             | VT04A                    | VT04               |  |  |  |
|--------------------------|--------------------------|--------------------|--|--|--|
| Built-in digital camera  | Yes                      |                    |  |  |  |
| Thermal heat map overlay | Yes, five blend          | ing modes          |  |  |  |
| Image optics system      | PyroBlend™ Plus Optic    |                    |  |  |  |
| Field of view            | 28° x 28°                |                    |  |  |  |
| Hi-Lo temperature alarms | Yes                      |                    |  |  |  |
| Time lapse image capture | Yes                      |                    |  |  |  |
| Auto-monitor alarm       | Yes                      |                    |  |  |  |
| Battery type             | 4 AA batteries           | Li-Ion rechargable |  |  |  |
| Training                 | No training required     |                    |  |  |  |
| Ergonomics               | Slim pocket-sized design |                    |  |  |  |
| Hot and cold markers     | Yes                      |                    |  |  |  |
| Case                     | Soft Case                | Hard Case          |  |  |  |

| General features  |   |
|---|---|
| Battery life  | 8 hours   |
| Temperature measurement range                                   | -10 °C to +250 °C   |
| Temperature measurement accuracy                                | +/- 2 °C or +/- 2 %   |
| Temperature measurement   | Yes, centrepoint  |
| Storage medium (micro SD card)                                  | Stores up to 10,000 images per Gb<br>(4 Gb card included)   |
| Infrared spectral band  | 6.5 μm to 14 μm   |
| Level and span  | Auto  |
| Focus mechanism   | Focus free, no training required with built-in intelligence |
| Focus options - exlusive<br>user selectable NEAR/FAR<br>options | NEAR > 23 cm; FAR < 23 cm                                   |
| Size  | 21 cm x 7.5 cm x 5.5 cm                                     |

#### Recommended Accessories





FLK-VT04-Charger VT04 Battery Charger

FLK-VT04-Battery



Image Not Available

Soft Case for Visual IR Thermometers See page 152

FLK-VT-Holster

#### **Recommended Kits**

Buy more, Save more

#### Fluke VT04 Visual Infrared **Thermometer Maintenance** Combo Kit

- VT04 Visual IR Thermometer
- 1507 Insulation Multimeter

#### Fluke VT04 Vigual Infrared **Thermometer Electrical Combo Kit**

- VTO4 Visual IR Thermometer
- 117 Digital Multimeter
- 376 AC/DC True-RMS Clamp Meter

#### Fluke VT04 Visual Infrared **Thermometer HVAC Combo Kit**

- VTO4 Visual IR Thermometer
- 116 Digital Multimeter
- 902 FC True-RMS HVAC Clamp Meter

For more details see page 172

#### **Included Accessories**

Hard Case (VTO4), Soft Case (VTO4A), Hand Strap, Mini SD Card and Adapter, SmartView® Software on CD, Lithium-ion Battery and Micro USB Charger/Power Supply (including mains adapters) (VTO4) or Four AA Batteries (VTO4A), Quick Start Guide, User Manual.

| Ordering               | Information  |
|------------------------|--|
| FLK-VT04A              | Visual Infrared<br>Thermometer                             |
| FLK-VT04               | Visual Infrared<br>Thermometer                             |
| FLK-VT04-<br>MAINT-KIT | Visual Infrared<br>Thermometer<br>Maintenance<br>Combo Kit |
| FLK-VT04-<br>HVAC-KIT  | Visual Infrared<br>Thermometer<br>HVAC Combo Kit           |
| FLK-VT04-<br>ELEC-KIT  | Visual Infrared Thermometer                                |

**HVAC Combo Kit** 



# Industrial Imagino

# Fluke Infrared Cameras Selection Guide

| Fluke Int | rc        | irec<br>_                        | d Cam  | 16              | era                    | 5 3  | e                 | 160                       | CTIO   | n (  | ٦l  | uiC                      | æ  | •   |   |   |                      |
|-----------|-----------|----------------------------------|--|-----------------|------------------------|--|-------------------|---------------------------|--|--|---|--------------------------|--|---|---|---|----------------------|
|           | TiX580    | 640 x 480 (307,200 pixels)       | Yes, in software. Captures and combines 4x the data to create a 1280 x 960 image |                 | -20 °C to +1,000       | 0.93 mRad, D.S 1065:1                              | 34 °H x 24 °V     |                           | Yes, focused near and far, throughout the field of view    |  | creen   |                          |  |   |   | 2-3 hours continuous use per battery pack     |                      |
|           | TiX501    | 640 x 480 (3                     | No   |                 | -20 °C to +650 °C      | 0.93 mRad  | 34 °H             |                           | No   | e. Time  | displays distance on s  |                          |  | g and sharing   | ared image  | 2-3 hours continu                             |                      |
|           | Ti450 SF6 | 320 x 240                        | Yes, in software. Captures and combines  | SF <sub>6</sub> | -20 °C to +1,200<br>°C | 1.31 mRad, D:S<br>753:1                            | 24 °H x 17 °V     | 15 cm                     | Yes, focused near and far, throughout the<br>field of view | Yes, for consistently in-focus images. Every. Single. Time | Yes, calculates distance to the target for precisely focused images and displays distance on screen | Yes                      | AN (where available)   | Yes*, connect your camera to your smartphone, and images taken automatically upload to the Fluke Connect app for saving and sharing | Yes, adds the context of the visible details to your infrared image                                     | 3-4 hours per<br>battery                      |                      |
|           | Ti480 PRO | 640 x 480 (307,200 pixels)       | Yes, in software. Ca   | _               | -20 °C to +1,000<br>°C | 0.93 mRad, D:S 1065:1                              |                   | 16                        | Yes, focused near a  | or consistently in–focu                                    | the target for precisel   |                          | Yes, to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN (where available) | ly upload to the Fluke  | the context of the visi   | oattery pack                                  | ET.                  |
|           | Ti401 PRO | 640 x 480 (3                     | No   |                 | -20 °C to +650 °C      | 0.93 mRad  | 34 °H x 24 °V     |                           | No   | Yes, f   | calculates distance to  |                          | d later), Android™ 4.3   | yes taken automatical   | Yes, adds   | 2-3 hours continuous use per battery pack     | Two years (standard) |
|           | Ti300+    | 320 x 240<br>(76 800 nixels)     |  |                 | -20 °C to +650 °C      | 1.85 mRad, D:S<br>532:1                            |                   |                           | T.   |  | Yes,  |                          | and iPad® (iOS 4s an   | smartphone, and imag  |   | 2-3 hours                                     |                      |
|           | TiS60+    | 320 x 240<br>(76 800 nixels)     |  |                 | -20 °C to 400 °C       | 1.86 mRad, D:S<br>532:1                            | 34.1 °H x 25.6 °V | 46 cm                     |  |  |   |                          | Yes, to PC, iPhone®  | tyour camera to your  | ls the context of the<br>1 image  | 4 hours continuous<br>use per battery<br>pack |                      |
|           | TiS20+    | 120 x 90<br>(10 800 nixels)      | No   |                 | -20 °C to 150 °C       | 7.6 mRad, D:S 130:1                                | 50° H x 38° V     | 50 cm                     | No   | Fixed Focus  | No  | Fixed Focus              |  | Yes*, connec  | AutoBlend continuous 0 $\%$ to 100 $\%.$ Adds the context of the visible details to your infrared image | ≥ 5 hours<br>continuous<br>(without WiFi)     |                      |
|           | PTi120    | 120 x 90<br>(10 800 nixels)      |  |                 | -20 °C t               | 7.6 mRad,  | 50° H             | 22.8 cm                   |  |  |   |                          |  |   | AutoBlend continuo  | ≥ 2 hours<br>continuous<br>(without WiFi)     |                      |
|           |           | Key Features Infrared Resolution | SuperResolution  | Gas Detection   | Temperature Range      | IFOV with Standard<br>Lens (spatial<br>resolution) | Field of View     | Minimum Focus<br>Distance | MultiSharp Focus   | LaserSharp Auto<br>Focus                                   | Laser Distance Meter  | Advanced Manual<br>Focus | Wireless Connectivity  | Fluke Connect App<br>Compatible   | IR-Fusion Technology  | Battery Life                                  | Warranty             |

#### Fluke Thermal Imaging Software



#### Fluke Connect® Desktop for Thermal Imaging

Get the most out of your thermography program. Create professional inspection reports in minutes while efficiently capturing full radiometric data to support preventive and predictive maintenance programs in the new Fluke Connect® Desktop software.

- Easily edit and optimise images to visualise equipment status
- Combine infrared and visible images for simpler analysis using picture-in-picture mode and image blending
- · Create detailed reports in minutes and save customised report templates
- Connect a camera to your computer wirelessly with the built in Fluke Camera Wifi
- Never lose your data automatically save all your thermal images and reports in the Fluke Connect® cloud storage, accessible anytime on PC or Mobile App
- Organise images and easily search by asset, severity, and image title
- Enhance inspection credibility by incorporating live readings of energised circuits and
  operational equipment from Fluke Connect® enabled test tool into your infrared image
- Share images immediately with team members with the Fluke Connect® Mobile App

Fluke Connect® Desktop has all the same features as SmartView and more, with intuitive navigation interface and the advantage of FREE Fluke Connect cloud storage. Download Fluke Connect® Desktop **FREE** from the Fluke website and the Fluke Connect® Mobile app from the mobile IOS or Android app store.





#### Get more out of your Thermal Inspections with Fluke Connect® Wireless Modules

You can connect up to 5 Fluke Connect® Wireless modules with a Fluke Infrared Camera, incorporating live readings on the infrared image. The below table shows a list of Fluke Connect enabled Test Tools that are compatible with Fluke Infrared Cameras.

#### Fluke Connect® Compatibility Guide

| Fluke Connect® Tools                                    | Fluke<br>Connect <sup>®</sup><br>App | 3000 FC | 902 FC | 376/375<br>/374 FC | a3000 FC<br>a3001 FC | a3002 FC | a3003 FC<br>a3004 FC | v3000 FC | v3001 FC | t3000 FC |
|---|--------------------------------------|---------|--------|--------------------|----------------------|----------|----------------------|----------|----------|----------|
| Fluke Connect App – iOS and Android $^{\text{\tiny M}}$ | •                                    | •       | •      | •                  | •                    | •        | •                    | •        | •        | •        |
| TiX580/501<br>Infrared Cameras                          | •                                    | •       | •      | •                  | •                    | •        | •                    | •        | •        | •        |
| Ti300+/Ti401PRO/Ti480PRO<br>Infrared Cameras            | •                                    | •       | •      | •                  | •                    | •        | •                    | •        | •        | •        |
| PTI120/TiSxx Series<br>Infrared Cameras                 | •                                    | •       | •      | •                  | •                    | •        | •                    | •        | •        | •        |



Download the FREE Fluke Connect® Desktop from the Fluke website and the Fluke Connect® Mobile app from the mobile IOS or Android app store.





#### Fluke PTi120 Pocket Infrared Camera





Fluke PTi120





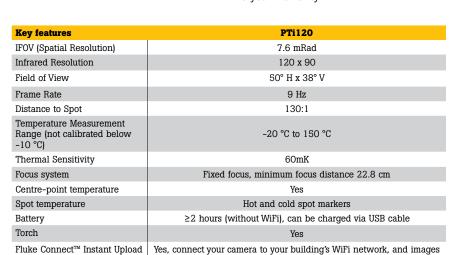
#### Get the infrared troubleshooting power you need that fits in your

A fully radiometric thermal imager with a 3.5" LCD touchscreen that offers IR-Fusion™ to blend a visible light image with an infrared image to easily locate problems. The PTi120 has built in WiFi that allows you to connect your camera to the Fluke Connect® App and share images remotely with your team. Compact and easy to use, the Fluke PTi120 should be your first line of defense with maintenance work.

- 120 x 90 infrared resolution (10,800 pixels)
- -20 °C to 150 °C temperature measurement range

taken automatically upload to the Fluke Connect™ mobile App for storage and viewing on your PC.

- 3.5" (8.89 cm) LCD touchscreen display with intuitive interface for easy troubleshooting
- 1 metre drop tested
- IP54 enclosure rating
- Touchscreen IR-Fusion blends a visible light image with an infrared image, simply slide your finger across the screen to adjust
- Two year warranty



#### Fluke PTi120 Application





#### **Included Accessories**

Soft Case, Lanyard and USB cable.

#### **Ordering Information**

FLK-PTi120 9 Hz Fluke Pocket Infrared Camera

#### Fluke Performance Series Infrared Cameras TiS20+ and TiS60+





Easy-to-use frontline troubleshooting

Easily see potential problems with blended IR and visual image, up to 320 x 240 resolution (TiS60+) on a large 3.5 inch LCD display. The TiS20+ and TiS60+ cameras come in a one-handed pistol grip model that make onsite thermal inspection quicker and easier.

- Get the context of the visual and infrared details all in one precisely blended or picture-in-picture image with IR-Fusion® technology
- Measure up to 400 °C (TiS60+) to handle all applications
- Easy to use fixed focus
- One-handed image capture, review and save capability
- Digitally document critical information with your infrared image using IR-PhotoNotes™ or voice annotation (TiS60+ only)
- Make decisions in real time-wirelessly sync images from your camera, create and email reports all with your smart phone and the Fluke Connect® App
- Wirelessly connect other Fluke Connect® tools and collect other measurements types like electrical and vibration into your thermal image
- Monitor battery charge and avoid unexpected loss of power with the smart battery with LED charge indicator
- Two year warranty







| Key features                                 | TiS20+  | TiS60+  |  |
|--|---|---|--|
| Infrared Resolution                          | 120 x 90 (10,800 pixels)  | 320 x 240 (76,800 pixels)                                   |  |
| IFOV (Spatial Resolution)                    | 7.6 mRad, D:S 130:1   | 1.86 mRad, D:S 532:1  |  |
| Field of View                                | 50° H x 38° V   | 34.1 °H x 25.6 °V   |  |
| Thermal Sensitivity (NETD)**                 | 60 mK   | 45 mK   |  |
| Temperature Measurement<br>Range             | -20 °C to 150 °C  | -20 °C to 400 °C  |  |
| Focus Systems                                | Fixed focus   | Fixed focus   |  |
| Laser Distance Meter                         | •   | -   |  |
| IR-Fusion AutoBlend Continuous 0 % to 100 %. | Yes   | Yes, including Picture in Picture (PIP)                     |  |
| Display                                      | 3.5 inch (landscape) 320 x 240 LCD touch screen   | 3.5 inch (landscape) 320 x 240 LCD                          |  |
| Colour Alarms                                | -   | High temperature, low temperature, isotherms (within range) |  |
| Software                                     | Fluke Connect Desktop Software - full analysis and reporting software with access to the Fluke Connect system |   |  |

#### **Recommended Accessories**





FLK-TI-TRIPOD3 Tripod Mounting Accessory See page 157









TI-CAR CHARGER

FLK-TI-SBC3B Smart Battery Charger See page 157





FLK-TI-BLUETOOTH Bluetooth Headset See page 157

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#### Fluke TiS60+ Applications





#### **Included Accessories**

AC Power Supply, Lithium-ion Smart Battery, USB Cable, Soft Transport Bag. Fluke TiS60+ also includes: Two-Bay Smart Battery Charger, Two Lithium-ion Smart Batteries, 4 GB Micro SD Card, Rugged Hard Carrying Case.

#### **Ordering Information**

FLK-TiS20+ 9 Hz

Infrared Camera Manual Focus

FLK-TIS60+ 30 Hz

Infrared Camera Manual Focus

FLK-TIS60+ 9 Hz

Infrared Camera **Manual Focus** 

# Fluke Professional Series Infrared Cameras Ti300+, Ti401 PRO and Ti480 PRO





Fluke Ti401 PRO

Get clear, accurate focus on objects near and far with MultiSharp  $^{\text{\tiny TM}}$  focus  $^{\text{l}}$ , or focus with laser speed and accuracy on your designated target with LaserSharp® Auto Focus. Easily navigate the menu and view images on a 3.5 inch, 640 x 480 touchscreen. Get more from your camera with an optional 2x or 4x telephoto or wide angle smart lens - no calibration required. New models to the Professional Series family are the Ti300+ and Ti401 PRO Infrared Cameras, capturing smaller temperature differences with increased thermal sensitivity on an intuitive touch screen.

- Get 4x the pixel data with SuperResolution, which captures multiple images and combines them to create a 1280 x 960 image (Ti480 PRO)
- Save time-wirelessly sync images directly from your camera to the Fluke Connect® system, and attach to an asset record or work order
- Reduce the need to take notes in the field with two helpful features:
  - IR-PhotoNotes™ annotation system captures digital images of the surrounding area to reference conditions or actual location
- Any additional details can also be saved to the file with voice annotation
  • Field of view (34 °H x 24 °V)
- · View all your assets with increased accuracy using one of the four optional lenses (macro, wide-angle, 2x telephoto and 4x telephoto)
- Two year warranty

| Key Features                                       | Ti300+   | Ti401 PRO  | Ti480 PRO  |  |  |
|--|--|--|--|--|--|
| Infrared Resolution                                | 320 x 240 (76,800<br>pixels)   | 640 x 480 (30  | 07,200 pixels)   |  |  |
| SuperResolution                                    | No   | No   | Yes, in software. Captures and combines 4x the data to create a 1280 x 960 image |  |  |
| IFOV with Standard<br>Lens<br>(Spatial Resolution) | 1.85 mRad, D:S 532:1   | 0.93 mRad,   | D:S 1065:1   |  |  |
| Field of View                                      |  | 34 °H x 24 °V  |  |  |  |
| Thermal Sensitivity (NETD)**                       | ≤ 0.075 °C at 30 °C  | target temp (75 mK)  | ≤ 0.05 °C at 30 °C target temp (50 mK)   |  |  |
| Temperature<br>Measurement Range                   | −20 °C to +650 °C  | -20 °C to +650 °C  | -20 °C to +1,000 °C  |  |  |
| LaserSharp™ Auto<br>Focus and Manual<br>Focus      | Yes Yes with MultiSharp™ Focus option  |  |  |  |  |
| Laser Distance Meter                               | Yes, calculates distance to the target for precisely focused images and displays distance on screen                                    |  |  |  |  |
| Optional Lenses                                    | Wide angle, 2x and 4x telephoto, 25 micron macro   |  |  |  |  |
| IR-Fusion Technology                               | Yes, adds the context of the visible details to your infrared image  |  |  |  |  |
| Display  | 3.5 inch (la   | ndscape), 640 x 480 LCD To                                 | ouch Screen  |  |  |
| Frame Rate   |  | 60 Hz or 9 Hz versions                                     |  |  |  |
| Voice Annotation                                   |  | recording time per image; r<br>Bluetooth headset available |  |  |  |
| Text Annotation                                    | Yes. Including standar   | d shortcuts as well as user                                | programmable options   |  |  |
| Video Recording                                    | No   | No   | Standard and radiometric   |  |  |
| Remote Control<br>Operation                        | No   | Remote display through<br>Fluke Connect                    | Remote display and<br>control operation<br>through<br>Fluke Connect              |  |  |
| Alarms   | High temperature, 1  | low temperature, and isothe                                | erms (within range)  |  |  |
| Wireless Connectivity                              | Fluke Connect® App compatible. Wireless connectivity to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN |  |  |  |  |
| Software   | Full analysis and reporting software with access to the Fluke Connect® system  |  |  |  |  |

#### **Recommended Accessories**





FLK-LENS/TELE2 (2x magnification) See page 60

FLK-LENS/WIDE2 Telephoto Infrared Lens Wide-angle Infrared Lens See page 60





FLK-TI-VISOR3 Thermal Imager Visor See page 157

TI-TRIPOD3 Tripod Mounting Base Accessory See page 157





FLK-TI-BLUETOOTH Bluetooth Hands See page 157

TI SBP3 Smart Battery See page 157





FLK-TI-SBC3B Additional Smart Battery Charger See page 157

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#### **Included Accessories**

AC Power Supply and Battery Pack Charger, Two Rugged Lithium-Ion Smart Battery Packs, USB Cable, HDMI Video Cable, 4GB Micro SD Card, Adjustable Hand Strap.

#### **Ordering Information**

| Infrared Camera |
|-----------------|
| Infrared Camera |
|                 |

#### Fluke Ti450 SF<sub>6</sub> Gas Detector



Fluke Ti450 SF6



# $SF_6$ gas leak detector combined with Fluke's top performing pistol grip Infrared Camera

Increase efficiency and save money with Fluke Ti450 SF6 Gas Leak Detector that delivers pinpoint, state-of-the-art SF6 detection – conduct two critical functions with a single tool. Best of all, it's affordable enough to own, so you can conduct infrared and gas inspections whenever and wherever you want without having to pay heavy rental charges or hire expensive contractors.

- Detects and pinpoints the exact location of the SF<sub>6</sub> leak – without shutting down equipment
- Quick entry/exit button allowing quick toggling between gas imaging and infrared mode
- 320 x 240 resolution for gas and infrared images; SuperResolution increases to 640 x 480, only in infrared mode
- Get in-focus images in both infrared and gas modes with a touch of a button with LaserSharp® Auto Focus
- Wirelessly connect your camera to the Fluke Connect® system to make faster decisions. Team members can see the same data and collaborate on identifying the problem or authorise work before you've left the inspection site
- Compatible with smart lenses that require no calibration when swapping them between compatible cameras
- Optimise images, perform analytics, generate quick, customisable reports and export images to the format of your choice with Smart-View® desktop software, included with your purchase
- Capture clear, accurate infrared images focused throughout the entire field of view with MultiSharp™ Focus
- HDMI eye piece that aids users to detect gas leaks more effectively
- Two year warranty

| Key Features                                 | Ti450 SF6  |
|--|--|
| Infrared Resolution                          | 320 x 240 (76,800 pixels)  |
| SuperResolution                              | 320 x 240 (76,800 pixels) on gas mode<br>640 x 480 (307,200 pixels) on infrared mode                         |
| IFOV with Standard Lens (Spatial Resolution) | 1.31 mRad, D:S 753:1   |
| Field of View                                | 24 °H x 17 °V  |
| Thermal Sensitivity (NETD)**                 | ≤ 0.025 °C at 30 °C target temp (25 mK)  |
| Temperature Measurement<br>Range             | -20 °C to +1200 °C   |
| Focus Systems                                | LaserSharp™ Auto Focus and MultiSharp Focus with built-in Laser distance meter and advanced manual focus     |
| Laser Distance Meter                         | Yes, calculates distance to the target for precisely focused images and displays distance on screen          |
| Optional Lenses                              | Wide Angle, 2x and 4x Telephoto, 25 Micron Macro   |
| Wireless Connectivity                        | To PC, iPhone® and iPad® (iOS 4s and later),<br>Android™ 4.3 and up, and WiFi                                |
| IR-Fusion Technology                         | Yes, adds the context of the visible details to your infrared image  |
| Picture-in-Picture (PIP)                     | Yes  |
| Display                                      | 3.5 inch (landscape) 640 x 480 LCD Touchscreen   |
| Ergonomic Design                             | Rugged, ergonomic design for one-handed use  |
| Frame Rate                                   | 60 Hz  |
| Software                                     | Fluke Connect® Desktop software—full analysis and reporting software with access to the Fluke Connect system |
| Voice annotation                             | Yes  |
| Text annotation                              | Yes  |
| Video recording                              | Standard and radiometric   |
| Remote control operation                     | Yes, through Fluke Connect® Desktop software or<br>Fluke Connect® mobile app                                 |
| Colour Alarms                                | High temperature, low temperature, and isotherms (within range)  |

#### **Recommended Accessories**



FLK-LENS/4XTELE2
Telephoto Infrared Lens
(4x magnification)
See page 60



**FLK-LENS/WIDE2** Wide-angle Infrared Lens See page 60



**FLK-TI-VISOR3**Thermal Imager Visor
See page 157



**TI-TRIPOD3**Tripod Mounting
Base Accessory
See page 157



FLK-TI-BLUETOOTH Bluetooth Handset See page 157



TI SBP3
Additional
Smart Battery
See page 157

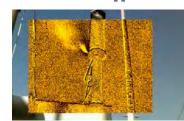


FLK-TI-SBC3B
Additional
Smart Battery Charger
See page 157



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#### **Fluke Ti450 SF6 Application**





#### **Included Accessories**

AC Power Supply, Battery Pack Charger, Two Rugged Lithium Ion Smart Battery Packs, USB Cable, HDMI Video Cable, 4 GB Micro SD Card, HDMI Eye Piece, 2x Infrared Telephoto Lens; Tripod Holder, Adjustable Hand Strap, Hard Carrying Case.

#### **Ordering Information**

FLK-TI450 SF6 60Hz Gas Detector and Infrared Camera

#### Fluke Expert Series Infrared Cameras TiX501, TiX580, TiX620 and TiX1000



Fluke TiX580



Fluke TiX501



FlukeTiX1000

#### LaserSharp® Auto Focus

Get an in-focus image like never before with just a touch of a button. LaserSharp  $^{\rm \tiny B}$  Auto Focus, exclusive to Fluke, uses its built-in laser distance meter to calculate the distance to your designated target with pinpoint accuracy. On target and in-focus. Every. Single. Time.

#### **Brilliant Image Quality**

Enhanced image quality and temperature measurement accuracy - turn your 640 x 480 images (307,200 pixels) into 1280 x 960 images (1,228,800 pixels). That's 4x the resolution and pixels with SuperResolution.

| Key Features                 | TiX1000   | TiX620  | TiX580  | TiX501                              |  |  |
|------------------------------|---|---|---|-------------------------------------|--|--|
| Infrared Resolution          | 1024 x 768<br>(786,432 pixels)<br>SuperResolution<br>mode: 2048 x 1536<br>(3,145,728 pixels)  | St  | 0 x 480 (307,200 pixel) uperResolution mode: 0 (1,228,800 pixels)(not TiX501) |                                     |  |  |
| IFOV (Spatial<br>Resolution) | 0.6 mRad  | 0.85 mRad   | 0.93  | mRad                                |  |  |
| Field of View                | 32.7° H x   | 24.0° V   | 34 °H :   | x 24 °V                             |  |  |
| Distance to Spot             | 1765:1  | 1065:1  | 75  | 3.:1                                |  |  |
| Thermal Sensitivity*         | ≤ 0.05 °C at 30 °C target temp (50 mK)  | ≤ 0.04 °C at 30 °C target temp (40 mK)                          |   | C target temp (50<br>K)             |  |  |
| Temperature Range            | -40 °C to +1200 °C<br>(up to 2000 °C)   | -40 °C to +600 °C<br>(up to 2000 °C)                            | -20 °C to +1,000 °C   | -20 °C to +650 °C                   |  |  |
| Optional lenses              | 2 wide angle, 2<br>telephoto, 3 macro<br>and 1 standard   | 1 wide angle and<br>1 telephoto                                 |   | art optional lenses<br>2x telephoto |  |  |
| Wireless Connectivity        | Fluke Connect* app compatible. Wireless connectivity to PC, iPhone and iPad* (iOS 4s and later), Android 4.3 and up, and WiFi to LAN¹ |   |   |                                     |  |  |
| IR-Fusion®                   | AutoBlend™ mode, continuous blending  |   |   |                                     |  |  |
| Picture-In-Picture (PIP)     | Picture-in-Picture  |   |   |                                     |  |  |
| Software                     | Flu   | ke Connect® (web,   | mobile and desktop  | 0)                                  |  |  |
| Video recording              | Standard and radiometric  |   |   |                                     |  |  |
| Alarms                       | High tempera  | High temperature, low temperature, and isotherms (within range) |   |                                     |  |  |

#### Tablet sized screen, more details, faster decisions

You need maximum flexibility with an ergonomic design that allows you to easily navigate over, under and around hard-to-reach objects. With a lens that rotates a full 240 degrees and a tabletsized 5.7 inch touchscreen LCD, you can aim and focus from a comfortable angle and easily capture the target that was once impossible to see.

#### Resolution

TiX501, TiX580 and TiX620: 640 x 480 (307,200 pixels)

TiX1000: 1024 x 768 resolution (786,432 pixels)

#### Temperature range

TiX501 -20 °C to +650 °C TiX580 -20 °C to +1000 °C TiX620 -40 °C to +600 °C TiX1000 -40 °C to +1200 °C (high temperature option request at time of order up to 2000 °C)

- Premium in-field viewing experience with a 5.7 inch responsive touchscreen LCD
- Integration capability with third-party R&D software such as Matlab and LabView
- See the details you need with smart lenses-2x and 4x telephoto, wide angle, and 25 micron macro-no calibration required, interchangeable between compatible cameras
- See, save and share from the field and connect to the largest selection of wireless test and measurement tools with the Fluke Connect® App
- Two year warranty
- <sup>1</sup> Compared to industrial handheld infrared cameras with 320x240 detector resolution as of September 1, 2015
- <sup>2</sup>Up to 30 metres
- <sup>3</sup> Compared to a 3.5 inch screen.

### **Recommended Accessories** FLK-LENS/TELE2 FLK-LENS/WIDE2 Telephoto Infrared Lens Wid angle Infrared See page 60 (2x magnification) See page 60 FLK-LENS/25MAC2 FLK-LENS/4XTELE2 elephoto Infrared Lens (4x magnification) Infrared 25 Micron Macro Lens See page 60 See page 60 TI-CAR-CHARGER FLK-TI-BLUETOOTH Bluetooth Headse See page 157 See page 157 FLK-TIX5XX-NECK

#### **Included Accessories**

AC Power Supply and Battery Pack Charger, Two Lithium-ion Smart Battery Packs, USB Cable, HDMI Video Cable, Hard Carrying Case, Adjustable Neck and Hand Strap, Bluetooth Headset (where available), Warranty Registration Card and Calibration Certificate. Flash Drive includes Product Manuals and SmartView® Software.

| <b>Ordering Infor</b> | mation          |
|-----------------------|-----------------|
| FLK-TiX501 60Hz       | Infrared Camera |
| FLK-TiX501 9Hz        | Infrared Camera |
| FLK-TiX580 60Hz       | Infrared Camera |
| FLK-TiX580 9Hz        | Infrared Camera |
| FLK-TIX620 60Hz       | Infrared Camera |
| FLK-TIX620 9Hz        | Infrared Camera |
| FLK-TIX1000 60Hz      | Infrared Camera |
| FLK-TIX1000 9HZ       | Infrared Camera |

#### Fluke Lenses

#### Telephoto, Wide Angle and Macro

Extend your applications with optional IR lenses, compatible with Fluke Professional and Expert Series Cameras: 2x and 4x telephoto, macro as small as 25 microns, and wide angle.

#### **Telephoto Lenses**

The difference between finding and potentially diagnosing the problem, and not seeing any discrepancy at all. Get the detail you need, even from a distance, when you view your target magnified 2 or 4 times more than a standard lens.







Standard

2x Telephoto

4x Telephoto



#### **Wide Angle Lenses**

When working in a tight space, see a larger target from a close distance. Ideal for roof and building inspection or for looking through IR Windows.





Standard Lens

Wide Lens see both sides of the building at once from the same distance



#### **Macro Lenses**

Get an incredibly detailed image of very small objects-as small as 25 microns, smaller than the average human hair.





Standard

25 Micron Macro Lens -see detail in very small objects

| Model number  | Ti300+ | Ti401PRO/<br>Ti480PRO | TiX501/<br>TiX580 | TiX620/<br>TiX1000 |
|---|--------|-----------------------|-------------------|--------------------|
| TI-LENS/TELE2<br>2x Telephoto infrared smart lens†        | •      | •                     | •                 |                    |
| TI-LENS/WIDE2<br>Wide Angle Infrared Smart Lens†          | •      | •                     | •                 |                    |
| FLK-Lens/4xTele2<br>4x Telephoto infrared smart lens†     | •      | •                     | •                 |                    |
| FLK-Lens/25Mac2<br>25 Micron macro infrared smart lens†   | •      | •                     | •                 |                    |
| FLK-XLens/SupWide<br>Super wide-angle lens                |        |                       |                   | •                  |
| FLK-XLens/Wide<br>Wide-angle lens                         |        |                       |                   | •                  |
| FLK-XLens/Stan<br>Standard lens                           |        |                       |                   | •                  |
| FLK-XLens/Tele<br>Telephoto lens                          |        |                       |                   | •                  |
| FLK-XLens/SupTele<br>Super telephoto lens                 |        |                       |                   | •                  |
| FLK-Xlens/Macrol<br>Close-up 0.2x                         |        |                       |                   | •                  |
| FLK-Xlens/Macro2<br>Close-up 0.5x; 34.3 x 25.3mm²; 32 um; |        |                       |                   | •                  |
| FLK-Xlens/Macro3<br>Close-up 0.5x                         |        |                       |                   | •                  |

†The lenses for TiX580, TiX501, Ti480PRO, Ti401PRO and Ti300+ are smart lenses.

They come pre-calibrated and don't require calibration to a specific camera, so they are interchangeable between compatible cameras. Lenses for TiX1000 and TiX620 require calibration to the specific camera.

#### **Fluke Lens Application**



| Ordering | Information |
|----------|-------------|
|          |             |

| FLK-LENS | 2x Telephoto  |  |  |
|----------|---------------|--|--|
| /TELE2   | Infrared Smar |  |  |
|          | Lens          |  |  |

| FLK-LENS | 4x Telephoto  |
|----------|---------------|
| /4XTELE2 | Infrared Smar |

Lens

FLK-XLENS 2x Telephoto /TELE Infrared Lens (TiX1000, TiX660, TiX640)

**FLK-XLENS** 4x Telephoto /SUPTELE Infrared Lens (TiX1000, TiX660,

TiX640)

**FLK-LENS** Wide Angle

/WIDE2 Infrared Smart Lens

FLK-XLENS Wide Angle /WIDE Infrared Lens (TiX1000, TiX660,

**FLK-XLENS** Super Wide Angle /SUP-WIDE

TiX640)

Infrared Lens (TiX1000, TiX660, TiX640)

**FLK-LENS** 25 Micron Macro /25MAC2 **Infrared Smart** Lens

FLK-XLENS 81 Micron /MACRO1 (TiX1000) or 119 Micron (TiX660/640)

Macro Infrared Lens

FLK-XLENS 32 Micron /MACRO2 (TiX1000) or 47 Micron (TiX660/640) Macro Infrared

FLK-XLENS

35 Micron /MACRO3 (TiX1000) or 50 micron (TiX660/640) Macro Infrared

Lens

Lens

#### Fluke CV Series ClirVu® Infrared Windows





Fluke CV200

Fluke CV300





#### Compliance without compromise. Safety without sacrifice.

Increase the safety and speed of electrical thermal imaging inspections with the Fluke ClirVu® IR Windows Reduce the risk of arc-flash and electrocution, increase the safety of your personnel and reduce the time and cost of preventive

- Save time with a quick and easy 5 minutes or less installation
  - One technician
  - One hole with standard Greenlee® punch
  - Panel door does not need to be removed
  - Grounds instantly to metal enclosure with patent-pending AutoGround™ process
  - Maintains panel arc test ratings up to 63kA when properly installed
- Torture Tested™ to the highest arc blast test ratings
   IEEE C37.20.7: 63 kA Arc tested at KEMA,
  - UL50/50E/50V, UL1558, IEC60529-1: IP67, IEC 60068, NEMA 4/12, CSA C22.2 NO. 14-13:2012,
- Convenience of both quick turn (CV400, CV300, CV200) or security keyed access (C401, CV301, CV201)
- Fluke IR Windows offered in three sizes 50 mm, 75 mm and 95 mm
- Work permit requirements and NFPA 70E processes are significantly reduced
- Full PPE is often not required so inspections are done faster and more comfortable
- Lifetime replacement warranty against manufacturing defects

| Specifications                         | CV400  | CV401           | CA300                    | CV301           | CV200         | CV201           |
|--|--|-----------------|--------------------------|-----------------|---------------|-----------------|
| Size                                   | 95 mm 75 mm 50 mm  |                 |                          | mm              |               |                 |
| Voltage Range                          |  |                 | Aı                       | ny              |               |                 |
| NEMA Environment Type                  |  | T               | Type 4/12 (in            | door/outdoo     | r)            |                 |
| AutoGround™                            |  |                 | Υe                       | es              |               |                 |
| ClirVu® Optic                          |  |                 | Ye                       | es              |               |                 |
| Operating temperature                  |  | -40 °C to       | + 232 °C and             | d + 260°C Ir    | ntermittent   |                 |
| Body material                          | F  | EZAC & ZA-2     | 7 High Stren             | gth Zinc/ Al    | uminum Alloy  | 7               |
| Ratings and testing                    |  |                 |                          |                 |               |                 |
| Arc-Tested (IEEE C37.20.7)             |  | 63 kA           | A for 30 cycle           | s @ 60Hz at     | KEMA          |                 |
| UL 50V component recognition           | Yes  |                 |                          |                 |               |                 |
| UL 50/NEMA Environmental<br>Rating     | NEMA Type 4/12   |                 |                          |                 |               |                 |
| UL 1558                                | Yes  |                 |                          |                 |               |                 |
| CSA C22.2 No.                          | Yes  |                 |                          |                 |               |                 |
| CSA Type Rating                        | Type 4   |                 |                          |                 |               |                 |
| IP rating                              | IP67 at TUV  |                 |                          |                 |               |                 |
| Lloyds Register                        | Up to 11 kV marine switchgear, indoor or outdoor (offshore only) |                 |                          |                 |               |                 |
| Vibration rating                       | IEC60068-2-6 at TUV  |                 |                          |                 |               |                 |
| Humidity rating                        | IEC60068-2-3 at TUV  |                 |                          |                 |               |                 |
| Install                                |  |                 |                          |                 |               |                 |
| Actual mounting hole diameter required | 115.42 mm  |                 | 89.89 mm                 |                 | 61.37 mm      |                 |
| Greenlee Punch Kit = Punch/<br>Die     | 742BB =<br>2984AV/2983AV   |                 | 739BB =<br>1431AV/1432AV |                 | 76B<br>441AV/ | _               |
| Door Latch                             | Hand Turn  | Security<br>Key | Hand Turn                | Security<br>Key | Hand Turn     | Security<br>Key |
| Optics                                 |  |                 |                          |                 |               |                 |
| Optic insert diameter                  | 95 1   | mm              | 75 1                     | mm              | 50 1          | mm              |

#### **Quick & Easy Installation** in 5 minutes or less







#### **Included Accessories**

Hand Turn Door Latch (CV200, 300 & 400), Security Key Door Latch (CV201, 301 & 401) and Warranty Statement.

Fluke IR Windows are supplied complete, assembled and ready for installation.

#### **Ordering Information**

FLUKE-CV200 50 mm, Infrared Window, Hand

Turn Door Latch

FLUKE-CV201 50 mm, Infrared Window, Security

Key Door Latch

FLUKE-CV300 75 mm, Infrared

Window, Hand Turn Door Latch

FLUKE-CV301 75 mm, Infrared

Window, Security **Key Door Latch** 

FLUKE-CV400 95 mm, Infrared

Window, Hand Turn Door Latch

FLUKE-CV401 95 mm, Infrared Window, Security

Key Door Latch

# Fluke ii900 Sonic Industrial Imager





Fluke ii900



# A fast, simple way to detect compressed air, steam, gas and vacuum leaks

Equipped with an array of microphones for an expanded field-of-view, the handheld Fluke ii900 Sonic Industrial Imager enables maintenance teams to quickly and accurately locate air, gas and vacuum leaks in compressed air systems; even in noisy environments

- 7" LCD Touchscreen
- Frequency band of 2kHz to 52kHz (detected 150ml/ min leak at 7 bar for 10 mins)
- SoundMap™ overlay for visual leak detection
- Capture images in JPEG or PNG format with user input notes function
- Capture videos in MP4 format
- Manual frequency filtering
- Two year warranty

#### New SoundSight™ Technology

Specifically designed for noisy production facilities the new SoundSight<sup>TM</sup> technology is simple to learn and easy to implement. The T'' LCD touchscreen overlays a SoundMap<sup>TM</sup> on a visual image for quick leak location identification. The straightforward, intuitive interface allows technicians to isolate the sound frequency of the leak to filter out loud background noise. In a matter of hours, the team can inspect the entire plant – during peak operations. For the first time, you can quickly and easily identify the air leak repairs needed to ensure efficient operations and reduce utility bills. Images can be saved and exported for reporting purposes. Never leave air leaks unattended again.

#### With minimal training, the ii900 enables you to:

- Fast, simple leak location identification
- Optimise air compressors—delay the capital expense of installing additional compressors
- Ensure proper air pressure to pneumatic equipment
- Lower energy and gas costs
- Reduce leak detection time
- Improve reliability of the production line
- · Make leak detection part of the typical maintenance routine
- · Train the team in a matter of minutes
- Validate repairs on the spot

| Key Features                   | ii900   |
|--------------------------------|---|
| Sensor                         |   |
| # of Microphones               | 64 digital MEMS microphones   |
| Frequency Band                 | 2 kHz to 52 kHz   |
| Sound Pressure Sensitivity     | 150 ml/min leak at 7 bar from 10 metres   |
| Operational Distance Range     | 0.5 to 50 metres  |
| Built-in Digital Camera (visib | le light)   |
| Field of view                  | 65 ° ± 3 °  |
| Focus                          | Fixed lens  |
| <b>Acoustic Measurements</b>   |   |
| Measurement Range              | 29.7 dB to 120 dB SPL at 2kHz<br>16 dB to 106.3 dB SPL (± 1 dB) at 19 kHz<br>21.4 dB to 117 dB SPL (± 1 dB) at 52 kHz |
| <b>General Specifications</b>  |   |
| Battery Life                   | ≥2 hours (product includes spare battery)   |
| Main Unit Rating               | IP40 protection against particles 1mm or greater and dripping water   |
| Sensor Head Rating             | IP51  |

#### **Recommended Accessories**





BP291 4500 mAh capacity Li-ion Battery

EBC290 External Battery Charger See page 162





FLK-TIX5XX-NECK Neck Strap

CXT1000 Hard Carry Case See page 153

#### Fluke ii900 Application





#### **Included Accessories**

AC Power Supply, Battery Pack Charger, Two Rugged Lithium Ion Smart Battery Packs, USB Cable, Rugged, Hard Carrying Case, Two Rubber Array Covers, Adjustable Hand Strap and Neck Strap.

#### **Ordering Information**

Fluke-II900 Sonic Industrial Imager

# Fluke DS701 and DS703 FC High Resolution Diagnostic Scopes





Gritty, industrial, expensive equipment? Diagnose before teardown with the durability of Fluke

Industrial inspections require a powerful diagnostic borescope designed to stand up to the dirtiest, most harsh environments. Fluke Diagnostic Scopes put high-resolution images in the palm of your hand.

- High definition probe with dual-view camera
- High Resolution
   DS701 800 x 600 (480,000 pixels)
   DS703 FC- 1200 x 720 (864,000 pixels)
- Processing speeds that render a smooth, clear, consistent image
- 7" LCD screen for easy viewing
- Macro to micro zoom function
- Adjustable lighting to capture the best image
- Up is Up® technology for an appropriate orientation, regardless of the probe location
- True 720p video
- Two year warranty



Rugged, industrial  $800 \times 600$  resolution Diagnostic Scope with dual view probe. Inspection camera with 7" LCD screen for accurate diagnostics in difficult to reach spaces. Adjustable LED lighting and digital zoom for quality images. Up is Up® technology rotates the display screen to allow for consistent image display, regardless of the orientation of the probe. Intuitive user interface with easy to navigate button technology.

# Fluke DS703 FC High Resolution Diagnostic Scope with Fluke Connect®

Rugged, high-definition industrial  $1280 \times 720$  resolution Diagnostic Scope with Wi-Fi capability. 7'' capacitive touch screen for accurate diagnostics in difficult to reach spaces. 720p video recording inspection camera. Up is  $Up^{**}$  technology rotates the display screen to allow for consistent image display, regardless of the orientation of the probe.

| pecifcations                | DS701   | DS703 FC                                  |  |
|-----------------------------|---|---|--|
| Length                      | 1.2 metre   |   |  |
| Туре                        |   | of, immersible to 1 metre or more in epth |  |
| Diameter                    | 8.5 mm, optional 3.8, 5.5 and 9 mm probes available |   |  |
| Material                    | Elastomer   | coated steel                              |  |
| Lighting                    | Adjustable LED, o                                   | one front, one side                       |  |
| Illumination                | 53  | Flux                                      |  |
| Camera                      | Dual view camera                                    | a, forward and side                       |  |
| Resolution                  | 800 x 600 (480,000 pixels)                          | 1200 x 720 (864,000 pixels)               |  |
| Still image format          | J   | PG  |  |
| Video recording format      | AVI   |   |  |
| Video output format         | MPEG compression                                    |   |  |
| Digital zoom                | Adjustable from 1x to 8x zoom                       |   |  |
| Field of view               | 6   | 8°  |  |
| Depth of field              | 25 mm to infinity                                   |   |  |
| Video resolution            | Standard  | 720p                                      |  |
| Minimum focus distance      | 10  | mm  |  |
| Focus type                  | Fi  | xed                                       |  |
| Rotation                    | 18  | 80°                                       |  |
| Streaming video             |   | Via HDMI and Fluke Connect®               |  |
| LCD screen                  |   |   |  |
| Touch screen                |   | Capacitive touch screen                   |  |
| Size                        | 17.79 cm  |   |  |
| Refresh rate                | 30 hz   |   |  |
| UpisUp® technology          | Real-time upright a                                 | adjustment for image                      |  |
| LED backlight               | Adjust display brightn                              | ess for optimal viewing                   |  |
| Instant upload to the cloud |   | Yes, with Fluke Connect®                  |  |

# Image Not Available FLK-3.8MM Scope 1M probe, forward view FLK-5.5MM Scope 1M probe, forward view FLK-8.5MM Scope 2M probe, dual view FLK-8.5MM Scope 1M probe, dual view FLK-9.5MM Scope 2M probe, dual view FLK-9.5MM Scope Porward view, 20M probe reel

#### Fluke DS703 FC Application



#### **Included Accessories**

Hand Strap (DS703 FC Only), USB Cable, AC Power Supply/Battery Charger, TPAK Magnetic Hanger, Protective EVA Case.

#### **Ordering Information**

FLK-DS701 Diagnostic Scope

FLK-DS703 FC High Resolution
Diagnostic Scope



#### Fluke 975 AirMeter™

#### Simple, one-touch air velocity



Fluke 975



The Fluke 975 AirMeter™ raises indoor air monitoring to the next level by combining five powerful tools in one rugged and easy-to-use handheld device. The Fluke 975 offers an unparalleled feature-set for HVAC and facilities technicians, helping them work more quickly and accurately, with the ease of use and durability customers expect from a Fluke meter.

Use the AirMeter to respond to comfort-related calls from occupants, verify the operation of building HVAC control systems and determine whether adequate ventilation exists. Also be able to monitor air flow and velocity, test for dangerous carbon monoxide leaks, perform duct traversals and optimise HVAC systems to manage energy costs.

- · Simultaneously measures, logs and displays temperature, humidity, CO<sub>2</sub> and CO on a bright, backlit LCD display
- % of outside air calculation
- One-touch air flow and velocity with available probe\*
- Dew point and wet bulb temperature
- CO<sub>2</sub> and CO field calibration feature
- Min/Max/Avg on all measured and calculated readings
- Audible and visual threshold alarms
- Extensive discrete or continuous data logging capacity, downloadable to PC via USB interface
- Includes NIST-traceable certificate of calibration
- · Automatically compensates for barometric pressure
- Two year warranty

\*Included with Fluke 975V, optional with Fluke 975.

| Feature                                   | Range   | Display resolution      | Accuracy   |
|---|---|-------------------------|--|
| Measured specifications                   |   |                         |  |
| Temperature                               | -20 °C to 60 °C                                   | 0.1 °C                  | ± 0.9 °C from 40 °C to 60 °C<br>± 0.5 °C from 5 °C to 40 °C<br>± 1.1 °C from -20 °C to 5 °C  |
| Relative humidity                         | 10 % to 90 % RH<br>non-condensing                 | 1 %                     | ± 2 % RH (10 % RH to 90 % RH)  |
| Air velocity                              | 50 fpm to 3000<br>fpm 0.25 m/sec<br>to 15 m/sec   | 1 fpm<br>0.005m/sec     | 4 % or 4 fpm<br>3 % or 0.015 m/sec<br>whichever is greater<br>Accuracy specification only valid for<br>velocity readings above 50 fpm.         |
| CO <sub>2</sub>                           | 0 to 5000 ppm                                     | 1 ppm                   | Warm up time 1 min<br>(5 minutes for full specification)<br>2.75 % + 75 ppm  |
| CO  | 0 to 500 ppm                                      | 1 ppm                   | ± 5 % or ± 3 ppm, whichever is greater, @ 20 °C and 50 % RH  |
| Calculated specifications                 |   |                         |  |
| Dew point temperature                     | -44 °C to 57 °C                                   | 0.1 °C                  | ± 1 °C when temp: -20 °C to 60 °C<br>RH: 40 % to 90 %<br>± 2 °C when temp: -20 °C to 60 °C<br>RH: 20 % to 40 %<br>± 4 °C when RH: 10 % to 20 % |
| Wet bulb temperature                      | -16 °C to 57 °C                                   | 0.1 °C                  | ± 1.2 °C when RH: 20 % to 90 % temp: -20 °C to 60 °C ± 2.1 °C when RH: 10 % to 20 %  |
| Volume flow rate (in a duct)              | 0 to 3,965 M <sup>3</sup> /m<br>0 to 140,000 cfm) | 0.001 M³/min<br>(1 cfm) | N/A: The volume flow calculation will be a simple average of the data points times the duct area   |
| % outside air (based on temperature)      | 0 to 100 %  | 0.1 %                   | N/A  |
| % outside air (based on CO <sub>2</sub> ) | 0 to 100 %  | 0.1 %                   | N/A  |

#### **Recommended Accessories**



#### Fluke 975VP

AirMeter Velocity Probe for use with Fluke 975 AirMeter.

#### **Recommended Kits**

Buy more, Save more



#### Fluke 975V AirMeter **Calibration Kit** with Velocity Probe

For more details see page 172

#### **Fluke 975 Application**



#### **Included Accessories**

Three AA Alkaline Batteries, User Manual, Calibration Cap, FlukeView® Forms Software, Power Plug, Power Adapter, Air Velocity Probe (Fluke 975V).

#### **Ordering Information**

FLUKE-975

AirMeter™

FLUKE-975V

AirMeter™ with

Velocity

FLUKE-975VP Air Velocity

Probe

#### Fluke 922 Airflow Meter/Micromanometer



#### The Fluke 922 helps you analyse airflow easily

The Fluke 922 makes airflow measurements easy by combining three tools: differential pressure, airflow, and velocity into a single, rugged meter. The 922 was designed and built for how (and where) you do your job, with performance, ruggedness and ease of use, setting the Fluke 922 apart from the competition. The bright white display and ruggedised holster and wrist strap let you take the Fluke 922 into less than ideal environments. The colour-coded hoses help you keep track of where your readings are coming from. The simple, intuitive interface means you can measure pressure, velocity, or airflow at the push of a button.

- Powerful meter provides differential and static pressure, air velocity and flow readings
- Convenient coloured hoses help proper interpretation of pressure readings
- Easy to use without sacrificing performance
- · Bright, backlit display for clear viewing
- User-defined duct shape and size for maximum airflow accuracy
- Resolution down to 0.001 in H20
- 99 point data storage capacity
- Min/Max/Average/Hold functions for easy data analysis
- Auto power off saves battery life
- Two year warranty



#### Use the Fluke 922 Micromanometer to:

- Measure pressure drops across key HVAC equipment to drive peak performance and extend equipment life
- · Match ventilation to occupant loads
- Monitor indoor vs. outdoor pressure relationships and manage the building envelope
- Promote indoor comfort and quality
- Perform duct traversals for accurate airflow readings

| Specifications              | 922  |
|-----------------------------|--|
| Operating Temperature       | 0 °C to +50 °C   |
| Storage Temperature         | -40 °C to +60 °C   |
| Operating Relative Humidity | Non condensing (< 10 °C)<br>90% RH (10 °C to 30 °C)<br>75% RH (30 °C to 40 °C)<br>45% RH (40 °C to 50 °C) without Condensation |
| IP Rating                   | IP40   |
| Operating Altitude          | 2000 m   |
| Storage Altitude            | 12000 m  |
| EMI, RFI, EMC               | Meets requirements for EN61326-1   |
| Vibration                   | MIL-PREF-28800F, Class 3   |
| Max Pressure at Each Port   | 10 PSI   |
| Data storage                | 99 readings  |
| Size (HxWxD)                | 175 mm x 77.5 mm x 41.9 mm   |
| Weight                      | 0.64 kg  |
| Battery                     | Four AA batteries  |
| Battery Life                | 375 hours without backlight, 80 hours with backlight   |

|                      | Range   | Accuracy   |
|----------------------|---|--|
| Air pressure         | ± 4000 Pascals<br>± 16 in H20<br>± 400 mm H20<br>± 40 mbar<br>± 0.6 PSI | ± 1 % + 1 Pascal<br>± 1 % + 0.01 in H20<br>± 1 % + 0.1 mm H20<br>± 1 % + 0.01 mbar<br>± 1 % + 0.0001 PSI |
| Air velocity         | 250 fpm to 16,000 fpm (1 to 80 m/s)                                     | ± 2.5 % of reading at 2000 fpm<br>(10.00 m/s)  |
| Air flow<br>(volume) | 0 to 99,999 cfm<br>0 to 99,999 m 3/hr<br>0 to 99,999 l/s                | Accuracy is a function of velocity and duct size   |
| Temperature          | 0 °C to 50 °C   | 0.1 °C   |



#### **Included Accessories**

Fluke 922: Two Rubber Hoses, Wrist Strap, Four AA Batteries 1.5V Alkaline, User Manual and Soft Carrying Case.

Fluke 922 Kit: Fluke 922 Airflow Meter, 30.48 cm Pitot Tube, ToolPak, Two Rubber Hoses, Wrist Strap, Four AA Batteries, User Manual and Hard Carrying Case.

#### **Ordering Information**

FLUKE-922 Airflow Meter

FLUKE-922/KIT Airflow Meter Kit

# Fluke 971 Temperature Humidity Meter



Temperature and humidity are two important factors in maintaining optimal comfort levels and good indoor air quality. Quickly and conveniently take accurate humidity and temperature readings with the Fluke 971.

It is invaluable for facility maintenance and utility technicians, HVAC-service contractors, and specialists who assess indoor air quality (IAQ). Lightweight and easy to hold, it's the perfect tool for monitoring problem areas. With a rugged holster and protected sensor, the Fluke 971 is built to perform and made to last.

- New and improved digital sensor for faster response times
- Backlit dual display of humidity and temperature
- Measures dew point and wet bulb temperatures
- 99 record storage capacity
- Ergonomic design with belt clip and protective holster
- Compact and lightweight at 188 g
  Temperature range from -20 °C to 60 °C
- Relative humidity from 5 % to 95 %
- Min/Max/Avg/Hold functions
- Low battery indicator
- One year warranty





| Fluke 97 |
|----------|
|----------|



| Specifications   | 971   |
|--|---|
| Temperature range  | -20 °C to 60 °C   |
| Temperature accuracy 0 °C to 45 °C $^{\circ}\text{C}$ to 0 °C and 45 °C to 60 °C | ± 0.5 0C<br>± 1.0 °C                                    |
| Resolution   | 0.1 °C  |
| Response time (temperature)  | 500 ms  |
| Temperature sensor type  | NTC   |
| Relative humidity range  | 5% to 95% R.H.  |
| Relative humidity accuracy<br>10% to 90% R.H. @ 23 °C<br><10%, >90% R.H. @ 23 °C | ± 2.5 % R.H.<br>± 5.0 % R.H.                            |
| Humidity sensor  | Electronic capacitance polymer film sensor              |
| Data storage   | 99 points   |
| Response time (humidity)   | For 90% of total range - 60 sec with 1 m/s air movement |
| General  |   |
| Operating temperature  | Temperature: -20 °C to 60 °C<br>Humidity: 0 °C to 60 °C |
| Storage temperature  | -20 °C to 55 °C   |
| Battery life   | 4 AAA alkaline, 200 hours                               |
| Safety   | Complies with EN61326-1                                 |
| Size (HxWxD)   | 194 mm x 60 mm x 34 mm                                  |
| Weight   | 0.188 kg  |

#### **Included Accessories**

Fluke 971: Four AAA Alkaline Batteries, Operation Manual.

Fluke RLD2: Chain Carabiner and Batteries.

#### **Ordering Information**

FLUKE-971

Temperature **Humidity Meter** 

#### Fluke 985 Airborne Particle Counter



Fluke 985



#### Troubleshooting indoor air quality made easy

The Fluke 985 Particle Counter is ideal for troubleshooting and monitoring indoor air quality issues and verifying HVAC filter performance in critical locations. With its easy to read and fully configurable channel display, lightweight yet rugged form and highly accurate measurements, the Fluke 985 is the perfect tool for the maintenance, HVAC, and IAQ professional.

- Six channels and particle size range of 0.3 μm to 10.0 μm: Assures accurate measurements even for critical locations requiring ISO Class 5 9 certification
- Ultra-lightweight and ergonomic design: Promises easy single-hand operation in tight or awkward spaces with less operator fatique
- Long battery life: Ten hours of standard-use battery life to last a full work day
- Large 3.5 inch QVGC colour display: Easy navigation and viewing with the intuitive icons and large font options
- 10,000 record storage: Quick access to historical data
- On-screen data presentation: Data can be viewed in a traditional tabular or trend graph view at the user's preference
- Personalised setting and configurations: Customisable settings for the display, sample methods, and alarm settings for sample count
- Data export options: Download data to a PC using a USB memory stick, USB cable or Ethernet connection. No special software is required to download or view data
- Option password control: Confirms security when required
- USB/Ethernet charge cradle: Assures device is always ready to go when needed
- One year warranty

| Specifications        | 985   |  |  |
|-----------------------|---|--|--|
| Channels              | 0.3 μm, 0.5 μm, 1.0 μm, 2.0 μm, 5.0 μm, 10.0 μm   |  |  |
| Flow rate             | 0.1 cfm (2.83 L/min)  |  |  |
| Light source          | 775 nm to 795 nm, 90mW class 3B laser   |  |  |
| Count modes           | Raw counts, #/m3, #/ft3, #/liter in Cumulative or Differential mode                       |  |  |
| Counting efficiency   | 50 % @ 0.3 μm; 100 % for particles > 0.45 μm (per ISO 21501)                              |  |  |
| Zero count            | 1 count/5 minute (JIS B9921)  |  |  |
| Concentration limits  | 10 % at 4,000,000 particles per ft3 (per ISO 21501)                                       |  |  |
| Data storage          | 10,000 records (rotating buffer)  |  |  |
| Alarms                | Counts, low battery, sensor fail  |  |  |
| Delay time            | 0 to 24 hours   |  |  |
| Sample inlet          | Isokinetic probe  |  |  |
| Security              | Administrator password control (optional)   |  |  |
| Communication mode    | USB or Etheret  |  |  |
| Calibration           | PSL particles in air (NIST traceable)   |  |  |
| Size (HxWxD)          | 272 x 99 x 53 mm  |  |  |
| Weight                | 0.68 kg   |  |  |
| Power adapter         | 100 V AC to 240 V AC, 12 V DC, 2.5 A  |  |  |
| Rechargeable battery  | Li-ion 7.4 V 2600 mAh; 10 hours typical use<br>(5 hours continuous sampling) / 3.5 hours) |  |  |
| Operating environment | 10 °C to 40 °C / < 95 % non-condensing relative humidity                                  |  |  |
| Storage environment   | -10 °C to 50 °C /Up to 98 % non-condensing relative humidity                              |  |  |

#### **Specialty Model**

#### CO-220 Carbon Monoxide Meter

Measures CO levels in industrial invironmets, commercial or residential buildings where accumulation of combustion gas is possible.

- Stand-alone CO meter that does not require a digital multimeter
- Large backlit LCD displays CO levels from 0 ppm to 999ppm
- Beeper triggers with increasing frequency as CO levels rise
- MAX hold function stores and displays the maximum CO level
- Automatic sensor zeroing and self-test upon startup

For more information, go to www.fluke.com/au/co-220

#### **CO-205 Aspirator Kit**

The CO-205 flue gas sampling accessory kit contains all the components necessary to provide a clean sample for the Fluke family of gas measuring devices.

The CO-205 Accessory Kit includes:

- Stainless steel sampling tube
- Industrial-grade hand operated aspirator to draw flue sample
- Easily replaceable particulate filter
- Specially designed nose cap for connection to the Fluke CO-220

#### **Included Accessories**

Fluke 985: Cradle for charging and USB and Ethernet Communications, ENET CATSE 7-foot Cable, USA-A to Mini-B 6-foot Cable, 12V DC Power Supply, Zero Count Inlet-Filter, Filter Adapter, Sample Inlet Protective Cap, Hard Case, Getting Started Manual and User Manual (CD).

Fluke CO-220: C50 Soft Carrying Case and Battery.

#### **Ordering Information**

FLUKE-085 Particle Counter
FLUKE-CO-220 Carbon Monoxide
Meter

FLUKE-CO-205 Aspirator Kit

#### Fluke 925 Vane Anemometer



#### Easy-to-use and economical anemometer

The Fluke 925 is an economical and durable vane anemometer designed to measure wind speed, air flow and wind temperature conveniently. With a separate air flow sensor and display, the Fluke 925 provides the user the flexibility to measure air flow in a variety of locations. Vane anemometers are well suited to measure air flow in residential and commercial buildings as part of regular maintenance checks.

- Ability to measure wind speed in metres per second
- Data capture using one button and the ability to average multiple readings
- Min and Max alarm setting to alert the user when limits have been met
- Durable over mold housing to protect the unit from drops
- 1m extension of sensor from display to ensure air flow is captured in hard to reach locations
- Two year warranty

| Wind Speed                  | Range   | Resolution | Accuracy           |  |
|-----------------------------|---|------------|--------------------|--|
| m/s                         | 0.40 to 25.00 m/s   | 0.01 m/s   | ±2 % of full scale |  |
| <b>Air Flow Measurement</b> | Range   | Resolution | Accuracy           |  |
| CMS<br>(cubic metre/second) | 0.01 to<br>99.99 m3/s   | 0.01       | 0 to 9.999 m2      |  |
| Wind Temperature            | Range   | Resolution | Accuracy           |  |
| Wind Temperature            | 0 °C to 50 °C   | 0.1 °C     | ±0.8 °C            |  |
| Product Specification       |   |            |                    |  |
| Display                     | Dual-screen 4 digit (9999 points) LCD screen  |            |                    |  |
| Measurement Unit            | Wind speed: ft/m; m/s Air flow: CMS (m3/s) and CFM (ft3/m) (cubic foot/minute) Wind temperature: °C |            |                    |  |
| Data Holding                | Lock the displayed readings   |            |                    |  |
| Average Reading Storage     | Single point (2 hours at most) or multiple points (8 readings at most)                              |            |                    |  |
| Auto Power-Off              | Enter the sleep mode after 20 minutes (can be disabled) to save power                               |            |                    |  |
| Battery Life                | 100 hours   |            |                    |  |
| Weight                      | 363 g, including the battery and sensor   |            |                    |  |

# Fluke 930 Non-Contact & 931 Dual-Purpose Tachometer

181 × 71 × 38 mm

70 mm



Fluke 931

Dimensions (HxWxD)

Sensor Head Diameter

measure via stroboscope in non-contact mode only. With the ability for contact measurement and non-contact combined, the Fluke 931 provides greater flexibility for the professional technician.

Where equipment needs quick troubleshooting to diagnose problems, the Fluke 930 or 931 is the right tool for the job. The Fluke 930 is equivalent to a Fluke 931 with the ability to

- 6-digit backlit display for easy data visualisation
- Signal detection reminder minimises false readings
- Maximum/Minimum/Average value and final readings
- Easy switching of the contact and non-contact measurement modes (Fluke 931 only)
- Different speed measuring heads to adapt to different measurement occasions (Fluke 931 only)
- One year warranty



| Rotation Speed   |   |  |  |  |
|------------------|---|--|--|--|
| Range            | Optical (non-contact) measurement: 1 to 99999 revolutions/minute<br>Contact measurement: 1 to 19999 revolutions/minute (Fluke 931 only) |  |  |  |
| Precision        | ±0.02 % RD+1  |  |  |  |
| Sensing Distance | (optical) 500 mm  |  |  |  |
| Specifications   |   |  |  |  |
| Battery Life     | About 40 hours  |  |  |  |
| Operating Temp   | 0 °C to 50 °C   |  |  |  |

#### Fluke 925 Applications

- Clean rooms or other locations with installed filter systems
- Environmental Health and Safety Personnel, Construction Research Institutions
- HVAC System Supplies, Installers or Maintenance Technicians
- Pharmaceutical, Food and Beverage, Electronic Manufacturing, Building Fire Protection



#### Fluke 930/931 Applications

- Heavy Manufacturing Environments, e.g. Automotive, Textile, Pulp and Paper, Metalwork
- Water Purification Plants
- Machining and Chemical Manufacturing Plants
- **HVAC** Compressors for Industrial Systems



#### **Included Accessories**

Fluke 925: Instruction Guide. Fluke 930 and 931: 0.1 m Wheel, Conical Speed Measuring Head, Inner Cone Speed Measuring Head, Lengthening Rod, 10 Reflective Stripes and Instruction Guide.

| Ordering in | iormation  |
|-------------|--|
| FLUKE-925   | Vane Anemometer  |
| FLUKE-930   | Non-Contact<br>Tachometer                                |
| FLUKE-931   | Contact and<br>Non-Contact<br>Dual-Purpose<br>Tachometer |

Contact your local distributor for price and availability. www.fluke.com/au/wtb

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#### Fluke 941 Luminometer



Fluke 941

The Fluke 941 is a handheld luminometer than can measure visible light sent from a variety of light sources, to include fluorescent, metal halide, high pressure sodium, or incandescent lamps. With an extension cord to the light meter and separate display the Fluke 941 provides a handheld tool to accurately measure light in multiple environments. The Fluke 941 is a portable tool that measures light up to 20,000 fc of lux with an accuracy of .01 fc/lux.

- Measure in lux or footcandles, with one button to switch between display options
- Measuring range up to 20,000 lux or foot candles
- Data hold to freeze reading on the digital display
- Min/max ability to show high and low readings
- · Auto power off to save battery life
- · Includes protective sensor cap
- One year warranty



Fluke 941 Applications

Room Illumination Assessment for Environmental Health and

Light Source Quality and

Safety Reviews

| Measurement<br>Parameter |   |
|--------------------------|---|
| Range                    | 20, 200, 2000, 20000, 200000 Lux<br>20, 200, 2000, 20000FC (Footcandle)   |
| Precision                | ±3 % (at 2854 °K — calibrated by the common incandescent lamp) ±6 % other visible light sources Cosine error 30° ±2 % 60° ±6 % 80° ±25 % Cosine angle corrected according to the grade A general specifications of JIS C 1609:1993 and CNS 5119 A |
| Specifications           |   |
| Sampling Rate:           | 2.5 times/second for the digital display  |
| Display:                 | 3.5 digit 1999-point LCD screen   |
| Sensor:                  | Silicon photoelectric diode and optical filter  |

# Fluke 945 Sound Level Meter



The Fluke 945 Sound Level Meter has been designed to meet the measurement requirements of Safety Engineers, Health, Industrial Safety Officers and quality control in a wide variety of industrial environments.

It offers two types of measurements: A weighting and C weighting. The A weighting is for general noise sound level and the C weighting is for measuring sound level of acoustic material control in various environments. The Fluke 945 conforms to the IEC651 Type 2, ANSI S1.4 Type 2, and JISC1502 requirements for sound level meters.

- Data storage
- Max/Min
- Frequency weighting ranges: A, C
- Auto power off
- Auto ranging
- One year warranty



| <b>Measurement Parameter</b>                        | Range                              | Resolution | Accuracy                |  |
|---|------------------------------------|------------|-------------------------|--|
| Measurement of<br>Environment Noise<br>(A weighted) | 30 to 130 dB                       | 0.1 dB     | ±1.5 dB (ref 94dB@1KHZ) |  |
| Measurement of<br>Mechanical Noise<br>(C weighted)  | 35 to 130 dB                       | 0.1 dB     | ±1.5 dB (ref 94dB@1KHZ) |  |
| Specifications                                      |                                    |            |                         |  |
| Display   | 0.1 dB steps on 4 digit LCD screen |            |                         |  |
| Frequency Response                                  | From 31.5 Hz to 8 kHz              |            |                         |  |
| Max/Min Recording with<br>Memory Logging            | Up to 14,000 records               |            |                         |  |

#### **Fluke 945 Applications**

- Sound Testing for Education Environments
- Heavy and Light Industry Sound Testing
- Healthcare Environment Testing
- Safety Testing



#### **Included Accessories**

9 V Battery, User Manual.

#### **Ordering Information**

FLUKE-941

Luminometer

FLUKE-945

Sound Level Meter



# **Insulation Tester Selection Guide**















|   |                               |                                    |                               | · · · · · · · · · · · · · · · · · · · |                               |  |   |
|---|-------------------------------|------------------------------------|-------------------------------|---------------------------------------|-------------------------------|--|---|
| Insulation Test<br>Functionality                  | 1503                          | 1507                               | 1577                          | 1587 FC                               | 1587T                         | 1550C                                  | 1555  |
| Test Voltages                                     | 500V, 1000V                   | 50V, 100V,<br>250V, 500V,<br>1000V | 500V, 1000V                   | 50V, 100V,<br>250V, 500V,<br>1000V    | 50V, 100V                     | 250V, 500V,<br>1000V, 2500V,<br>5000V  | 250V, 500V,<br>1000V, 2500V,<br>5000V, 10000V |
| Insulation Resistance Test<br>Range               | 0.1ΜΩ - 2GΩ                   | 0.01ΜΩ - 10GΩ                      | 0.1ΜΩ - 600ΜΩ                 | 0.01 ΜΩ - 2GΩ                         | 0.01ΜΩ - 100ΜΩ                | 200ΚΩ - 1ΤΩ                            | 200ΚΩ - 2ΤΩ                                   |
| Polarisation Index/Dielectric<br>Absorption Ratio |                               | •                                  |                               | •                                     |                               | •                                      | •   |
| Auto Discharge                                    | •                             | •                                  | •                             | •                                     | •                             | •                                      | •   |
| Time Ramp Test (Breakdown)                        |                               |                                    |                               |                                       |                               | •                                      | •   |
| Pass/Fail Comparison                              |                               | •                                  |                               |                                       |                               |  |   |
| Estimated Number of Insulation resistance Tests   | 1000                          | 1000                               | 1000                          | 1000                                  | 1000                          | 1000 @ 5000 V                          | 1000 @ 10000 V                                |
| Voltage > 30V Warning                             | •                             | •                                  | •                             | •                                     | •                             | •                                      | •   |
| Memory  |                               |                                    |                               | •                                     |                               | (99 locations)                         | (99 locations)                                |
| Remote Test Probe                                 | •                             | •                                  | •                             | •                                     | •                             |  |   |
| Lo Ohms   | •                             | •                                  |                               |                                       |                               |  |   |
| Display   | Digital LCD                   | Digital LCD                        | Digital LCD                   | Digital LCD                           | Digital LCD                   | Digital LCD /<br>Analogue Bar<br>Graph | Digital LCD /<br>Analogue Bar<br>Graph        |
| Continuity  | (200mA)                       | (200mA)                            | •                             | •                                     | •                             |  |   |
| Multimeter Functionality                          |                               |                                    |                               |                                       |                               |  |   |
| AC/DC Volts                                       | •                             | •                                  | •                             | •                                     | •                             |  |   |
| Current   |                               |                                    | •                             | •                                     | •                             |  |   |
| Resistance  | •                             | •                                  | •                             | •                                     | •                             |  |   |
| Temperature (contact)                             |                               |                                    |                               | •                                     | •                             |  |   |
| Temperature Compensation                          |                               |                                    |                               | •                                     |                               |  |   |
| Lo-Pass Filter                                    |                               |                                    |                               | •                                     | •                             |  |   |
| Capacitance                                       |                               |                                    |                               | •                                     | •                             | •                                      | •   |
| Diode Test  |                               |                                    |                               | •                                     | •                             |  |   |
| Frequency   |                               |                                    |                               | •                                     | •                             |  |   |
| MIN/MAX   |                               |                                    |                               | •                                     | •                             |  |   |
| Fluke Connect® enabled                            |                               |                                    |                               | •                                     |                               | ●+                                     | •   |
| Other   |                               |                                    |                               |                                       |                               |  |   |
| Hold/Lock   | •                             | •                                  | •                             | •                                     | •                             | •                                      | •   |
| Backlight   | •                             | •                                  | •                             | •                                     | •                             |  |   |
| Software  |                               |                                    |                               |                                       |                               | (Fluke View®<br>Forms Basic)           | (Fluke View®<br>Forms Basic)                  |
| Warranty (in years)                               | 1                             | 1                                  | 3                             | 3                                     | 3                             | 3                                      | 3   |
| Battery   | 4 AA (NEDA 15A<br>or IEC LR6) | 4 AA (NEDA 15A<br>or IEC LR6)      | 4 AA (NEDA 15A<br>or IEC LR6) | 4 AA (NEDA 15A<br>or IEC LR6)         | 4 AA (NEDA 15A<br>or IEC LR6) | Rechargeable                           | Rechargeable                                  |

<sup>+</sup> With Fluke IR FC Connector.

# Fluke 1587 FC and 1577 Insulation Multimeters





Fluke 1577









#### Two powerful tools in one

The Fluke 1587 FC and 1577 Insulation Multimeters combine a digital 1 kV insulation tester with a full-featured, true-RMS digital multimeter in a single compact, handheld unit, which provides maximum versatility for both troubleshooting and preventive maintenance.

- Insulation test (1587 FC: 0.01 MΩ to 2 GΩ) (1577: 0.1 MΩ to 600 MΩ)
- Insulation test voltages (1587 FC: 50 V, 100 V, 250 V, 500 V, 1000 V), (1577: 500 V, 1000 V) for many applications
- Live circuit detection prevents insulation test if voltage > 30 V is detected for added user protection
- Auto-discharge of capacitive voltage for added user protection
- Filter for motor drive measurements (1587 FC only)
- AC/DC voltage, DC millivolts, AC/DC milliamps, resistance  $(\Omega)$ , and continuity
- Capacitance, diode test, temperature, Min/Max, and frequency (Hz) (1587 FC only)
- Auto power off to save battery power
- Large display with backlight and large digits
- Included accessories: Remote probe, test leads and probes, alligator clips, (Type K thermocouple, 1587 FC only)
- Accepts optional Fluke TPAK magnetic hanging system to free your hands for other work
- Rugged, utility hard case allows you to bring everything you need for the job
- · Three year warranty

# The Fluke 1587 FC Insulation Multimeter adds four powerful diagnostic functions through the Fluke Connect® Measurements app:

- PI/DAR timed ratio tests with TrendIt<sup>™</sup> graphs identifies moisture and contaminated insulation problems faster
- Memory storage through Fluke Connect eliminates writing down results, reduces errors and saves data for historical tracking over time
- Temperature Compensation through app for establishing accurate baselines and relevant historical comparisons

| Specifications   | 1587 FC           | 1577             |
|--|-------------------|------------------|
| Insulation test voltages 50 V, 100 V, 250 V, 500 V, 1000 V | •                 | _                |
| Insulation test voltages 500 V, 1000 V                     | -                 | •                |
| Insulation resistance                                      | 0.01 MΩ to 2.0 GΩ | 0.1 MΩ to 600 MΩ |
| Auto-discharge of capacitive voltage                       | •                 | •                |
| Insulation test smoothing reading                          | •                 | _                |
| Frequency  | •                 | -                |
| Capacitance  | •                 | _                |
| Diode test   | •                 | -                |
| Temperature  | •                 | _                |
| Min/Max  | •                 | -                |
| Low-pass filter (for work on VSDs)                         | •                 | _                |
| AC/DC voltage  | •                 | •                |
| DC millivolts  | •                 | •                |
| AC/DC milliamps  | •                 | •                |
| Resistance   | 0.1 Ω to 50 MΩ    | 0.1 Ω to 50 MΩ   |
| Continuity   | •                 | •                |
| Remote probe, test leads, alligator clips                  | •                 | •                |
| Type K thermocouple  | •                 | -                |
| Rugged, utility hard case                                  | •                 | •                |
| Auto power off   | •                 | •                |









Magnetic Meter Hanger See page 154

AC Current Clamp See page 148



C100 Universal Carrying Case See page 153

TL27 Heavy Duty Test Leads See page 141

#### **Recommended Kits**

Buy more, Save more



## Fluke 1587/i400 Current Clamp FC Kit



#### Fluke 1587 FC Advanced Electrical Troubleshooting Kit



Fluke 1587 FC/MDT Advanced Motor and Drive Troubleshooting Kit

For more details see page 169

#### **Included Accessories**

Remote Probe, Test Leads, Alligator Clips, K-type Thermocouple (1587 FC only), Hard Case, User Documentation.

#### **Ordering Information**

FLUKE-1577 Insulation Multimeter

FLUKE-1587T Insulation Multimeter for Telecommunications

FLUKE-1587FC Insulation Multimeter with Fluke Connect

FLUKE-1587/ FC 2-in-1 Adv Motor &

MDT FC Kit Drive Kit w/9040, i400

FLUKE-1587/ FC 2-in-1 Insulation I400 FC KIT Multimeter with i400

**1587KIT/** FC 2-in-1 Adv Elec Kit **62MAX+FC** w/62MAX+ i400

# Fluke 1507 and 1503 Insulation Resistance Testers



Fluke 1503

These lightweight, affordable insulation testers are perfect for troubleshooting, commissioning and preventive maintenance applications.

- Automatic calculation of polarisation index and dialectric absorption ratio (1507 only)
- Multiple test voltages: 50 V, 100 V, 250 V, 500 V, 1000 V (1507 only)
- Remote test probe for rapid testing
- Insulation test range 0.01 M $\Omega$  to 10 G $\Omega$  (1507), 0.1 M $\Omega$  to 2000 M $\Omega$  (1503)
- Compare (Pass/Fail) function for repetitive tests (1507 only)
- Live circuit detection prevents insulation test if voltage
   > 30 V is detected
- Auto-discharge of capacitive voltage
- AC/DC voltage: 0.1 V to 600 V
- Lo ohms/Earth-bond continuity (200 mA) for checking connections and motor windings
- Resistance: 0.01  $\Omega$  to 20.00  $\Omega$
- · One year warranty







| Features  | 1503 | 1507 |  |
|---|------|------|--|
| User selectable test voltages for many applications   | •    | •    |  |
| Additional test voltages 50V, 100V, 250V  |      | •    |  |
| Special remote control probe for easy and safe measurements   | •    | •    |  |
| Auto-discharge of capacitive voltage for added user protection  | •    | •    |  |
| Live circuit detection prevents insulation test if voltage > 30 V is detected for added user protection   | •    | •    |  |
| Save both time and money with Automatic calculation of Polarisation Index and Dielectric Absorption Ratio |      | •    |  |
| Auto Power off to save batteries  | •    | •    |  |
| Large display with backlight  | •    | •    |  |
| Continuity function (200 mA)  | •    | •    |  |
| Compare function (pass/fail) for fast repetitive tests  |      | •    |  |

| Insulation                   | 1503  | 1507  |  |
|------------------------------|---|---|--|
| Insulation test range        | 0.1 MΩ to 2000 MΩ                                     | 0.01 M $\Omega$ to 10 G $\Omega$                      |  |
| Test voltages                | 500 V, 1000 V   | 50 V, 100 V, 250 V, 500 V, 1000 V                     |  |
| Test voltage accuracy        | + 20 %, - 0 %   | + 20 %, - 0 %   |  |
| Insulation test current      | 1mA nominal   | 1 mA nominal  |  |
| AC/DC Voltage measurement    | 600 V (0.1 V resolution)                              | 600 V (0.1 V resolution)                              |  |
| Resistance measurement range | 0.01 Ω to 20 kΩ                                       | 0.01 Ω to 20 kΩ                                       |  |
| Auto discharge               | Discharge time < 0.5 second for $C = 1 \mu F$ or less | Discharge time < 0.5 second for $C = 1 \mu F$ or less |  |
| Maximum capacitive load      | Up to 1 μF  | Up to 1 μF  |  |
| Open circuit test voltage    | > 4 V , < 8 V   | > 4 V , < 8 V   |  |
| Short circuit current        | > 200 mA  | > 200 mA  |  |
| General                      |   |   |  |
| Battery life                 | Meter: 1000 hours<br>Insulation Test: >1000 tests     |   |  |
| Size (HxWxD)                 | 203 mm x 100 mm x 50 mm                               |   |  |
| Weight                       | 0.55 kg   |   |  |



#### Fluke 1507/1503 Applications



Insulation test at a distribution panel



Wiring test in a small distribution box – all in one spot

#### **Included Accessories**

TL224 Test Leads, TP74 Test Probes, Clips PN 1958654 (red) and PN 1958646 (black), Holster, Remote Probe and User Manual.

#### **Ordering Information**

FLUKE-1507 Insulation Tester FLUKE-1503 Insulation Tester

# Fluke 1555 and 1550C Insulation Resistance Testers





Fluke 1550C







# Powerful troubleshooting and predictive maintenance tools

The Fluke 1555 and redesigned Fluke 1550C Insulation Resistance Testers offer digital insulation testing up to 10 kV, making them ideal for testing a wide range of high voltage equipment including switchgear, motors, generators and cables.

- · Capacitance and leakage current measurement
- · Ramp function for breakdown testing
- Warning function alerts the user that line voltage is present and gives a voltage reading up to 600 V AC or DC for increased user safety
- Measurements can be stored in up to 99 memory locations, and each location is assigned a unique, defined label for easy recall
- Automatic calculation of Dielectric Absorption (DAR) and Polarisation Index (PI) with no additional setup
- Three year warranty

The tester's accuracy is specified for one year after calibration at operating temperatures of 0 °C to 35 °C. For operating temperatures outside the range (-20 °C to 0 °C and 35 °C to 50 °C), add  $\pm$  .25 % per °C, except on the 20 % bands add  $\pm$  1 % per °C.

|                        | Insulation resistance measurement  |   |  |  |  |  |
|------------------------|--|---|--|--|--|--|
| Test voltage (DC)      | Range  | Accuracy (± reading)                      |  |  |  |  |
| 250 V                  | < 250 kΩ<br>250 kΩ to 5 GΩ<br>5 GΩ to 50 GΩ<br>> 50 GΩ   | unspecified<br>5 %<br>20 %<br>unspecified |  |  |  |  |
| 500 V                  | < 500 kΩ<br>500 kΩ to 10 GΩ<br>10 GΩ to 100 GΩ<br>> 100 GΩ   | unspecified<br>5 %<br>20 %<br>unspecified |  |  |  |  |
| 1000 V                 | < 1 MΩ<br>1 MΩ to 20 GΩ<br>20 GΩ to 200 GΩ<br>> 200 GΩ   | unspecified<br>5 %<br>20 %<br>unspecified |  |  |  |  |
| 2500 V                 | < 2.5 M $\Omega$<br>2.5 M $\Omega$ to 50 G $\Omega$<br>50 G $\Omega$ to 500 G $\Omega$<br>> 500 G $\Omega$ | unspecified<br>5 %<br>20 %<br>unspecified |  |  |  |  |
| 5000 V                 | $<$ 5 M $\Omega$ 5 M $\Omega$ to 100 G $\Omega$ $100$ G $\Omega$ to 1 T $\Omega$ $>$ 1 T $\Omega$          | unspecified<br>5 %<br>20 %<br>unspecified |  |  |  |  |
| 10000 V<br>(1555 only) | $< 10 \ M\Omega$ $10 \ M\Omega$ to $200 \ G\Omega$ $200 \ G\Omega$ to $2 \ T\Omega$ $> 2 \ T\Omega$        | unspecified<br>5 %<br>20 %<br>unspecified |  |  |  |  |

| Functions               | Range                         | Accuracy (± reading)   |
|-------------------------|-------------------------------|------------------------|
| Leakage current         | 1 nA to 2 mA                  | $\pm$ (5 % + 2 nA)     |
| Capacitance measurement | 0.01 uF to 15.00 μF           | ± (15 % rdg + 0.03 μF) |
| Live circuit warning    | 30 V to 600 V AC/DC, 50/60 Hz | ± (15 % + 2 V)         |

# Combine the IR3000 FC Connector and Fluke Connect, to perform advanced insulation testing for preventive and PdM tasks through:



- PI (polarity index) and DAR (dielectric absorption ratio) tests with TrendIt<sup>™</sup> graphs to identify problems faster\*
- Wireless transfer of test results from the tool to Fluke Connect eliminates error-prone paperwork and saves your technician's time
- Temperature Compensation through Fluke Connect App helps establish accurate baselines and relevant historical comparisons\*

#### **Recommended Accessories**

#### Fluke 1550C



Integral Test Lead and 10 kV Clamp



FVF-BASIC FlukeView® Forms Software See page 165





IR189USB USB-IR Cable See page 155

CXT1555 Pelican Carrying Case



IR3000 FC Fluke Connector ir3000 Connector See page 155

#### **Recommended Kits**

Buy more, Save more

Fluke 1550C 5 kV Insulation

Tester Kit
Fluke 1550C FC 5kV Insulation

Tester Kit with IR 3000FC Fluke 1555 10 kV Insulation

Tester Kit

Fluke 1555 10kV Insulation Tester Kit with IR 3000FC

For more details see page 169

#### **Included Accessories**

Test Cables with Alligator Clips (red, black, green), Infrared Adapter with Interface Cable, FlukeView\* Forms Basic CD, AC Power Cord, Soft Carrying Case, User Manual, Quick Reference Card, Software License Agreement, Registration Card, FlukeView Forms Installation Guide, USB-IR Cable Installation Guide, IP67 Hard Case (Kit only), Certificate of Calibration (Kit only), Ruggedised Alligator Clips (Kit and 1555 only), IR3000 FC Connector (FC models only).

#### **Ordering Information**

FLUKE-1550C SkV Insulation Tester

FLUKE-1550C FC SkV Insulation Tester with IR 3000FC

FLUKE-1555 10kV Insulation Tester

FLUKE-1555 FC 10kV Insulation

Tester with IR 3000FC

FLUKE-1550C KIT 5kV Insulation

Tester Kit

5kV Insulation

FLUKE-1550C FC 5kV Insulation
KIT Tester Kit with IR
3000FC

FLUKE-1555 KIT 10kV Insulation

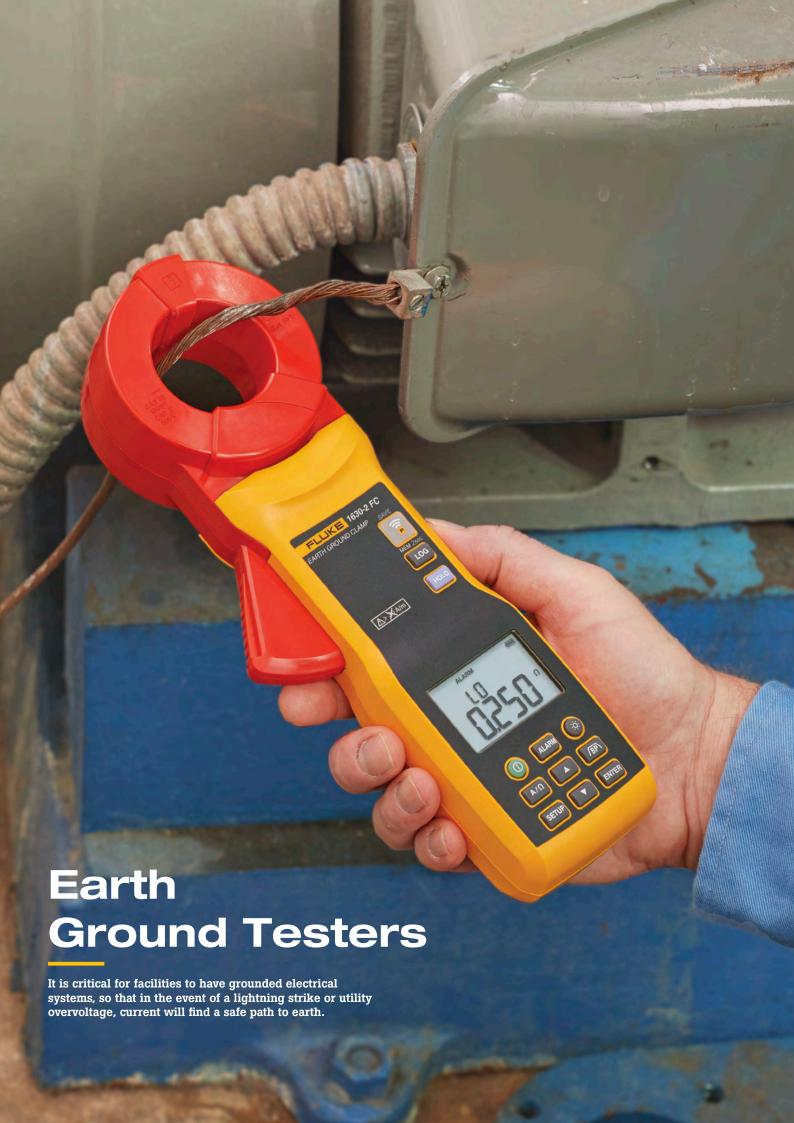
KIT

FLUKE-1555 FC 10kV Insulation

3000FC

Tester Kit with IR

<sup>\*</sup> Not all functions will be available at time of purchase.



## Fluke 1620-2 Series Geo Earth **Ground Testers**



Fluke 1625-2



Fluke 1623-2



The Fluke 1623-2 and 1625-2 Earth Ground Testers offer data storage and download capabilities via USB port, have a large display and world class accessories that will simplify and speed up testing time.

#### These unique earth ground testers that can perform all four types of earth ground measurement:

- 3- and 4-Pole Fall-of-Potential (using stakes)
- 4-Pole Soil Resistivity testing (using stakes)
- Selective testing (using 1 clamp and stakes)
- Stakeless testing (using 2 clamps only)
- IP56 rated for outdoor use
- Professional carrying case
- USB data storage and transfer
- Two year warranty

#### In addition, the Fluke 1625-2 offers these advanced features:

- Automatic Frequency Control (AFC) identifies existing interference and chooses a measurement frequency to minimse its effect, providing more accurate earth ground value
- R\* measurement calculates earth ground impedance at 55 Hz to more accurately reflect the earth ground resistance that a fault-toearth ground would see
- · Adjustable limits for quicker testing

#### Earth ground resistance and soil resistivity should be measured when:

- Designing earth ground systems
- Installing new ground system and electrical equipment
- Periodically testing ground and lightning protection systems
- Installing large electrical equipment such as transformers, switchgears, machines, etc.

| Features  | 1623-2       | 1625-2       |
|---|--------------|--------------|
| One-button measurement concept                                    | •            |              |
| 3- and 4-pole Fall of Potential, earth resistance loop testing    | •            | •            |
| 4-Pole soil resistivity testing                                   | •            | •            |
| 2-Pole resistance measurement AC                                  |              | •            |
| 2-and 4-pole resistance measurement DC                            |              | •            |
| Selective testing, no disconnection of ground conductor (1 clamp) | •            | •            |
| Stakeless testing, quick ground loop testing (2 clamps)           | •            | •            |
| Measuring frequency 128 Hz  | •            |              |
| Earth impedance measurement at 55 Hz                              |              | •            |
| Automatic frequency control (AFC) (94 – 128 Hz)                   |              | •            |
| Measuring voltage switchable 20/48V                               |              | •            |
| Programmable limits, settings                                     |              | •            |
| Continuity with buzzer  |              | •            |
| Dust/water resistance   | IP56         | IP56         |
| Safety rating   | CAT II 300 V | CAT II 300 V |

| Specifications        | 1623-2                       | 1625-2                       |  |
|-----------------------|------------------------------|------------------------------|--|
| Resistance ranges     | 0 to 20 kΩ                   | 0 to 300 kΩ                  |  |
| Operating error       | ± 10%                        | ± 5%                         |  |
| Test voltage          | 48 V                         | 20 / 48 V                    |  |
| Short circuit current | > 50mA                       | 250 mA                       |  |
| Weight                | 1.1 kg (including batteries) | 1.1 kg (including batteries) |  |
| Size (WxHxD)          | 250 x 133 x 187 mm           |                              |  |
| Battery type          | 6 x AA alkaline cells        |                              |  |

These products are for unpowered installations measuring grounding connections.

#### **Recommended Accessories**



EI-1623 Selective/stakeless clamp set for 1623



ES-162P4 ES-162P3 Stake/reel set for Stake/reel set for 3-pole measurements



EI-162BN 320MM Split Core Transformer for use with Fluke 1625



Ground/Earth Cable Reel

#### **Recommended Kits**

Buy more, Save more



Fluke 1623-2 GEO Earth **Ground Tester Kit** 



#### Fluke 1625-2 GEO Earth **Ground Tester Kit**

For more details see page 169

#### **Included Accessories**

Fluke 1623-2: Protective Holster, 2 Test Leads, 2 Alligator Clips, User Manual

Fluke 1623-2 Kit: Same as above plus Stake/Reel, Set 4 Pole and Selective/ Stakeless Clamp Set.

Fluke 1625-2: Protective Holster, 2 Test Leads, 2 Alligator Clips, User Manual.

Fluke 1625-2 Kit: Same as above plus Stake/Reel, Set 4 Pole and Selective/ Stakeless Clamp Set.

#### **Ordering Information**

FLUKE-1623-2

Basic GEO Earth **Ground Tester** 

FLUKE-1623-2 KIT

Basic GEO Earth **Ground Tester Kit** 

FLUKE-1625-2

Advanced GEO Earth Ground Tester

FLUKE-1625-2 KIT

Advanced GEO

Earth Ground Tester Kit

#### Fluke 1621 Basic Earth Ground Tester

#### Earth ground tester for resistance measurement





#### **Hand-held Earth Ground Tester for resistance** measurement

The Fluke 1621 is an easy-to-use earth ground tester. For ground resistance testing, the 1621 is the first line of defence in detecting reliable ground connections. The unit features basic ground testing methods including 3-pole Fall-of-Potential as well as 2-pole ground resistance tests. Its convenient size, rugged holster, and large, clear LCD display make it an ideal field earth ground tester, for most electrical grounding work environments. With a simple user interface and intuitive functionality, the Fluke 1621 is a handy grounding tool for electrical contractors, utility test engineers, and earth ground specialists.

- 3-pole Fall-of-Potential earth testing for basic measurements
- 2-pole resistance measurements for added versatility
- Easily capture values with single-button operation
- Ensure accurate measurements with automatic 'noise' voltage detection
- Hazardous voltage warning offers increased user protection
- Clearly read and record data with a large, backlit display
- Instantly be alerted to measurements outside of your set limit, when you use the adjustable limit setting
- Safety rating CAT II 600 V
- Two year warranty

| Specifications          | 1621  |
|-------------------------|---|
| Measuring functions     | 3-pole earth ground resistance, 2-pole AC resistance of a conductor, Interference voltage                       |
| Intrinsic error         | Refers to the reference temperature range and is guaranteed for one year  |
| Measuring rate          | 2 measurements/second   |
| Battery                 | One 9 volt alkaline (LR61)  |
| Battery condition       | LO-BAT is displayed if voltage drops below 6.5 V  |
| Voltages                | Between jacks H/C2 and E/C1: 250 Veff maximum (effective voltage) Between jacks S/P2 and E/C1: 250 Veff maximum |
| Climatic class          | VDE/VDI 3540 RZ (conforming to KWG as per DIN 40040, 4/87)  |
| Temperature performance | Working: -10 °C to +50 °C Operating: 0 °C to +35 °C Storage: -20 °C to +60 °C                                   |
| Temperature coefficient | ± 0.1 % of range per degree Kelvin  |
| Size                    | 113 mm x 54 mm x 216 mm including holster   |
| Weight                  | 850 g including standard accessories, volume approximately 600 cm <sup>3</sup>                                  |

Note: If the tester is not going to be used, or is being stored for a long period, remove the battery and store separately from

the tester to avoid damage from battery leakage.

The four temperature ranges for the tester exists to satisfy European Standards requirements; the instrument can be used over the full working temperature range by using the temperature coefficient to calculate accuracy at the ambient temperature of use. These products are for unpowered installations measuring grounding connections.



#### **Included Accessories**

Fluke-1621: Two Measuring Leads with Alligator Clips - 2 m, Protective Holster, 9V Akaline Battery (LRO1), User Manual and CD.

Fluke-1621 Kit: 2 x Cable Reels with Wire (1-50 m, 1-25 m), 3 x Earth Ground Stakes, 1 x Test Lead (red and black 2 m), 2 x Alligator Clips, Batteries, Hard Carrying Case and User Manual.

#### **Ordering Information**

**FLUKE-1621** 

Basic GEO Earth **Ground Tester** 

FLUKE-1621 KIT Basic GEO Earth

**Ground Tester Kit** 

# Fluke 1630-2 FC Earth Ground Clamp Meter





Fluke 1630-2 FC





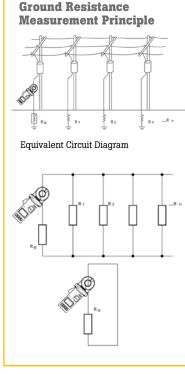


# Stakeless earth ground loop and AC leakage current clamp for fast, safe indoor/outdoor earth ground resistance and AC leakage current tests.

Heavy-duty clamp jaw stays in alignment and in calibration even in every day, on-the-job industrial environments. Test the grounding components of equipment in hard-to-reach spaces, including areas that are indoors or fully paved and do not permit driving auxiliary test stakes. Stay on line—identify ground loop resistance without the need to disconnect then reconnect the earth electrode from the system.

#### **Stakeless measurement**

The 1630-2 FC clamp measures earth ground loop resistances for multi-grounded systems using the dualclamp jaw. This test technique eliminates the dangerous and time-consuming activity of disconnecting parallel grounds, as well as the process of finding suitable locations for auxiliary test stakes. You can also perform ground tests in places that were previously difficult: inside build-ings, on power pylons or anywhere you don't have access to soil to place auxiliary test stakes. With this test method, a twoprocess measurement is made around the earth ground wire or bus bar using the specially-designed jaw of the 1630-2 FC clamp. Auxiliary test stakes are not used at all. A known voltage is induced by the source in the clamp, and the current is measured by the sensor in the clamp. The tester automatically determines the earth loop resistance for this section of the earthing system. One year warranty.





| Electrical sp   | ecifications    |   |               |         |  |
|---|-----------------|---|---------------|---------|--|
| Maximum voltage to earth ground                                   |                 | 1000 V  |               |         |  |
| Battery type  |                 | 4 x 1.5 V AA alkaline II                          | EC/EN LR6     |         |  |
| Battery life  |                 | More than 15 hours                                |               |         |  |
| Frequency ran   | nge             | 40 Hz to 1 kHz                                    |               |         |  |
| Ingress protec  | ction           | IEC/EN 60529: IP30 wi                             | th jaw closed |         |  |
| LCD   | Digital reading | 9999 counts                                       |               |         |  |
|   | Refresh rate    | 4/s   |               |         |  |
| Reference tem   | perature        | 23 °C ±5 °C                                       |               |         |  |
| Display Reading<br>Specification with Loop<br>Resistance Standard |                 | Input (Ω)   | Minimum       | Maximum |  |
|   |                 | 0.474   | 0.417         | 0.531   |  |
|   |                 | 0.5   | 0.443         | 0.558   |  |
|   |                 | 10  | 9.55          | 10.45   |  |
|   |                 | 100   | 96            | 104.0   |  |
| Data logging  | capacity        | Minimum of 32,760 measurements                    |               |         |  |
| Safety  | General         | IEC/EN 61010-1: Pollution Degree 2 IEC/EN 61557-1 |               |         |  |
|   | Measurement     | IEC/EN 61010-2-032: CAT IV 600 V / CAT III 1000 V |               |         |  |
| Current clamp<br>current measu                                    | U               | IEC/EN 61557-13: Class 2, ≤30 A/m                 |               |         |  |
| Resistance to   | Earth           | IEC/EN 61557-5                                    |               |         |  |
| Effectiveness of the protective measures                          |                 | IEC/EN 61557-16: cutoff frequency 20 kHz (-3 dB)  |               |         |  |
| General specifications  |                 |   |               |         |  |
| Conductor size  |                 | 40 mm approximately                               |               |         |  |
| Dimensions (I   | x W x H)        | 283 mm x 105 mm x 48 mm                           |               |         |  |
| Weight  |                 | 880 g   |               |         |  |

#### **Included Accessories**

Hard Case, Loop Resistance Standard, Four AA Batteries, Safety Information Guide and Quick Reference Guide.

#### **Ordering Information**

Fluke-1630-2 FC Earth Ground
Loop and
Leakage Clamp

79

Contact your local distributor for price and availability. www.fluke.com/au/wtb

www.fluke.com/au/EGT Earth Ground Testers



## Fluke 1660 Series **Multifunction Installation Testers**





Fluke 1664 FC



Fluke 1663









The Fluke 1660 Series Multifunction Installation Testers verify the safety of electrical installations in domestic, commercial and industrial applications. They can ensure that fixed wiring is safe and correctly installed to meet the requirements of IEC 60364 and all relevant local standards. Three year warranty.

#### Fluke 1664 FC - The complete tester for advanced users

The Fluke 1664 FC is the only installation tester that protects connected appliances from damage during insulation tests, and allows you to share your test results wirelessly by smartphone with coworkers or customers. Fluke's patented Insulation PreTest stops you from performing tests with appliances that are connected to the system during test. This helps eliminate accidental damage and keeps your customers happy.

In addition, the Fluke 1664 FC offers you the power of Fluke Connect. Now you can send test results straight from your Fluke 1664 FC to your smartphone, and transmit those results to other members of your team.

#### Fluke 1663 - The ideal tester for professional troubleshooters

This instrument is ideal for professional users' high-end functionality, advanced measurement capability, yet it is still easy to use.

#### Fluke 1662 - A solid, basic installation tester

The Fluke 1662 gives you Fluke reliability, simple operation and all the testing power you need for basic installation testing.

| Measurement function   | 1664 FC        | 1663   | 1662   |
|--|----------------|--------|--------|
| Insulation PreTest safety function                               | •              | -      | -      |
| Insulation at L-N, N-PE inputs                                   | •              | -      | -      |
| Auto Test sequence   | •              | -      | -      |
| Loop and line resistance– $m\Omega$ resolution                   | •              | -      | -      |
| Continuity at L-N, N-PE inputs                                   | •              | •      | -      |
| Test smooth dc sensitive RCDs (Type B/B+)                        | •              | •      | -      |
| Earth resistance   | •              | •      | -      |
| Wiring polarity checker, detects broken PE and N wires           | •              | •      | •      |
| Insulation resistance  | •              | •      | •      |
| Continuity and resistance  | •              | •      | •      |
| Measure motor windings with continuity test (@ 10 mA)            | •              | •      | •      |
| Loop and line resistance   | •              | •      | •      |
| Prospective earth fault current (PEFC/IK)                        | •              | •      | •      |
| Prospective short-circuit current (PSC/IK)                       | •              | •      | •      |
| RCD trip time  | •              | •      | •      |
| RCD trip current (ramp test)                                     | •              | •      | •      |
| Measures trip time and current for RCD type A and AC in one test | •              | •      | •      |
| Automatic RCD test sequence                                      | •              | •      | •      |
| Phase sequence test  | •              | •      | •      |
| Other features   |                |        |        |
| Fluke Connect® compatibility                                     | •              | -      | -      |
| ShareLive™ calling   | •              | -      | -      |
| On/Off switchable auto-start for RCD and Looptest                | •              | •      | •      |
| Self-test  | •              | •      | •      |
| Memory, interface  |                |        |        |
| Z Max memory   | •              | •      | -      |
| Memory   | •              | •      | •      |
| IR-USB and BLE interface (when used with optional FVF software)  | IR-USB/<br>BLE | IR-USB | IR-USB |



#### **Recommended Accessories**





**TLK290** Flexible Socket Probe Set See page 142

FLK-166X-MTC-AU Test Cable Assembly Mains Test Lead





TP165X Remote Control Probe See page 140

ES165X Earth Spike Test Kit (Fluke 1663 and 1664 FC)





FVF-SC2 Fluke ViewForms Software (Fluke 1662) See page 165

Zero Adapter Null Adapter

#### **Complete Package with** Fluke FVF-SC2 Software



To address the increasing demands for reporting and documentation, we've added FlukeView Forms Software to the Fluke 1663 and 1664 FC Testers.

#### **Included Accessories**

Six AA (IEC LR6) Batteries, C1600 Hard Carrying Case, Zero Adapter, Heavy Duty Mains Cord, STD Standard Test Lead Set, Padded Carrying and Waist Strap, Quick Reference Guide, TP165X Remote Control Probe and Lead Set, User's Manual on CD-ROM.

#### **Ordering Information**

**FVF AU** 

Fluke 1664 FC/ Multifunction Installation Tester with Auto Test, Insulation PreTest, Fluke Connect® compatibility with FlukeView Forms Software

Fluke 1663/FVF Multifunction

**Installation Tester** with FlukeView

Forms Software

Fluke 1662 AU Multifunction **Installation Tester** 

# Fluke 6200-2 and 6500-2 Portable Appliance Testers



Fluke 6200-2



Fluke 6500-2



Wescurement functions





#### Perform more tests each day

The Fluke 6200-2 and 6500-2 Portable Appliance Testers (PAT) have redesigned auto-test capabilities to help you increase the number of portable appliance tests completed each day. It is designed to enable you to work faster without compromising safety – yours or your customer's. Two year warranty.

#### The Fluke 6200-2 Portable Appliance Tester offers:

- Dedicated key for each test for 'one- touch' testing
- Pre-set pass/fail levels to save time
- Large display for easy reading
- · Single mains socket for appliance connection
- Separate IEC socket for easy mains/extension lead testing
- Detachable test leads for quick field replacement
- · Integral carrying handle

# The Fluke 6500-2 Portable Appliance Tester delivers all of this capability, plus:

- · Integral QWERTY keyboard for rapid data entry
- Additional Compact Flash memory card capability for back-up data storage and USB port for transfer to PC
- · Large backlit graphics display
- Pre-set, auto-test sequences for user convenience
- Integral site, location and description codes for faster data processing
- Memory review facility for more on-site control

6200-2

6500-2

| Measurement functions                     | 6200-2 | 6500-2 |
|---|--------|--------|
| LN Mains Volts                            | •      | •      |
| Outside Limits Indicators                 | •      | •      |
| Null out facility for earth bond lead     | •      | •      |
| Protective Earth Resistance PE (200mA)    | •      | •      |
| Protective Earth Resistance PE (25 A)     | •      | •      |
| Insulation 500V DC                        | •      | •      |
| Insulation 250V DC                        | -      | •      |
| Protective Earth Conductor Current        | •      | •      |
| Touch Current                             | •      | •      |
| RCD Test                                  | -      | •      |
| Substitute leakage current                | •      | •      |
| Appliance Power kVA                       | •      | •      |
| Appliance Load Current                    | •      | •      |
| Seven Segment Custom LCD                  | •      | -      |
| Colour dot matrix display                 | -      | •      |
| Back Light                                | •      | •      |
| USB Flash drive port                      | •      | •      |
| USB Port-Printing/downloading             | -      | •      |
|   |        |        |
|   |        |        |
| External printer output                   | •      | •      |
| Front Panel QWERTY Key pad                | -      | •      |
|   |        |        |
| IEC Lead Test                             | •      | •      |
| Auto-testing                              | -      | •      |
| Pass / Fail Level Programmable Indicators | -      | •      |
| Data Storage                              | -      | •      |
| Limited Data Storage                      | -      | •      |
| Polarity Checks                           | •      | •      |
| Graphical Help Menu Online                | -      | •      |
| Programme Mode                            | -      | •      |
| Real time clock                           | -      | •      |
|   | ı      | ļ      |

#### **Recommended Accessories**



(6500-2 only)





DMS COMPL
Data Management
Software
See page 165



DMS COMPL PROF
Data Management
Software
(Professional Version)
See page 165



C1600 Rugged, molded plastic case See page 153

#### **Fluke DMS Software**



#### Fluke DMS Complete Software for Fluke Portable Appliance Testers

Fluke DMS (Data Management Software) is the official software package for data recording and administration of test results for portable appliance testing. It is compatible with the Fluke 6500-2 Portable Appliance Tester. Fluke DMS has been designed to manage all of your portable appliance test records. When used together with a Fluke Portable Appliance Tester, the software will automatically accept downloaded test results and these can be used to produce comprehensive professional looking reports and documentation.

\* Fluke DMS Software sold separately

#### **Included Accessories**

Test Lead, Test Probe, Crocodile Clip, Mains Cord, USB Stick and Cable (6500-2 only), Hard Carrying Case, Quick Reference Guide and User Manual on CD.

#### **Ordering Information**

FLUKE-6200-2 AU Portable Appliance Tester

FLUKE-6500-2 AU Portable Appliance Tester

The accuracy specification for the display range is defined as  $\pm$  (%reading + digit counts) at 23 °C  $\pm$  5 °C,  $\leq$  75 % RH. Between 0 °C and 18 °C and between 28 °C and 40 °C, accuracy specifications may degrade by 0.1 x (accuracy specification) per °C. The measurement range meets the service operating errors specified in EN61557-1: 1997, EN61557-2: 1997, EN61557-4: 1997, EN61557-6: 1997, DIN VDE404-2.

#### **Power-on Test**

The test indicates reversed L-N, missing PE, and measures the mains voltage and frequency.

| Display Range                  | 90 V to 264 V          |
|--------------------------------|------------------------|
| Accuracy at 50 Hz              | ± (2% + 3 counts)      |
| Resolution                     | 0.1V (1V - model 6200) |
| Input Impedance                | > 1 MΩ // 2.2 μF       |
| Maximum Input Mains<br>Voltage | 264 V                  |

#### **Earth Bond Test**

| Display Range                            | 0 to 19.99 Ω  |
|--|---|
| Accuracy<br>(After Bond Test<br>Zeroing) | 6200-2: ± (2.5% +4 counts)<br>6500-2: ± (5% +4 counts)                    |
| Resolution                               | 0.01Ω   |
| Test Current                             | 200 mA AC $-$ 0% $+$ 40% into 1.99Ω 25 A AC $\pm$ 20% into 25 mΩ at 230 V |
| Open Circuit Voltage                     | > 4 V AC, < 24 Vac  |
| Bond Test zeroing                        | can subtract up to 1.99Ω  |

#### **Insulation Test (Riso)**

| Display Range        | 0 to 299 MΩ  |
|----------------------|--|
| Accuracy             | ± (5% + 2 counts) from 0.1 to 300 MΩ   |
| Resolution           | 0.01 MΩ (0 to 19.99 MΩ)<br>0.1 MΩ (20 to 199,9 MΩ)<br>1 MΩ (200 to 299 MΩ)                     |
| Test Voltage         | 500 V DC - 0% + 25% at 500 k $\Omega$ load 250 V DC - 0% + 25% at 250 k $\Omega$ load (6500-2) |
| Test Current         | > 1 mÅ at 500 k $\Omega$ load, < 15 mÅ at 0 $\Omega$   |
| Auto Discharge Time  | < 0.5 s for 1 µF   |
| Max. Capacitive Load | Operational up to 1 µF   |

#### RCD Test: Trip Current (6500-2 only)

| Operational Error | ± 10% |
|-------------------|-------|
| Nominal           | 30 mA |
| Accuracy          | ± 5%  |

#### RCD Test: Trip Time (6500-2 only)

| nob lest. Trip Time              | 0300-2 dilly)  |
|----------------------------------|--|
| Standard<br>Requirement          | 61557 Part 6: Tolerance of rated test current 0% to +10% |
| Operational Error                | ± 10%  |
| RCD Type                         | AC General-Purpose<br>30 mA                              |
| Display Range                    | 310 ms   |
| Resolution                       | 0.1 ms   |
| Accuracy                         | 3 ms   |
| Trip time limit at 100% (30 mA)  | 300 ms   |
| Trip time limit at 500% (150 mA) | 40 ms  |
|                                  |  |

| Touch Current Test                 |                   |
|------------------------------------|-------------------|
| Display Range                      | 0 to 1.99 mA AC   |
| Accuracy                           | ± (4% + 2 counts) |
| Resolution                         | 0.01 mA           |
| Internal Resistance<br>(via probe) | 2 kΩ              |
| Measuring Method                   | Probe             |
| mi1:                               | . :               |

The appliance under test is energised at mains

#### **Substitute Leakage Current Test**

| Display Range     | 0 to 19.99 mA AC    |
|-------------------|---------------------|
| Accuracy          | ± (2.5% + 3 counts) |
| Resolution        | 0.01 mA             |
| Test Voltage      | 100V AC ± 20%       |
| Operational Error | 10%                 |

#### **Load/Leakage Test: Load Current**

| . , ,      | 0 to 10 A         |
|------------|-------------------|
| Accuracy   | ± (4% + 2 counts) |
| Resolution | 0.1 A             |

The appliance under test is energised at mains

#### **Load/Leakage Test: Load Power**

|            | ± (5% + 3 counts)                         |
|------------|---|
| Resolution | 1 VA (0 to 999 VA),<br>0.1 kVA (>1.0 kVA) |

The appliance under test is energised at mains

#### **Load/Leakage Test: Leakage Current**

| Display Range | 0.25 to 19.99 mA  |
|---------------|-------------------|
| Accuracy      | ± (4% + 4 counts) |
| Resolution    | 0.01 mA           |
|               |                   |

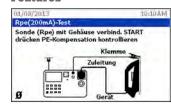
The appliance under test is energised at mains potential

#### **PELV Test**

|                     | ± (2% + 3 counts) |
|---------------------|-------------------|
| Overload protection | 300 V RMS         |
| Warning threshold   | 25 V RMS          |



#### **Features**



#### Fast professional testing mode

The professional testing mode enables you to conduct more tests faster and more efficiently than ever before.



#### Rapid data entry (6500-2)

With a full QWERTY keyboard, alphanumeric data entry is faster, easier and more convenient. The integral site, location and description codes further speed up data entry on site, and contribute to more efficient testing and results management.



#### One-touch testing

Tests are selected on the 6200-2 and 6500-2 with just one button. This greatly simplifies testing.



#### Built-in handle and separate hard case

The strong, lightweight enclosure features an integral carrying handle and fits neatly into the separate hard case (supplied as standard). Unlike typical portable appliance testers with large cumbersome integral cases, the Fluke 6200-2 and 6500-2 are easier to carry around in the field.



# ower Quality

# **Power Quality Tools Selection Guide**

|  |  |           |             |        |        |        |        | i                           | i                        |      |      |      |         |      |
|--|--|-----------|-------------|--------|--------|--------|--------|-----------------------------|--------------------------|------|------|------|---------|------|
| Rasic measurements                                 | Annlication use  | Single-Ph | nase<br>345 | 434-II | 435-11 | 437-11 | 438-II | Three-Phase 1739/34 1736/38 | Three-Phase<br>1 1736/38 | 1742 | 1746 | 1748 | 1750 ET | 1760 |
| Energy Studies                                     | oen romovidar  |           |             |        |        |        |        |                             | 00/00**                  |      |      |      |         |      |
| Measure V, I, kW, Cos/DPF,<br>kWhr                 | Get detailed power and energy  |           | •           | •      | •      | •      | •      | •                           | •                        | •    | •    | •    | •       | •    |
| Measure MIN/MAX and AVG values                     | consumption profiles during energy audits and pinpoint savings opportunities               |           |             | •      | •      | •      |        | •                           |                          |      | •    | •    | •       |      |
| Waste energy monetisation<br>Basic Harmonics Study | and obtains  |           |             | •      | •      | •      | •      |                             |                          |      |      |      |         |      |
| THD measurement (V & I)                            | Discover the source of distortion in volt installation                                     | •         | •           | •      | •      | •      | •      | •                           | •                        | •    | •    | •    | •       | •    |
| Harmonics 1 to 25 for V & I                        | so that you can filter those loads or move them to separate circuits                       | (V only)  | •           | •      | •      | •      | •      |                             | •                        |      | •    | •    | •       | •    |
| Advanced Harmonics Study                           |  |           |             |        |        |        |        |                             |                          |      |      |      |         |      |
| Full harmonic spectrum                             | If distorting loads are causing problems in your installation, you need comprehensive data |           | •           | •      | •      | •      | •      |                             | •                        |      | •    | •    | •       | •    |
| Power harmonics                                    | create a solution  |           | •           | •      | •      | •      | •      |                             |                          |      |      |      | •       | •    |
| Basic Industrial PQ Troubleshooting                | oting  |           |             |        |        |        |        |                             |                          |      |      |      |         |      |
| Oscilloscope function                              | When troubleshooting in the field, graphical data enables                                  |           | •           | •      | •      | •      | •      |                             | •                        |      |      |      | •       | •    |
| Voltage dips and swells                            | you to trace the source of the problem at hand   | •         |             | •      | •      | •      | •      |                             | •                        |      | •    | •    | •       | •    |
| Advanced Industrial PQ Troubleshooting             | eshooting  |           |             |        |        |        |        |                             |                          |      |      |      |         |      |
| Comprehensive logging capability                   | Complex installations often require a deeper dive into                                     |           | •           | •      | •      | •      | •      |                             | •                        | •    | •    | •    | •       | •    |
| Transient capture                                  | measurement data. Multiple<br>loads may be interacting                                     | •         |             |        | •      | •      | •      |                             | •                        |      |      | •    | •       | •    |
| Flicker  | randomly to cause a single<br>problem  | •         |             |        | •      | •      | •      |                             |                          | •    | •    | •    | •       | •    |
| Motor Analysis                                     |  | -         |             |        |        |        |        |                             |                          |      |      |      |         |      |
| Speed  | Perform dynamic motor<br>analysis by plotting of motor                                     |           |             |        |        |        |        |                             |                          |      |      |      |         |      |
| Torque   | de-ráting factor against   |           |             |        |        |        | •      |                             |                          |      |      |      |         |      |
| Mechanical power                                   | god according to neway no guidelines on direct on-line electric motors                     |           |             |        |        |        | •      |                             |                          |      |      |      |         |      |
| Features   |  |           |             |        |        |        |        |                             |                          |      |      |      |         |      |
| Inrush   |  |           |             | •      | •      | •      | •      |                             | •                        |      | •    | •    |         |      |
| Flicker  |  |           |             |        | •      | •      | •      |                             |                          | •    | •    | •    | •       | •    |
| Transients   |  |           |             |        | •      | •      | •      |                             |                          |      |      | •    | •       | •    |
| Mains signaling                                    |  |           |             |        | •      | •      | •      |                             |                          |      | •    | •    | •       | •    |
| Power wave   |  |           |             |        | •      | •      | •      |                             |                          |      |      |      |         |      |
| Event waveform capture                             |  |           |             |        | •      | •      | •      |                             | •                        |      |      | •    | •       | •    |
| Power inverter efficiency                          |  |           |             | •      | •      | •      | •      |                             |                          |      |      |      |         |      |

# Fluke 345 Power Quality Clamp Meter

#### The ideal meter to troubleshoot modern electrical loads



The Fluke 345 is more than just a power meter; it combines the functions of a clamp meter, oscilloscope, data logger and digital power meter into one handy device. The Fluke 345 is ideal for working with variable frequency motor drives, high efficiency lighting and other loads using switching electronics.

- AC/DC current: Clamp-on measurement of AC current up to 1400 A RMS and DC current up to 2000 A without breaking the circuit
- Highest safety rating: CAT IV 600 V power analyser is rated for use at the service entrance
- Accurate in noisy environments: Clamp meter performs even with distorted waveforms present on electronic loads with low-pass filter
- Data logging: Identify intermittent faults by logging any power quality parameter for minutes, or over a month, including harmonics
- Troubleshoot harmonics: Analyse and log harmonics digitally or graphically
- Inrush current: Capture and analyse nuisance tripping from 3 seconds to 300 seconds
- View graphs and generate reports: Use power analyser with included Power Log software
- Three phase power: Built-in capability for balanced loads
- Verify batteries: Direct measurement of DC ripple (%) for battery and DC systems
- One year warranty

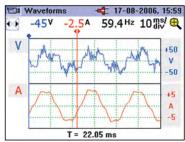




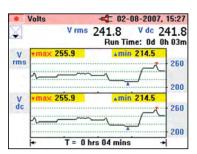
| <b>Current measurement</b>                                 |   |  |
|--|---|--|
| DC, DC RMS, AC RMS   | All measurements DC and 15 Hz to 1 kHz.  Maximum overload 10,000 Å or RMS x frequency < 400,000. Amps RMS is a true RMS measurement (AC + DC) |  |
| Measuring range  | 0 – 2000 A DC or 1400 AC RMS  |  |
| Harmonics  | All measurements up to 30th harmonic (40th harmonic for 15 Hz to 22 Hz); Frequency range F0 : 15 Hz to 22 Hz and 45 Hz to 65 Hz; Iacrms > 10A |  |
| Voltage measurement  |   |  |
| DC, DC RMS, AC RMS   | All measurements DC and 15 Hz to 1 kHz. Maximum overload 1,000 V RMS. Volts RMS is a true-RMS measurement (AC + DC)                           |  |
| Measuring range  | 0 – 825 V DC or AC RMS  |  |
| Harmonics  | All measurements up to 30th harmonic; Frequency range F0 : 15 Hz to 22 Hz and 45 Hz to 65 Hz; Vacrms $> 1V$                                   |  |
| Watts measurement (singl                                   | e-and three-phase)) DC, DC RMS, AC RMS  |  |
| Measuring range  | 0 - 1650 kW DC or 1200 kW AC  |  |
| VA measurement (single-and three-phase) DC, DC RMS, AC RMS |   |  |
| Measuring range  | 0 -1650 kVA DC or 1200 kVA AC   |  |
| VAR measurement (single-                                   | and three-phase)  |  |
| Measuring range  | 0 – 1250 kVAR   |  |
| Power factor (single-and th                                | nree-phase)   |  |
| Measuring range  | 0.3 cap1.0 0.3 ind (72.5° cap0° 72.5° ind)  |  |
| Displacement power factor                                  |   |  |
| Measuring range  | 0.3 cap 1.0 0.3 ind (72.5° cap 0° 72.5° ind)  |  |
| Kilowatt hour (kWHr)                                       |   |  |
| Measuring range  | 40,000 kWHr   |  |
| Scope function   |   |  |
| Time base  | 2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms/div   |  |
| Inrush current function                                    | All measurements DC and 15 Hz to 1 kHz  |  |
| Ranges   | 40, 400 and 2000 A  |  |
| Memory   |   |  |

Up to 50 screen shots and over 150,000 individual measurement values





View waveforms for equipment checking and setup



Log parameters over time to track down intermittent faults

#### **Included Accessories**

Soft Carrying Case, PowerLog Software, Test Probes, Test Leads, Alligator Clips, AC Adapter/Battery Eliminator, User Manual.

#### **Ordering Information**

FLUKE-345

Power Quality Clamp Meter

# Fluke VR1710 Single Phase Voltage Quality Recorder



Fluke VR1710



# Easy-to-use solution for detecting and recording voltage quality problems

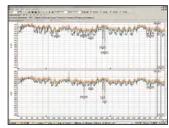
The Fluke VR1710 is a single-phase, plug-in voltage quality recorder that provides fast and easy recording of voltage trends, dropouts, harmonics and general power quality including dips and surges to help maintenance and facilities management personnel easily pinpoint the root cause of voltage problems. Voltage quality parameters including RMS average, transients, flicker, and harmonics up to the 32nd are recorded using a user-selected average period from 1 second to 20 minutes.

- Fast and easy recording of voltage trends, dropouts and power quality: Easily pinpoint the root cause of single phase voltage problems
- Extremely easy to use: Plugs directly into the mains power socket and capture data
- Quickly see what happened and when: Min, Max, and Average RMS values (1/4 cycle) with time stamp, transient display (>100 μs) with time stamp
- Easily identify problems: Power quality or equipment related Flicker recording to EN 61000-4-15, individual harmonic and THD values with trends
- Includes PowerLog software: For quick download, analysis and automatic reporting
- Save time: Generate power quality reports automatically with pre-set templates
- One year warranty

# Applications Voltage recording Monitors and records supply voltage; measures RMS average, minimum and maximum values, and checks whether the socket outlet is providing voltage within tolerance. Distortion measurement Measure frequency and harmonics; check whether the distorting loads (UPS systems, drives, etc.) are affecting your other equipment. Flicker measurement Quantify the affects of switching loads on lighting systems. Capture those intermittent, momentary events that may be affecting your equipment; the full waveform is captured with date, timestamp, and duration.

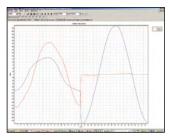
| Specifications               |   |
|------------------------------|---|
| Operating voltage            | 70 V to 300 V   |
| Min/Max/Avg RMS value        | Resolution 0.125 V  |
| Number of events             | 175,000   |
| Dips/Interruptions           | Yes   |
| Time resolution              | 5 ms  |
| Voltage resolution)          | 0.125 V   |
| Over-voltages                | Yes   |
| Frequency                    | Yes   |
| Harmonics measurement        | EN 61000-4-7 (up to 32nd)   |
| Flicker measurement          | EN 61000-4-15   |
| Number of recording channels | 1 Phase to Neutral, 2 Phase/Neutral to Ground                           |
| Recording time               | 1 day to 339 days depending on average time from 1 second to 20 minutes |
| Transients                   | Yes   |
| Frequency range              | 50 Hz ± 1 Hz and 60 Hz ± 1 Hz   |
| Safety category rating       | CAT II 300 V  |

#### **PowerLog Software**

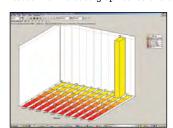


PowerLog Setup – Simple set up of internal clock, logging periods, and intervals with default values for quick results

PowerLog View – Data presentation showing RMS voltage and harmonic trends, actual transients, summary information and statistics in accordance with EN50160.



Actual transient display (> 100 µs) with time stamp — Quickly identify issues with included graphical software.



Statistical analysis of voltage event – reduces analysis time by tracking event quantities and magnitudes.



Includes PowerLog software

#### **Included Accessories**

USB Cable, PowerLog Software CD, Power Cord Adapter.

#### **Ordering Information**

**FLK-VR1710** Voltage Quality Recorder

## Fluke 1732 and 1734 Three-Phase **Electrical Energy Logger**



Fluke 1734







Energy logging is now within your reachdiscover where you're wasting energy, optimise your facility's energy use and reduce your bill

The Fluke 1732 and 1734 Three-Phase Electrical Energy loggers introduce a new simplicity to discovering sources of electrical energy waste. Discover when and where energy in your facility is being consumed; from the service entrance to individual circuits. Access and share data remotely with your team via the Fluke Connect® app so you can maintain safer working distances and make critical decisions in real-time, reducing the need for protective equipment, site visits and check-ins.

Profiling energy usage across your facility helps you identify opportunities for energy savings, and provides you with the data you need to act on them. The new Energy Analyse software package allows you to compare multiple data points over time to build a complete picture of energy usage, which is the first step to reduce the cost of your energy bill.

- Key measurements: Automatically capture and log voltage, current, power, power factor, energy and associated values
- Fluke Connect® compatible: View data locally on the instrument, via Fluke Connect mobile app and desktop software or through your facilities' WiFi infrastructure
- Convenient instrument powering: Power instrument directly from the measured circuit
- Highest safety rating in the industry: 600 V CAT IV/1000 V CAT III rated for use at the service entrance and downstream
- Measure all three phases: With included 3 flexible current probes
- Fully integrated logging: Connect other Fluke Connect devices to the Fluke 1734 to simultaneously log up to two other measurement parameters, virtually any parameter available on a Fluke Connect wireless digital multimeter or module
- Energy Analyse Plus application software: Download and analyse every detail of energy consumption with our automated reporting
- One year warranty

| Specifications    |                     |                      |                      |  |
|-------------------|---------------------|----------------------|----------------------|--|
| Accuracy          |                     |                      |                      |  |
| Paramet           | ter                 | Range                | Max resolution       | Intrinsic accuracy at reference conditions (% of reading + % of full scale)        |
| Voltage           |                     | 1000 V               | 0.1 V                | ± (0.2 % + 0.01 %)   |
|                   | i17xx-flex 1500 12" | 150 A<br>1500 A      | 0.1 A<br>1 A         | ± (1 % + 0.02 %)<br>± (1 % + 0.02 %)   |
| Current           | i17xx-flex 3000 24" | 300 A<br>3000 A      | 1 A<br>10 A          | ± (1 % + 0.03 %)<br>± (1 % + 0.03 %)   |
| Ourrent           | i17xx-flex 6000 36" | 600 A<br>6000 A      | 1 A<br>10 A          | ± (1.5 % + 0.03 %)<br>± (1.5 % + 0.03 %)   |
|                   | i40s-EL clamp       | 4 A<br>40 A          | 1 mA<br>10 mA        | ± (0.7 % + 0.02 %)<br>± (0.7 % + 0.02 %)   |
| Frequen           | су                  | 42.5 Hz to<br>69 Hz  | 0.01 Hz              | ± (0.1 %)  |
| Aux inpu          | ıt                  | ± 10 V DC            | 0.1 mV               | ± (0.2 % + 0.02 %)   |
| Voltage           | min/max             | 1000 V               | 0.1 V                | ± (1 % + 0.1 %)  |
| Current           | min/max             | defined by accessory | defined by accessory | ± (5 % + 0.2 %)  |
| THD on            | voltage             | 1000 %               | 0.1 %                | ± 0.5  |
| THD on            | current             | 1000 %               | 0.1 %                | ± 0.5  |
| Voltage 3         | harmonics 2nd       | 1000 V               | 0.1 V                | ≥ 10 V: ± 5 % of reading<br>< 10 V: ± 0.5V   |
| Current 1<br>50th | harmonics 2nd       | defined by accessory | defined by accessory | ≥ 3 % of current range: ± 5 % of reading < 3 % of current range: ± 0.15 % of range |
| Unbalan           | ce                  | 100 %                | 0.1 %                | ± 0.2  |

For more information, go to www.fluke.com/au/PQ



#### **Recommended Accessories**





117XX-FLEX 1500 1500A 12 inch iFlex Current Clamps urchase as individual, 3pk or 4pk) See page 159







117XX-FLEX 6000 6000A 36 inch iFlex® Current Clamps (Purchase as individual, 3pk or 4pk) See page 159







FLUKE-17XX-TL 0.1M Test Lead Set. 1000V CAT III. Non-stackable ctors; 0.1M; Red/Blk See page 159





173X-HANGER KIT Hanging Strap Kit See page 159



MP1-MAGNET PROBE1 gnet Probes for 41 banana, Set of 4 See page 159



1732/UPGRADE Upgrade Kit for 1732 to 1734 See page 160



C17XX Soft case See page 160

#### **Included Accessories**

Power Supply, Voltage Test Leads, 4 x Alligator Clips, 3 x 12 in 1,500A Flexible Current Probe, Soft Case, Energy Analyse Plus Software, Line Cords, Colour Coding Set and Documentation on USB Flash Drive, Magnetic Hanging Strap (1734) and Magnetic Voltage Probes (1734).

#### **Ordering Information**

**FLUKE 1732/B** 

Energy Logger, Basic Version (excl. current probes)

FLUKE 1732/ INTL

Energy Logger, International Version (incl. current probes)

FLUKE 1734/B

Energy Logger, Basic Version with Fluke Connect (excl. current probes)

**FLUKE 1734/** INTI.

Energy Logger, International Version with Fluke Connect (incl. current probes)

## Fluke 1736 and 1738 Three-Phase Power Loggers





Fluke 1736



Fluke 1738







#### More visibility, reduced uncertainty

The Fluke 1736 and 1738 Three-Phase Power Loggers built with Fluke Connect® mobile app and desktop software compatibility give you the data you need to make critical power quality and energy decisions in real-time. The ideal test tools for conducting energy studies and basic power quality logging, the 1736 and 1738 automatically capture and log over 500 power quality parameters so you have more visibility into the data you need to optimise system reliability and savings.

- Measure all three phases and neutral with included 4 flexible current probes.
- Comprehensive logging: More than 20 separate logging sessions can be stored on the instruments. In fact, all measured values are automatically logged so you never lose measurement trends.
- Capture dips, swells, and inrush currents:
   Includes event waveform snapshot and high resolution RMS profile, along with date, timestamp and severity to help pinpoint potential root causes of power quality issues
- Optimised user interface: Capture the right data every time with quick, guided, graphical setup and reduce uncertainty about your connections with the intelligent verification function.
- Complete "in-the-field" setup through the front panel or Fluke Connect App:
   No need to return to the workshop for download and setup or to take a computer to the electrical panel.
- Energy Analyse Plus application software:
   Download and analyse every detail of energy consumption and power quality state of health with our automated reporting.
- · One year warranty

|   | Three-Phase Energy Loggers  |                       | Three-Phase l        | Energy Loggers                       |  |
|---|---|-----------------------|----------------------|--------------------------------------|--|
|   | 1732 Energy<br>Logger   | 1734 Energy<br>Logger | 1736 Power<br>Logger | 1738 Advanced<br>Power Logger        |  |
| Load studies  | •   | •                     | •                    | •                                    |  |
| Energy assessments  | •   | •                     | •                    | •                                    |  |
| Neutral Current<br>Measurement (four<br>current channels)                         | -   | -                     | •                    | •                                    |  |
| Harmonics<br>measurements   | -   | -                     | •                    | •                                    |  |
| Voltage event capture   | -   | -                     | •                    | •                                    |  |
| Advanced analysis:<br>Waveform and Inrush<br>event capture<br>PQ Health (EN51060) | -   | -                     | Upgrade<br>package*  | •                                    |  |
| Fully integrated logging with Fluke Connect®                                      | Upgrade<br>package*   | •                     | Upgrade<br>package*  | •                                    |  |
| WiFi  | Optional  | •                     | •                    | •                                    |  |
| Wi-Fi / Bluetooth   | Optional  | •                     | Optional             | •                                    |  |
| Magnetic probe set  | Optional  | •                     | Optional             | •                                    |  |
| Magnetic hanger   | Optional  | •                     | Optional             | •                                    |  |
| Connection via WiFi router  | Requires FREE software license available upon product registration. |                       |                      | software license oduct registration. |  |

<sup>\*</sup>Upgrade packages are available to upgrade existing 1732 Energy Loggers with the same features of the 1734 Energy logger, and to upgrade existing 1736 Power Loggers with the same features and capabilities of the 1738 Advanced Power Logger. Please note that 1732 and 1734 Energy Loggers cannot be upgraded with the functionality of 1736 and 1738 Power Loggers.

#### **Recommended Accessories**





I17XX-FLEX 1500 1500A 12 inch iFlex\*\* Current Clamps (Purchase as individual, 3pk or 4pk) See page 159

TEST Lead Set, 1000V CAT III, Non-stackable Connectors; 0.1M; Red/Blk See page 159





I17XX-FLEX 3000 3000A 24 inch iFlex® Current Clamps (Purchase as individual, 3pk or 4pk) See page 159 PLUKE-17XX-TL 1.5M
Test Lead Set, 1000V
CAT III, Non-stackable
Connectors; 1.5M; Red/Blk
See page 159





117XX-FLEX 6000 6000A 36 inch iFlex\* Current Clamps (Purchase as individual, 3pk or 4pk) See page 159 MP1-MAGNET
PROBE 1
Magnet Probes
for 4mm banana,
Set of 4
See page 159







117XX 140S-EL/3PK
40A Clamp-on
Current Transformer
(Purchase as individual or 3pk)
See page 159



1736/UPGRADE Upgrade Kit for 1736 to 1738



C17XX Soft Case See page 160

#### **Included Accessories**

Power Supply, Voltage Test Leads, 4 x Alligator Clips, 4 x 12 in 1500A Flexible Current Probe, Soft Case, Energy Analyse Plus Software, WiFi Adapter, Line Cords, Colour Coding Set and Documentation on USB Flash Drive, Magnetic Hanging Strap [1738] and 4 x Magnetic Voltage Probes (1738).

#### **Ordering Information**

FLUKE 1736/B

Power Logger, Basic Version (excl. current probes)

FLUKE-1736/INTL Power Logger,

Power Logger, International Version (incl. current probes)

**FIUKE 1738/B** 

Power Logger, Advanced Version (excl. current probes)

FLUKE-1738/INTL Power Logger,

Power Logger, International Advanced Version (incl. current probes)

# Fluke 1742, 1746 and 1748 **Three-Phase Power Quality Loggers**



Fluke 1746









### Troubleshoot, quantify energy usage and perform quality of service surveys easier than

The Fluke 1742, 1746 and 1748 Three-Phase Power Quality Loggers give you fast, easy access to the data you need to make critical power quality and energy decisions in real-time, and with the included Energy Analyse Plus software package you can easily create detailed reports.

Fully compliant with international power quality standards such as IEC 61000-4-30 Class A including local compliance to AS/NZ 61000.4.30 Class A and capable of simultaneously logging up to 500 parameters while also capturing events, the Fluke 1740 Series helps uncover intermittent and hard-to-find power quality issues more easily than ever. Energy Analyse Plus software quickly assesses the quality of power at the service entrance, substation, or at the load, according to national and international standards.

- "In-workshop" or "in-the-field" setup and download through PC application software using USB Memory Stick, Wi-Fi download, wired ethernet connection or via USB cable
- One-touch reporting: Create standardised reports or export data in PQDIF or NeQual compatible format for use with third party software
- Capture dips, swells and interruptions
- Measures harmonics and interharmonics for voltage and current, also includes unbalance, flicker and rapid voltage changes
- Two year warranty (battery not included)

| Measure all power quality and power paramaters | 1742 Power<br>Quality Logger | 1746 Power<br>Quality Logger | 1748 Power<br>Quality Logger |
|--|------------------------------|------------------------------|------------------------------|
| Functions                                      |                              |                              |                              |
| Energy   | •                            | •                            | •                            |
| Basic Power Quality                            | Optional                     | •                            | •                            |
| Advanced Power Quality                         | Optional                     | Optional                     | •                            |

| Selection Guide  | 1742 Power<br>Quality Logger | 1746 Power<br>Quality Logger | 1748 Power<br>Quality Logger |
|--|------------------------------|------------------------------|------------------------------|
| Functions  |                              |                              |                              |
| Voltage, current, power, power factor, frequency       | •                            | •                            | •                            |
| Energy forward/reverse                                 | •                            | •                            | •                            |
| Peak Demand  | •                            | •                            | •                            |
| THD  | •                            | •                            | •                            |
| Voltage and current harmonics (to 50th)                | -                            | •                            | •                            |
| Flicker  | •                            | •                            | •                            |
| Unbalance  | -                            | •                            | •                            |
| Rapid voltage change events                            | -                            | •                            | •                            |
| Interharmonics (to 50th)                               | -                            | •                            | •                            |
| Dips, swells, interruption and transient events tables | -                            | •                            | •                            |
| Mains signaling  | -                            | •                            | •                            |
| Inrush current   | -                            | •                            | •                            |
| Transients (low frequency)/Waveform deviation events   | -                            | -                            | •                            |
| Recording  |                              |                              |                              |
| Trend  | •                            | •                            | •                            |
| Waveform snapshots                                     | -                            | -                            | •                            |
| RMS profile  | -                            | -                            | •                            |
| Communication  |                              |                              |                              |
| Ethernet   | •                            | •                            | •                            |
| USB (mini B)   | •                            | •                            | •                            |
| WiFi download Instrument to device                     | •                            | •                            | •                            |
| Wifi download via WiFi hub (requires registration)     | Opt.                         | Opt.                         | Opt.                         |

#### **Recommended Accessories**



#### i17XX-FLEX1.5KIP

IP65 iFlex 1.5KA 60cm (24") Current Probes (Purchase as individual, 3pk or 4pk) See page 159



#### i17XX-FLEX6KIP

IP65 iFlex 6KA 90cm (36") Current Probes chase as individual 3pk or 4pk) See page 159



## **IP65 VOLT CONN**

See page 159



## 3PHVL-1730-5M

Cable Assembly, Voltage Test Lead 3-Phase+N 5m See page 159



#### 174X-HANGER 174X Hanger Kit See page 159

Image Not Available

Upgrade Kit 1742 to 1746/1748 & 1746 to 1748 See page 160

### 0 i17XX-FLEX3KIP

# IP65 iFlex 3KA 60cm (24") Current Probes (Purchase as individual, 3pk or 4pk) See page 159



# i40S-EL/3PK 40A Clamp-On Current Transformer

See page 159



## MP1-3R/1B

Magnet Probe 1 (3 x Red, 1 x Black) See page 159



## FLUKE-17XX AUX

Auxiliary Input Adapter See page 160



1742-6/8 UPGRADE

#### **Included Accessories**

4 x Flexible Current Probes, USB Stick, USB Cable, 3PHVL-1730 3-Phase + Neutral Voltage Test Lead, Test Lead Set Red/Black 0.18m, Test Lead Set Red/Black 1.5m, 4 x Alligator Clips, 173X/174X Soft Case, Cable Marker Kit, MP1-3R/1B-Magnet Probe 1 Set (3 Red, 1 Black) and Hanger Kit (1748).

| Ordering Inform        | nation                                 |
|------------------------|--|
| FLUKE-1742/15/<br>INTL | Three-Phase<br>Power Quality<br>Logger |
| FLUKE-1742/30/<br>INTL | Three-Phase<br>Power Quality<br>Logger |
| FLUKE-1746/15/<br>INTL | Three-Phase<br>Power Quality<br>Logger |
| FLUKE-1746/30/<br>INTL | Three-Phase<br>Power Quality<br>Logger |
| FLUKE-1748/15/<br>INTL | Three-Phase<br>Power Quality<br>Logger |
| FLUKE-1748/30/<br>INTL | Three-Phase<br>Power Quality<br>Logger |

# Fluke 1750/ET Three-Phase Power Recorder



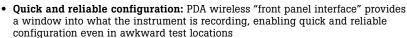
Fluke 1750/ET

# every cycle, all the time Setting up a Power Quality Analyser to capture detailed

Record every power quality parameter,

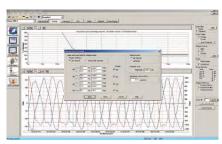
Setting up a Power Quality Analyser to capture detailed power quality data has never been easier than it is with the Fluke 1750ET. This Fluke Three-Phase Power Recorder captures the most important data for up to 30 days. It automatically records every power quality parameter and event, on every cycle – all the time. Once the data is captured; download via Ethernet or directly to the 2GB SD card (without the need of any other device). The Fluke 1750/ET features a wireless front panel for viewing measurements, data and setting up, implemented via a tablet computer using Bluetooth communication.

 Power quality that meets the standard: All measurements comply with IEC61000-4-30 standards for correct evaluation of all measured values including voltage, current, power, harmonics, flicker etc

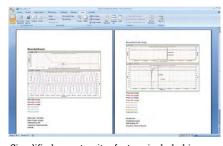


- Threshold-free set up: Apply thresholds after data is collected with Fluke Power Analyse Software—no need to worry about missed information due to incorrect setups
- Windows 10 tablet for control, setup, data download and analysis
- Captures everything: Cross-channel and current triggering capture every measurement, on every channel, every time
- Measure every parameter: Voltage and current on three phases, neutral and ground
- 5 MHz, 8000 Vpk waveform capture: Get a detailed picture of even the shortest events
- Plug and play: Set up in minutes with self-identifying current probes and single-lead voltage connections
- No need to reconnect wires: Swap channels internally with the wireless front panel or PC when connections are not correct
- · One year warranty

| <b>Power Quality Measurement Star</b>                        | ndards   |
|--|--|
| Conformance  | IEC 61999-1-4 Class 1, IEC 61000-4-30, IEEE519, IEEE1159, IEEE1459 and EN50160 |
| Clock/calendar   | Leap years, 24-hour clock  |
| Real-time clock accuracy                                     | Not more than ± 1 s/day  |
| Internal memory capacity for data                            | At least 2 GB  |
| Maximum recording period                                     | At least 31 days   |
| Measurement time control                                     | Automatic  |
| Maximum number of events                                     | Limited only by the size of the internal memory                                |
| Power requirements   | 100 to 240 V RMS ± 10 %, 47-63 Hz, 40 W  |
| Operating time during interruptions (internal UPS operation) | 5 mins per interruption, 60 mins total operating time without recharging       |
| Size   | 215 mm x 310 mm x 35 mm  |
| Weight   | 6.3 kg   |



Apply thresholds to data after collection using a variety of standard or customised templates.



Simplified report writer feature included in Fluke Power Analyse Software.

#### **Recommended Accessories**





3210-PR-TF-II 1000A Thin flexible current transformer 61cm (24") (20A – 1000A) See page 160

**3140R** 400A, Clamp-on Current Transformer See page 160





3310-PR-TF-II 5000A Thin flexible current transformer 61cm (24") (100A – 5000A) See page 160

I40S-PR 40A Current Clamp See page 160





3312-PR-TF-II 5000A Thin flexible current transformer 122cm (48") (100A – 5000A) See page 160







CS1750/1760 Soft Case for 1750 & 1760 See page 160

1750/CASE Transit Case See page 160



#### **Included Accessories**

Lenovo Miix 310 Windows 10 PC Tablet, 4 x 400A Amperage Clamps (3140R), 5 x Test Leads and Clips, SD Memory Card, Fluke Power View and Fluke Power Analyse Software, Power Cord, Ethernet Cable, Colour Localisation Set, Getting Started Manual, Product CD with Software, User Manual (PDF), CS1750/1760 Rugged Transit Carrying Case.

#### **Ordering Information**

FLUKE-1750/ET

Three-Phase Power Quality Recorder

# Fluke 1760 Three-Phase Power **Quality Recorder**

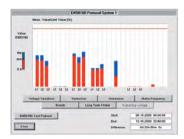


Fluke 1760









The included PO Analyse software provides a detailed overview of several power quality parameters.

#### Class-A compliance for the most demanding power quality tests

The Fluke 1760 Three-Phase Power Quality Recorder is fully compliant to IEC 61000-4-30 Class-A, for advanced power quality analysis and consistent compliance testing. Designed for analysis of utility and industrial power distribution systems, in medium and low-voltage networks, the Fluke 1760 provides the flexibility to customise thresholds, algorithms, and measurement selections. It has 8 input channels (4 currents/4 voltages or 8 voltages), and captures the most comprehensive details on user selectable parameters.

- Fully Class-A compliant: Conduct tests according to the stringent international IEC 61000-4-30 Class-A standard
- GPS time synchronisation: Correlate data with events or datasets from other instruments with precision
- Flexible and fully configurable thresholds and **scale factors:** Allows user to pinpoint specific issues by defining the detailed criteria for detection and recording of disturbances.
- 10 MHz, 6000 Vpk waveform capture: Get a detailed picture of even the shortest event
- 2 GB data memory: Enables detailed, simultaneous recording of numerous power parameters for long periods of time
- Comprehensive software (included): Provides trend diagrams for root cause analysis, statistical summaries, report writing and real-time data monitoring in the online mode
- Plug and play: Allows quick setup with automatic sensor detection; sensors are instrument powered, eliminating the need for batteries
- · Two year warranty

| Specifications   | 1760<br>Basic | 1760TR<br>Basic | 1760<br>INTL | 1760TR<br>INTL |
|--|---------------|-----------------|--------------|----------------|
| Power quality statistics according to EN50160            | •             | •               | •            | •              |
| Voltage event list (dips, swells and interruptions)      | •             | •               | •            | •              |
| Continuous recording of:                                 |               |                 |              |                |
| Voltage  | •             | •               | •            | •              |
| Current  | •             | •               | •            | •              |
| Power P, Q, S  | •             | •               | •            | •              |
| Power factor   | •             | •               | •            | •              |
| kWh  | •             | •               | •            | •              |
| Flicker  | •             | •               | •            | •              |
| Unbalance  | •             | •               | •            | •              |
| Frequency  | •             | •               | •            | •              |
| Voltage and current harmonics to the 50th/Interharmonics | •             | •               | •            | •              |
| THD  | •             | •               | •            | •              |
| Mains signaling  | •             | •               | •            | •              |
| Triggered recordings                                     | •             | •               | •            | •              |
| Online mode (Oscilloscope, transients and events)        | •             | •               | •            | •              |
| Fast transient analysis up to 10 MHz                     | -             | •               | -            | •              |
| 4, 600V voltage probes                                   | -             | -               | •            | •              |
| 4 dual-range flexible current probes (1000 A / 200 A AC) | -             | -               | •            | •              |
| GPS time sync receiver                                   | -             | -               | •            | •              |
| Memory   |               | 2 GB Flash      | n Memory     |                |

#### **Recommended Accessories**







TPS CLAMP 10A/1A Clip-on Current Transformer See page 160



Flexible Current Probe See page 160



TPS CLAMP 20A/2A



TPS FLEX 36-TF-II



Flexible Current Probe (Range: 30A to 3000A /60A to 6000A) See page 160



TPS VOLTPROBE 10V 10V Voltage Probe (Range: 10V to 600V)
See page 160







CS1750/1760 Soft Case for 1750 & 1760 See page 160

#### **Included Accessories**

4 x TPS Flex 24-TF-II Flexible Current Probes. 4 x TPS VoltProbe 600V. 2GB Internal Flash Memory, ST1760 Standard Ethernet Cable, RS232 Interface Cable and RS232-USB Adapter, CS1760 Crossover Ethernet Cable, 1 Mains Cable, PC Software on CD, WC17XX Colour Localisation Set, GPS-time Sync (1760TR only), CS 1750/1760 Carrying Bag, Hardware and Software Manual.

Basic Models: Excl. Current Clamps, TPS Flex 24-TF-II.

#### **Ordering Information**

FLUKE-1760TR INTL

High Speed Transient Power Quality Recorder Topas and Kit

FLUKE-1760TR BASIC

High Speed Transient Power **Quality Recorder** 

Topas

FLUKE-1760 INTL

**Power Quality** Recorder Topas and Kit

FLUKE-1760 BASIC Power Quality

Recorder Topas

# Fluke 434-II, 435-II and 437-II, Series Three-Phase Power Quality Analysers



Fluke 437-II



Fluke 434-II

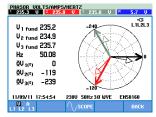
The Fluke 434-II, 435-II and 437-II Power Quality Analysers help locate, predict, prevent and troubleshoot power quality problems in three and single-phase power distribution systems. Additionally, the Fluke-patented energy loss algorithm, Unified Power Measurement, measures, quantifies and monitises energy losses due to harmonics and unbalance issues, allowing the user to pinpoint the origin of energy waste within a system.

- Patented energy loss management: Classic active and reactive power measurements unbalance and harmonic power and energy are quantified to pinpoint true system energy losses
- Realtime PowerWave data capture: Capture fast RMS data, show single cycle RMS value to characterise electrical system dynamics (generator start-ups, UPS switching etc.)
- Highest safety rating in the industry: CAT IV 600 V/ CAT III 1000 V rated for use at the service entrance
- Automatic transient mode: Capture 200 kHz waveform data on all phases simultaneously up to 6kV
- Fully Class-A compliant: Conduct tests according to the stringent international IEC 61000-4-30 Class-A standard intervals for 435-II and 437-II
- Troubleshoot real-time: Analyse the trends using the cursors and zoom tools-even while background recording continues
- Measure all three phases and neutral: With included four iFlex flexible current probes
- Monitise energy loss caused by power quality issues
- Three year warranty

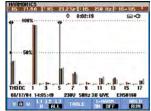








Phasor diagram.



Track harmonics up to the 50th, and measure and record THD.

|                                | 434-II                 | 435-II                 | 437-II                    |
|--------------------------------|------------------------|------------------------|---------------------------|
| Standard compliance            | IEC 61000-4-30 Class S | IEC 61000-4-30 Class A | IEC 61000-4-30<br>Class A |
| Volt Amp Hz                    | •                      | •                      | •                         |
| Dips and swells                | •                      | •                      | •                         |
| Harmonics                      | •                      | •                      | •                         |
| Power and energy               | •                      | •                      | •                         |
| Energy loss calculator         | •                      | •                      | •                         |
| Unbalance                      | •                      | •                      | •                         |
| Monitor                        | •                      | •                      | •                         |
| Inrush                         | •                      | •                      | •                         |
| Event waveform capture         | -                      | •                      | •                         |
| Flicker                        | -                      | •                      | •                         |
| Transients                     | -                      | •                      | •                         |
| Mains signaling                | -                      | •                      | •                         |
| Power wave                     | -                      | •                      | •                         |
| Power inverter efficiency      | •                      | •                      | •                         |
| 400Hz                          | -                      | -                      | •                         |
| C1740 Soft Case                | •                      | •                      | -                         |
| C437-II Hard Case with rollers | -                      | -                      | •                         |
| SD card (Max 32 GB)            | 8 GB                   | 8 GB                   | 8 GB                      |

#### **Recommended Accessories**





5A AC Current Clamps, 3 Pack See page 159

16000S FLEX See page 148





C437-II Water-tight hard case with rollers See page 159

I430-FLEXI-TF-4PK 6000A Fluke 43X Thir Flexi 24inch 4 Pack See page 159

#### **Energy Loss Calculator**

| Energy Loss Cal                 | Energy Loss Calculator |                 |           |  |  |
|---------------------------------|------------------------|-----------------|-----------|--|--|
|                                 | Ø 0:0                  | 3:26            | \$P 🖼 ⊀3: |  |  |
|                                 | Total                  | Loss            | Cost      |  |  |
| Effective kW                    | 35.9                   | W 488 s         | 48.83 /hr |  |  |
| Reactive kvar                   | 21.5                   | W 175 s         | 17.49 /hr |  |  |
| Unbalance kVR                   | 2.52                   | W 1.5 s         | 0.15 /hr  |  |  |
| Distortion kUA                  | 7.17                   | W 57.2 s        | 5.72 /hr  |  |  |
| Neutral A                       | 29.3                   | W 57.7 s        | 5.77 /hr  |  |  |
| Total                           |                        | k \$            | 683 /y    |  |  |
|                                 |                        |                 |           |  |  |
| 11/10/11 10:49:38               | 230V 50                | Hz 3.0' WYE     | EN50160   |  |  |
| LENGTH DIAMETER<br>100 m 25 mm2 | МЕТЕР                  | RATE<br>0.10 /k |           |  |  |

#### **Included Accessories**

TL430 Test Lead and Alligator Clip Set, i430flex-TF-II (60cm 4 Clamps), BC430 Power Adapter, BP290 Single Capacity Li-ion Battery, International Plug Adapter Set, WC100 Colour Coding Clips and Regional Decals, 8GB SD Card, PowerLog on CD, USB Cable A-B Mini, C1740 Soft Case (434-II, 435-II), C437 Hard Case (437-II).

| Ordering Inf           | ormation  |
|------------------------|---|
| FLUKE-437-II           | 400Hz Three-Phase<br>Power Quality and<br>Energy Analyser                     |
| FLUKE-437-II/<br>BASIC | 400Hz Three-Phase<br>Power Quality and<br>Energy Analyser<br>(without Clamps) |
| FLUKE-435-II           | Three-Phase Power<br>Quality and Energy<br>Analyser                           |
| FLUKE-435-II/<br>BASIC | Three-Phase Power<br>Quality and Energy<br>Analyser (without<br>Clamps)       |
| FLUKE-434-II           | Three-Phase<br>Energy Analyser  |
| FLUKE-434-II/<br>BASIC | Three-Phase<br>Energy Analyser<br>(without Clamps)                            |

# Fluke 438-II Power Quality and Motor Analyser





Fluke 438-II









#### Quickly and easily discover electrical and mechanical performance of electric motors and evaluate power quality with a single test tool

The Fluke 438-II Power Quality and Motor Analyser adds key mechanical measurement capabilities for electric motors to the advanced power quality analysis functions of the Fluke 430 Series II Power Quality Analysers. Quickly and easily measure and analyse key electrical and mechanical performance parameters such as power, harmonics, unbalance, motor speed, torque and mechanical power without the need of mechanical sensors.

- Measure key parameters on direct-on-line motors including torque, RPM, mechanical power and motor efficiency
- Perform dynamic motor analysis by plotting of motor derating factor against load according to NEMA/IEC guidelines
- Calculate mechanical power and efficiency without the need of mechanical sensors, just connect to the input conductors and you're ready to go
- Measure electrical power parameters such as voltage, current, power, apparent power, power factor, harmonic distortion and unbalance to identify characteristics that impact motor efficiency
- Identify power quality issues such as dips, swells, transients, harmonics and unbalance
- Waveform capture function captures 100/120 cycles (50/60 Hz) of each event detected event, in all modes, without set-up
- Automatic transient mode captures waveform data at 200 kS/s on all phases simultaneously up to 6 kV
- Firmware upgrade package available to add motor analysis capabilities to existing Fluke 434-II, 435-II and 437-II Power Quality Analysers
- Safety rated for industrial applications 600 V CAT IV/ 1000 V CAT III rated for use at the service entrance and downstream
- · Three year warranty



| Motor                               |   |                     |  |  |
|-------------------------------------|---|---------------------|--|--|
| Measurement                         | Range   | Resolution          | Accuracy                                 | Default Limit                              |
| Mechanical motor<br>Power           | 0.7 kW to 746 kW<br>1 hp to 1000 hp             | 0.1 kW<br>0.1 hp    | ± 3 % <sup>1</sup><br>± 3 % <sup>1</sup> | 100% = rated power<br>100% = rated power   |
| Torque                              | 0 Nm to 10 000 Nm<br>0 lb ft to 10 000<br>lb ft | 0.1 Nm<br>0.1 lb ft | ± 5%¹<br>± 5%¹                           | 100% = rated torque<br>100% = rated torque |
| rpm                                 | 0 rpm to 3600 rpm                               | 1 rpm               | ± 3 %¹                                   | 100% = rated rpm                           |
| Efficiency                          | 0% to 100%                                      | 0.1 %               | ± 3 %¹                                   | NA   |
| Unbalance<br>(NEMA)                 | 0% to 100%                                      | 0.10%               | ± 0.15%                                  | 5%   |
| Harmonics Voltage<br>Factor (NEMA)* | 0 to 0.20                                       | -                   | ± 1.5%                                   | 0.15                                       |
| Unbalance<br>Derating Factor        | 0.7 to 1.0                                      | -                   | indicative                               | NA   |
| Harmonics<br>Derating Factor*       | 0.7 to 1.0                                      | -                   | indicative                               | NA   |
| Total NEMA Derating Factor*         | 0.5 to 1.0                                      | _                   | indicative                               | NA   |

<sup>1</sup>Add 5% error when selecting Motor design type Other Specification valid for Motor Power > 30% of rated power Specification valid at stable operating temperature. Run the motor for at least 1 hour at full load (2-3 hours if the motor is 50 HP or higher) to obtain stable temperature.

#### **Included Accessories**

Test Lead Set, Battery, Power Adapter, 8GB SD Card (438-II/Basic/INTL only), Soft Carry Case, CD Rom with PowerLog 430-II Software and User Documentation, 4 x 430 Thin Flexible Current Probes (438-II/Intl), Combination WiFi/SD Card (438-II).

#### **Ordering Information**

Fluke-438-II

Three-Phase Power Quality and Motor Analyser

Fluke-438-II/ BASIC Three-Phase Power Quality and Motor Analyser

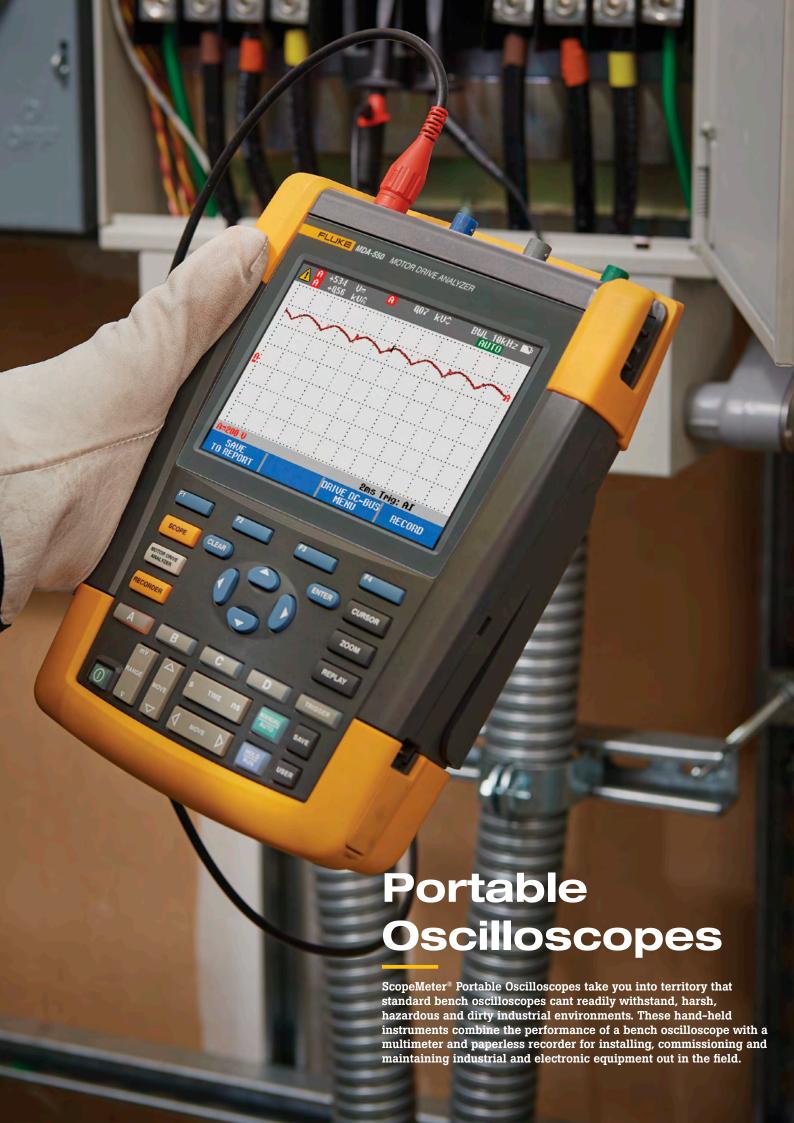
Analyser
(without current
flexis and FC WiFi
SD card)

Fluke-438-II/INTL

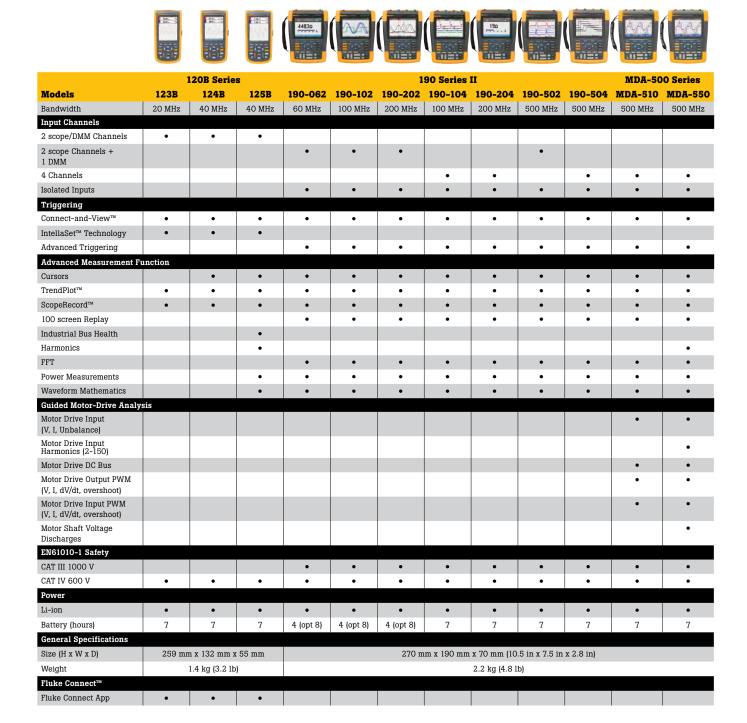
Three-Phase Power Quality and Motor Analyser, International

Version (without FC WiFi SD card)

Fluke-430-II/MA Motor Analyser Upgrade Kit (Fluke 434-II, 435-II & 437-II)

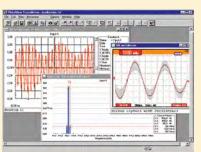


# Fluke ScopeMeter® Test Tool Selection Guide



#### FlukeView® ScopeMeter® Software for Documenting, Archiving and Analysis of Waveforms

Get more out of your ScopeMeter with FlukeView® ScopeMeter® SW90W software for Windows®



- · Copy screen images into your reports and documentation
- Store instrument's screen copies on the PC, in colour
- Capture and store waveform data from your ScopeMeter on your PC
- Online recording of your current waveform
- Create and archive waveform references for easy comparison
- Copy waveform data into your spreadsheet for detailed analysis
- Export data to another analysis program
- Use cursors for parameter measurement
- Add user text to instrument setups and send them to the instrument for operator reference and instructions

# Fluke ScopeMeter® Portable Oscilloscopes 190 Series II



Fluke 190-504

Fluke 190 Series II ScopeMeter Portable Oscilloscopes are high-performance scopes built for harsh industrial environments. Introducing the first high-performance portable oscilloscopes with 2 or 4 independently insulated input channels, an IP51 dust- and drip water proof rating and a CAT III 1000 V/CAT IV 600 V safety rating.

Choose from 500 MHz, 200 MHz, 100 MHz or 60 MHz bandwidth models. Now plant maintenance engineers can take a 2- or 4-channel scope into the harsh world of industrial electronics.

- Up to four independent floating isolated inputs, up to 1000V
- Up to 5 GS/s real time sampling (depending on model and channels used)
- Deep memory: 10,000 points per trace waveform capture CAT III 1000 V/CAT IV 600 V safety rated instrument for
- industrial environments Up to eight hours of battery operation using BP291
- Isolated USB host port for direct data storage to a USB memory device;
- Security slot: lock down oscilloscope with Kensington® lock while unattended
- IP51 rating, dust- and drip-proof
- Connect-and-View™ triggering for intelligent, automatic triggering on fast, slow and even complex signals
- Automatic capture and REPLAY of 100 screens
- $ScopeRecord^{TM}$  Roll mode gives 30,000 points per input channel for low frequency signal analysis
- Three year warranty



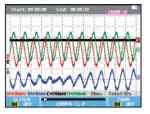
Fluke 190-202











Use the 27,000 points memor of ScopeRecord and zoom in for maximum detail.



Cursors and zoom features of the Fluke 190 Series II help you to analyse the captured TrendPlot.

| Specifications                            | 190-062                      | 190-102                      | 190-202        | 190-502        | 190-104        | 190-204        | 190-504     |
|---|------------------------------|------------------------------|----------------|----------------|----------------|----------------|-------------|
| Bandwidth (MHz)                           | 60                           | 100                          | 200            | 500            | 100            | 200            | 500         |
| Scope Inputs                              | 2                            | 2                            | 2              | 2              | 4              | 4              | 4           |
| Dedicated DMM                             | 1                            | 1                            | 1              | 1              | -              | -              | -           |
| Dual Input Trendplot $^{\text{\tiny TM}}$ | •                            | •                            | •              | •              | -              | -              | -           |
| Four Input Trendplot $^{\text{\tiny TM}}$ | -                            | -                            | -              | -              | •              | •              | •           |
| ScopeRecord Mode                          | •                            | •                            | •              | •              | •              | •              | •           |
| Automatic Capture & Replay Mode           | •                            | •                            | •              | •              | •              | •              | •           |
| Cursors                                   | •                            | •                            | •              | •              | •              | •              | •           |
| Zoom                                      | •                            | •                            | •              | •              | •              | •              | •           |
| Bus Health Test Mode                      | -                            | -                            | -              | -              | -              | -              | -           |
| Advanced Power<br>Measurements            | •                            | •                            | •              | •              | •              | •              | •           |
| EN61010-1 CAT III<br>Safety Rating        | 1000 V                       | 1000 V                       | 1000 V         | 1000 V         | 1000 V         | 1000 V         | 1000 V      |
| EN61010-1 CAT IV<br>Safety Rating         | 600 V                        | 600 V                        | 600 V          | 600 V          | 600 V          | 600 V          | 600 V       |
| Battery                                   | 4 hr<br>Li-ion<br>(8 hr Opt) | 4 hr<br>Li-ion<br>(8 hr Opt) | 7 hr<br>Li-ion | 7 hr<br>Li-ion | 7 hr<br>Li-ion | 7 hr<br>Li-ion | 7 hr Li-ion |
| Optical RS-232                            | -                            | -                            | -              | -              | -              | -              | -           |
| Isolated USB                              | •                            | •                            | •              | •              | •              | •              | •           |
| Isolated USB Memory                       | •                            | •                            | •              | •              | •              | •              | •           |

#### **Recommended Accessories**

Accessories for the Fluke 190-II Portable Oscilloscopes are available in the Accessories Section on Pages 161 – 162.

#### **Included Accessories**

Fluke 190 4-Channel Models: VPS410-X (1 red, 1 grey, 1 blue, 1 green), Double Capacity BP291 Li-ion Battery, BC190 Battery Charger, Hanging Strap, Adjustable Hand Strap, User Manual on CD-ROM, FlukeView® Demo Package, and USB Interface Cable for PC connectivity.

Fluke 190 2-Channel Models: VPS410-X (1 red, 1 blue), Single Capacity BP290 Li-ion Battery, TL175 Test Leads.

Fluke /S (SCC-290 Kit) Models: FlukeView ScopeMeter Software and C290 Hard Carrying Case.

#### **Ordering Information**

| FLUKE-190-504/<br>AU/S | Colour ScopeMeter<br>500MHz, 4 Channel<br>with SCC-290 Kit |
|------------------------|--|
| FLUKE-190-504/         | Colour ScopeMeter  |
| AU                     | 500MHz, 4 Channel  |
| FLUKE-190-502/         | Colour ScopeMeter  |
| AU/S                   | 500MHz, 2 Channel  |

FLUKE-190-502/ Colour ScopeMeter 500MHz, 2 Channel

with SCC-290 Kit

FLUKE-190-204/ Colour ScopeMeter 200MHz, 4 Channel with SCC-290 Kit Colour ScopeMeter FLUKE-190-204/ 200MHz, 4 Channel

Colour ScopeMeter 200MHz, 2 Channel with SCC-290 Kit FLUKE-190-202/ AU/S

FLUKE-190-202/ Colour ScopeMeter 200MHz, 2 Channel

Colour ScopeMeter FLUKE-190-104/ AU/S 100MHz, 4 Channel with SCC-290 Kit

FLUKE-190-104/ Colour ScopeMeter 100MHz, 4 Channel

FLUKE-190-102/ Colour ScopeMeter 100MHz, 2 Channel AU/S with SCC-290 Kit

FLUKE-190-102/ Colour ScopeMeter 100MHz, 2 Channel

FLUKE-190-062/ Colour ScopeMeter 60MHz, 2 Channel AU/S with SCC-290 Kit

FLUKE-190-062/ Colour ScopeMeter 60MHz, 2 Channel AU

# Fluke 120B Series Industrial ScopeMeter® Hand-Held Oscilloscopes





Fluke 125B





#### Simplified testing, more insight and faster electro-mechanical troubleshooting

The compact ScopeMeter® 120B Series, is the rugged oscilloscope solution for industrial electrical and electromechanical equipment troubleshooting and maintenance applications. It's a truly integrated test tool, with oscilloscope, multimeter and high-speed recorder in one easy-to-use instrument. The ScopeMeter 120B Series also integrates with Fluke Connect® mobile app and FlukeView® for ScopeMeter software to enable further collaboration, data analysis and archiving of critical test information.

The 120B Series Industrial ScopeMeter Test Tools include innovative functions designed to help technicians troubleshoot faster and get the answers they need to keep their systems up and running. Colour Display Waveforms with Connect and View™ trigger and setup technology and automatically view related numerical measurements using Fluke IntellaSet  $^{\scriptscriptstyle{\text{TM}}}$  technology, all without making manual measurement adjustments.

- Dual-input digital oscilloscope and multimeter
- 40 MHz or 20 MHz oscilloscope bandwidth
- Two 5,000-count true-RMS digital multimeters
- Connect-and-View<sup>™</sup> trigger simplicity for hands-off operation
- IntellaSet™ technology automatically and intelligently adjusts numerical readout based on the measured signal
- Dual-input waveform and meter reading recorder for trending data over extended periods
- With Recorder Event Detect capabilities and expandable micro SD memory, recording sessions can be done for up to 14 days
- The ScopeMeter 125B Bus Health Test analyses the electrical signals on the Industrial Network Bus and gives a clear "Good", "Weak" or "Bad" indication mark for each of the relevant parameters used in CAN-bus, Profi-bus, Foundation Field, RS2-232 and more.
- Three year warranty

| Specifications                           | 123B | 124B | 125B |
|--|------|------|------|
| Full Function Dual Input Scope and Meter | •    | •    | •    |
| Oscilloscope Bandwidth MHz               | 20   | 40   | 40   |
| Meter and Scope Recorder                 | •    | •    | •    |
| Scope Cursor Measurements                | -    | •    | •    |
| Power and Harmonics<br>Measurements      | -    | -    | •    |
| Bus Health                               | -    | =    | •    |
| 10:1 Voltage Probe                       | -    | •    | •    |
| i400S AC Current Clamp                   | -    | -    | •    |



#### **Included Accessories**

Fluke 120B: Li-Ion Battery Pack, Charger/Power Adapter, 10:1 Voltage Probe (124B, 125B), i400s AC Currently Clamp (125B), 2 Shielded Test Leads with Ground Leads, Black Test Lead, Red and Blue Hook Clips, Banana to BNC Adapter, USB Angled Adapter and WiFi USB Adapter.

Fluke 120B/S: Also include Soft Carry Case, FlukeView™ for Windows® Software, Magnetic Hanger and Screen Protector.

| Oraering infor  | mation                             |
|-----------------|------------------------------------|
| FLUKE-125B/AU/S | Industrial 40MHz<br>ScopeMeter Kit |
| FLUKE-125B/AU   | Industrial 40MHz<br>ScopeMeter     |
| FLUKE-124B/AU/S | Industrial 40MHz<br>ScopeMeter Kit |
| FLUKE-124B/AU   | Industrial 40MHz<br>ScopeMeter     |
| FLUKE-123B/AU/S | Industrial 20MHz<br>ScopeMeter Kit |
| FLUKE-123B/AU   | Industrial 20MHz<br>ScopeMeter     |

# Fluke MDA-510 and MDA-550 Motor Drive Analysers





Fluke MDA-550





#### Simplify complex motor-drive troubleshooting

The Fluke MDA-510 and MDA-550 Motor Drive Analysers simplify the troubleshooting process for variable frequency drives. On screen step-by-step guided measurements to show you where to make voltage and current connections, while preset measurement profiles ensure you will capture all the data you need for each critical motor-drive section—from the input to the output, the DC bus and the motor itself.

- Measure key motor-drive parameters including voltage, current, DC Bus voltage level and AC ripple, voltage and current unbalance and harmonics (MDA-550), voltage modulation, and motor shaft voltage discharges (MDA-550)
- Perform extended harmonics measurements to identify the effects of low and high order harmonics on your electrical power system
- Conduct guided measurements for motor-drive input, DC bus, drive output, motor input and shaft measurements (MDA-550) with graphical step-by-step voltage and current connection diagrams
- Preset measurement profiles collect data based on the chosen test procedure and reduce the need for complex configuration
- Capture additional parameters with full 500 MHz oscilloscope, meter and recording capability
- · Three year warranty

#### **Key Features Motor Drive Input** Test Points Phase - Phase V-A-Hz Phase - Ground V pk, Vmax, Vmin, V pk-to-pk, Crest factor Voltage Unbalance V AC+DC unbalance, V pk-to-pk Current Unbalance A AC+DC unbalance, A pk-to-pk Motor Drive DC Bus V DC, V pk-to-pk, V pk max Ripple V AC, V pk-to-pk, Hz **Motor Drive Output** Voltage and Current V-A-Hz, V pwm, V/Hz (filtered) Voltage Unbalance Vpwm unbalance, V pk-to-pk Current Unbalance A AC+DC unbalance, A pk-to-pk Voltage Modulation Phase-phase, Phase-ground, Phase-DC+, Phase-DC-: V pwm, V pk-to-pk, Hz, V/Hz, Delta V, Delta V/s, Risetime peak, Overshoot **Motor Input** Voltage and Current V-A-Hz, V pwm, V pk, A ac+dc, A pk, V/Hz, Crest factor (filtered) Voltage Unbalance V pwm unbalance, V pk-to-pk Current Unbalance A AC+DC unbalance, A pk-to-pk Voltage Modulation Phase-phase, Phase-ground: V pwm, V pk-to-pk, Hz, V/Hz, Delta V, Delta V/s, Risetime peak, Overshoot MDA 550 only Motor Shaft Shaft voltage events: V pk-to-pk, Delta V, Rise/fall time, Delta V/s, Events/s Motor Drive Input Voltage and Current Harmonics: Output and Motor V and A fundamental, Hz fundamental, %THD, %THD/TDD Input

# Recommended Accessories





SVS-500 Shaft Voltage

SB-500 Shaft Voltage Brush Set



**BP291** 4500 mAh capacity Li-ion Battery See page 159

#### **Included Accessories**

BP 291 Battery Pack, BC190 Charger Adapter, VPS 100:1 High Voltage Probes with Alligator Clips, VPS410-II-R 10:1 500MHz Voltage Probe, 400s AC Current Clamp, C1740 Carrying Case, 2GB USB Drive including FlukeView™ 2 software.

MDA-550 also includes: SVS-500 Shaft Voltage Set (3x Brush, Probe Holder, Two-piece Extension Rod and Magnetic Base), Additional 2x i400s AC Current Clamp.

#### **Ordering Information**

FLUKE-MDA-550 Motor Drive

Motor Drive Analyser, 4 Channel, 500 MHz with Motor Shaft and Harmonics

FLUKE-MDA-510

Motor Drive Analyser, 4 Channel, 500 MHz



Working in a process environment such as pharmaceutical, refining or other industrial area can be challenging. Whether you're working at a bench, out in the plant, or in the field, you need accurate tools that you can count on.

Finding the right tools for the specific challenges you face every day is important, so we've provided an 'at-a-glance' guide to the wide range of multifunction, mA loop, pressure and temperature calibrators that we carry.

For complete information to all your calibration needs visit au.fluke.com/PCT or one of the product pages within this catalogue.



## **mA Loop Calibration**

Loop calibrators are essential tools for working with 4–20mA current loops. Fluke Loop Calibrators provides mA sourcing, simulation and measurement, readouts in both mA and % of span, 24 V loop supply, simple operation and accuracy you can count on.

Fluke offers the widest variety of mA calibration and test tools in the industry to address virtually all types of mA loop testing.

See pages 105 to 108



#### **Electrical & Multifunction Calibration**

Fluke Multifunction Calibration Tools are designed to calibrate almost anything. These calibration tools source and measure almost all process parameters, and documenting versions even document the results.

Fluke offers a broad range of field and bench calibrators to source, simulate and measure pressure, temperature and electrical signals to help you verify and adjust your test equipment of almost any process instrument.

See pages 109 to 111



## **Temperature Calibration**

Fluke Temperature Calibrators simulate process sensors for testing temperature instrumentation. Specifically designed for the field, these lightweight compact tools are EMI tolerant, dust and splash resistant and offer an easy to use single push button interface. When paired with a temperature sensor they can take high accuracy temperature measurements to verify process temperatures and ensure the highest product quality and safety.

Fluke offer a variety of different bench and field temperature calibrators designed for your unique calibration and testing requirements.

See pages 112 to 117



#### **Pressure Calibration**

Instrumentation is found in virtually every process plant. Periodic calibration of these instruments is required to keep plants operating efficiently and safely. Fluke offers a wide range of pressure calibration tools with precision pressure measurment from 15psi/1 bar to 10,000 psi/690 bar boasting 0.025% full-scale accuracy to help you quickly and reliably calibrate your pressure instruments.

Everything from simple test gauges to calibrators with built in electric test pumps. Easy to use, rugged and reliable construction and an industry best 3-year warranty.

101

See pages 118 to 128

www.fluke.com/au/PCT Process Calibration Tools

## **Maintenance Manager**

Focus: Maintaining plant uptime and maintenance efficiency

#### What issues do you face?

- Ensuring continuous uptime
- Maintaining good ROI for equipment
- Compliance
- Process improvement
- Increase efficiency

#### **Fluke solutions:**

- Temperature
- Pressure
- Standards
- A Process tools

#### **Quality Manager**

Focus: Maintaining and documenting product quality

#### What issues do you face?

- Complying with quality regulations
- Maintaining documentation of processes

#### Fluke solutions:

- Temperature
- Pressure
- Standards
- A Process tools
- Software

#### **Field Calibration Technician**

Focus: Calibrating and verifying measurement devices

#### What issues do you face?

- Making accurate measurements
- Documenting procedures
- Increasing throughput

#### **Fluke solutions:**

- Temperature
- Pressure
- Standards
- A Process tools
- Software
- Field Metrology Wells

#### **Instrumentation Technician**

Focus: Maintaining and verifying instrumentation throughout the plant

#### What issues do you face?

- Monitor and maintain sensors and transmissions
- Accurate measurements

#### Fluke solutions:

- Temperature
- Pressure
- Standards
- A Process tools
- Software
- Field Metrology Wells

|       | Pressure<br>collers | Bench Temperat | ure Sources | Deadwe | ight Testers |        | Handheld P<br>Calibrat |                      |  |
|-------|---------------------|----------------|-------------|--------|--------------|--------|------------------------|----------------------|--|
|       |                     | 35050          |             |        | ***          | TA     | S                      | 100.000.<br>100.000. |  |
| 2271A | P3130               | 91008          | 9144        | P5510  | 3120         | 700PTP | 719 PRO                | 729                  |  |



\* Diagram is not intended to be an exact representation. Diagram components are not to scale and are for illustration purposes only.

| mA Loop<br>Calibrator | Precision<br>Multimeter | Pressure<br>Gauge | _         | ture Readouts<br>I Probes |         | Process (          | Calibrators |   | Software Solutions   |
|-----------------------|-------------------------|-------------------|-----------|---------------------------|---------|--------------------|-------------|---|--|
|                       | 1.61026 V/              | * 15000 M         | TANK ZARR |                           | 7.1597h | 12345 = 100 te 244 | 30.6 V-     | 8000<br>8000<br>8000<br>8000<br>8000<br>8000<br>8000<br>800 | TOTAL CONTROL OF THE PARTY OF T |
| 773                   | 8846A                   | 700G              | 1524      | PROBES                    | 707     | 725                | 754         | 789   | DPC/TRACK 2  |

# **Process Tools Selection Guide**

Pick the right process tool for you

|  | Documenting           |                                      |            |        |                         |        |   |                                  |   |   |  | Informatic                              |       |       |                  |               |        |              |                    |
|--|-----------------------|--------------------------------------|------------|--------|-------------------------|--------|---|----------------------------------|---|---|--|---|-------|-------|------------------|---------------|--------|--------------|--------------------|
|  | Process<br>Calibators | Multifunction Process<br>Calibrators | on Process | Tempe  | Temperature Calibrators | rators |   | Pressi                           | Pressure Calibrators                          | ors                                       |  | Pressure<br>Calibrator                  |       |       | Loop Calibrators | orators       |        |              | Frocess-<br>Meters |
|  | 754 / 753             | 725 /<br>725Ex                       | 726        | 724    | 714B                    | 712B   | 718 /<br>718Ex                                  | 717                              | 719   | 719Pro                                    | 721  | 729                                     | 715   | 705   | 707 /<br>707Ex   | 709 /<br>709H | 771    | 772 /<br>773 | 789°/<br>787B      |
| Voltage DC                                       | 300 V                 | 30 V                                 | 300        | 30 V   | 75 mV                   |        |   |                                  |   | 30 V                                      | 30 V   | 30 V                                    | 10 V  | 28 V  | 28 V             | 30 V          |        | -/30 N       | 1000 V             |
| Voltage AC (True RMS)                            | 300 V                 |                                      |            |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              | 1000 V             |
| Resistance                                       | 10 kΩ                 | 3200 Ω                               | 4000 Ω     | 3200 Ω |                         | 4000 Ω |   |                                  |   |   |  |   |       |       |                  |               |        |              | 40 MΩ              |
| Current DC                                       | 110 mA                | 24 mA                                | 24 mA      | 24 mA  | 24 mA                   | 24 mA  | 24 mA   | 24 mA                            | 24 mA   | 24 mA                                     | 24 mA  | 24 mA                                   | 24 mA | 24 mA | 24 mA            | 24 mA         | 100 mA | 100 mA       | 30 mA, 1 A         |
| Current AC                                       |                       |                                      |            |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              | •                  |
| Frequency  | 50 kHz                | 10 kHz                               | 15 kHz     |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              | 20 kHz             |
| Pressure   | -                     | -                                    | -          |        |                         |        | -0.85 bar to 20 bar (4 ranges) / up to 700 bar² | -0.85 bar to 700 bar (10 ranges) | -0.85 bar to T bar (2 ranges)/ up to 700 bar² | -0.8 to 20 bar (3 ranges)/ up to 700 bar² | input 1:<br>-0.97 bar to<br>2,48 bar<br>input 2:<br>-0.83 bar to<br>345 bar <sup>3</sup> | -0.83 bar to<br>20.69 bar<br>(3 ranges) |       |       |                  |               |        |              | roces              |
| Temperature                                      |                       |                                      |            |        |                         | ,      |   |                                  |   | -50 to<br>150°C <sup>4</sup>              | -50 to<br>150°C4   | -50 to<br>150°C <sup>4</sup>            |       |       |                  |               |        |              |                    |
| Temperature: RTD types                           | 00                    | 7                                    | œ          | 7      |                         | 13     |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| TC types   | 13                    | 12                                   | 12         | 12     | 17                      |        |   |                                  |   |   | •  |   |       |       |                  |               |        |              |                    |
| Source/Simulate                                  |                       |                                      |            |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| Voltage DC                                       | 15 V                  | 10 V                                 | 20 V       | 10 V   | 75 mV                   |        |   |                                  |   |   |  | 30 V                                    | 10 V  |       |                  |               |        | - / 10 V     |                    |
| Resistance                                       | 10 kn                 | 3200 D                               | 4000 D     | 3200 D |                         | 4000 n |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| mA DC/% scale                                    | 22 mA                 | 24 mA                                | 24 mA      |        |                         |        |   |                                  |   |   |  | 24 mA                                   | 24 mA | 24 mA | 24 mA            |               |        | 24 mA        | 24 mA              |
| mA source; auto step,<br>auto ramp               | •                     | •                                    | •          |        |                         |        |   |                                  |   |   |  | •                                       | •     | •     | •                | •             |        | •            | •                  |
| Frequency  | 50 kHz                | 10 kHz                               | 15 kHz     |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| Temperature: RTD types                           | ∞                     | 7                                    | ∞          | 7      |                         | 13     |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| Temperature: TC types                            | 13                    | 10                                   | 10         | 10     | 17                      |        |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| Record   |                       |                                      |            |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| Min/Max  | •                     |                                      |            |        |                         |        | •   | •                                | •   | •   | •  | •                                       |       |       |                  |               |        |              | •                  |
| Hold   |                       |                                      |            |        |                         |        | •   | •                                | •   |   |  |   |       |       |                  |               | •      | •            | •                  |
| As Found/ As Left results                        | •                     |                                      |            |        |                         |        |   |                                  |   |   |  | •                                       |       |       |                  |               |        |              |                    |
| Log data   | •                     |                                      |            |        |                         |        |   |                                  |   |   |  | •                                       |       |       |                  | •/-           |        |              |                    |
| Upload data to PC                                | •                     |                                      |            |        |                         |        |   |                                  |   |   |  | •                                       |       |       |                  | •             |        |              |                    |
| Remote operation                                 |                       | -/•                                  | •          |        |                         |        |   |                                  |   |   |  | •                                       |       |       |                  |               |        |              |                    |
| Features   |                       |                                      |            |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| Loop supply                                      | 26 V                  | 24 V/12 V                            | 24 V       | 24 V   |                         |        | 24 V/-  | 24 V                             | 24 V  | 24 V                                      | 24 V   | 24 V                                    | 24 V  | 24 V  | 24 V             | 24 V          |        | 24 V         | 24 V/-             |
| Hart communication                               | -/•                   |                                      |            |        |                         |        |   |                                  |   |   |  | •                                       |       |       |                  | •/-           |        |              |                    |
| Integrated hand pressure pump                    |                       |                                      |            |        |                         |        | •   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |
| Electric Pump                                    |                       |                                      |            |        |                         |        |   |                                  | •   | •   | •  | •                                       |       |       |                  |               |        |              |                    |
| Intrinsically safe (ATEX)                        |                       | 725Ex                                |            |        |                         |        | 718 Ex  |                                  |   |   |  |   |       |       | 707 Ex           |               |        |              |                    |
| NIST traceable<br>certification                  | •                     | •                                    | •          | •      | •                       | •      | •   | •                                | •   | •   | •  | •                                       | •     | •     | •                | •             |        |              |                    |
| Warranty in years                                | ю                     | ю                                    | ю          | ю      | ю                       | ю      | ю   | ю                                | ю   | m   | m  | ю                                       | ю     | ю     | m                | ю             | ю      | ю            | ო                  |
| <sup>1</sup> Fluke 750 Pressure Modules Required | ired                  |                                      |            |        |                         |        |   |                                  |   |   |  |   |       |       |                  |               |        |              |                    |

I Pluke 750 Pressure Modules Required
Ranges for the infernal sensor
Planges for the infernal sensor
Planges depending on version
Planges depending oversion
Planke 789 R. 787B now Pluke Connector
Pluke 789 R. 787B now Pluke Connector

# Fluke 771, 772 and 773 mA Process Clamp Meters



Fluke 771



Don't break the loop on 4-20 mA signal measurements and save time with the Fluke 771, 772 and 773 Milliamp Process Clamp Meters. Three year warranty, (one year provided on mA clamp assembly and cable).

#### Use the Fluke 772 and 773 to:

- Source 4-20 mA signals for testing control system I/O or I/Ps
- Simulate 4-20 mA signals for testing control system I/O
- Measure 4-20 mA signals with in-circuit measurement
- Power a transmitter with the 24 V loop power supply
- Automatically ramp and step change the 4-20 mA output for remote testing

#### Use the Fluke 773 to:

- Measure DC voltage to verify 24 V power supplies or voltage I/O signals
- Source DC voltage to test voltage input devices
- Scaled mA output signal enables a logging DMM (289) to record 4-20 mA signal without breaking the loop
- mA in/out: simultaneously source a mA signal while measuring a mA signal with the clamp

|     | mA<br>measure<br>w/jaw | mA<br>measure<br>In circuit | mA<br>source | mA<br>sim | Loop<br>power<br>24 V | DCV<br>source<br>0-10 V | DCV<br>measure<br>0-30 V | Scaled<br>mA<br>output to<br>mA input | mA in/<br>out |
|-----|------------------------|-----------------------------|--------------|-----------|-----------------------|-------------------------|--------------------------|---------------------------------------|---------------|
| 771 | •                      | _                           | _            | _         | _                     | _                       | _                        | _                                     | _             |
| 772 | •                      | •                           | •            | •         | •                     | _                       | _                        | -                                     | -             |
| 773 | •                      | •                           | •            | •         | •                     | •                       | •                        | •                                     | •             |

| Specifications | Function        | Resolution and range | Accuracy         | Notes   |
|----------------|-----------------|----------------------|------------------|---|
| 771, 772, 773  | mA measurement  | 0 to 20.99 mA        | 0.2 % + 5 counts | Measured by clamp                             |
|                |                 | 21.0 mA to 100.0 mA  | 1 % + 5 counts   | _   |
| 772 and 773    | mA measurement  | 0 to 24.00 mA        | 0.2 % + 2 counts | Measured in series with test jacks            |
| 772 and 773    | mA source       | 0 to 24.00 mA        | 0.2 % + 2 counts | Maximum mA<br>drive: 24 mA into<br>1,000 ohms |
| 772 and 773    | mA simulate     | 0 to 24.00 mA        | 0.2 % + 2 counts | Maximum voltage<br>50 V DC                    |
| 773            | Voltage source  | 0 to 10.00 V DC      | 0.2 % + 2 counts | 2 mA maximum drive current                    |
| 773            | Voltage measure | 0 to 30.00 V DC      | 0.2 % + 2 counts | _   |

|                       | 771                          | 772                 | 773                |
|-----------------------|------------------------------|---------------------|--------------------|
| Battery               | Two 1.5 V, Alkaline, IEC LR6 | Four 1.5 V, Alka    | line, IEC LR6      |
| Working hours         | 40 hours typical             | 12 hours @ 12 mA so | urce into 500 ohms |
| Size (HxWxL)          | 59 mm x 38 mm x 212 mm       | 43.7 mm x 70 m      | m x 246.2 mm       |
| Weight                | 260 g                        | 410                 | g                  |
| Operating temperature |                              | -10 °C to 50 °C     |                    |
| IP rating             |                              | IP 40               |                    |

#### **Recommended Accessories**





**TL220** SureGrip™ Industrial Test Lead Set See page 144

C550 Tool Bag See page 153

# Fluke 771, 772 and 773 mA Process Clamp Meters pay for themselves

- The more you use them the more money you save
- Measuring 4-20 mA signals (five) times without operator intervention can pay for the 771
- Saving a trip back to shop to get a loop calibrator can pay for the price difference of the 772
- Saving a trip back to the shop for a voltage test source can pay for the price difference of the 773



#### **Included Accessories**

Fluke 771: Soft Carrying Case, User Manual.

Fluke 772/773: Four AA Alkaline Batteries (installed), Soft Carrying Case, TL75 Test Leads, AC 72 Detachable Clip, TL940 Mini-hook Test Leads, Instruction Sheet, Hanging Tool with Hook and Loop Strap

#### Ordering Information

FLUKE-771 Milliamp Process
Clamp Meter

FLUKE-772 Milliamp Process
Clamp Meter

FLUKE-773 Milliamp Process

Contact your local distributor for price and availability.

www.fluke.com/au/wtb

Clamp Meter

## Fluke 787B and 789 ProcessMeter™





Fluke 787B





#### Double the troubleshooting power so you can do more, while carrying a lot less

The Fluke 787B and 789 ProcessMeter™ double troubleshooting capabilities by combining the power of a safety rated digital multimeter and mA loop calibrator into a single, compact test tool. Whether you only need to source and simulate mA, or need a 24V loop power supply, Fluke has a ProcessMeter™ test tool designed specifically to meet vour needs.

#### Fluke 787B and 789 key features

- 20 mA DC current source/measure/simulate
- Simultaneous mA and % of scale readout
- DMM designed to meet 1000 volt IEC 61010 CAT III and 600 V CAT IV standards
- Fluke Connect\* compatibility for wireless data logging (with IR3000FC module)
- Precision 1000 V, 440 mA true-RMS digital multimeter
- Frequency measurement to 20 kHz
- Min/Max/Average/Hold/Relative modes
- Diode test and continuity beeper
- Manual step (100 %, 25 %, Coarse, Fine) plus Auto Step and Auto Ramp
- Externally accessible battery for easy battery changes
- Three year warranty

#### Fluke 789 additional features

- 24 V loop power supply
- HART mode setting with loop power (adds 250 ohm resistor)

| Measurement Function         | Range and Resolution                                  | Best Accuracy<br>(% of reading +<br>LSD) |
|------------------------------|---|--|
| V DC                         | 400.0 mV, 4.000 V, 40.00 V,<br>400.0 V, 1000 V        | 0.1 % + 1                                |
| V AC (True-RMS)              | 400.0 mV, 4.000 V, 40.00 V,<br>400.0 V, 1000 V        | 0.7 % + 2                                |
| mA DC                        | 30.000 mA   | .05 % + 2                                |
| A DC                         | 1.000 A (0.440 A continuous)                          | 0.2 % + 2                                |
| A AC                         | 1.000 A (0.440 A continuous)                          | 1 % + 2                                  |
| Resistance                   | 400.0 0hms, 4.000 k, 40.00 k,<br>400.0 k, 4.0 M, 40 M | 0.2 % + 1                                |
| Frequency (0.5 Hz to 20 kHz) | 199.99 Hz, 1999.9 Hz, 19.999 kHz                      | .005 % + 1                               |
| Diode Rest                   | 2.000 V (shows diode voltage drop)                    | 2 % + 1                                  |
| Continuity                   | Beeps for resistance < approx. 100 ohms               |  |

| Output Function   | Range and Resolution   | Drive Capability                              | Accuracy |
|---|--|---|----------|
| DC Current Output<br>(Internal Battery<br>Operation)      | 0.000 to 20.000 mA or 4.000 to 20.000 mA, (selectable at power-up) Over-range to 24.000 mA | 24 V compliance or,<br>1,200 ohms,<br>@ 20 mA | .05 %    |
| DC Current Simulate<br>(Ext. 15 V to 48 V<br>loop supply) | 0.000 to 20.000 mA or 4.000 to 20.000 mA, (selectable at power-up) Over-range to 24.000 mA | 1000 ohms,<br>@ 20 mA                         | .05 %    |
| 24 V Loop Supply*   | Minimum 24 V   | 250 ohms @ 20 mA                              | > 24 V   |
| Current Adjustment<br>Modes                               | Manual: Coarse, Fine, 25 % and 100 % step<br>Automatic: Slow Ramp, Fast<br>Ramp, 25 % step |   |          |

\*24 V Loop Supply available on 789 ProcessMeter<sup>TM</sup> only.

# **Recommended Accessories** PV350 IR3000 FC Pressure Vacuum Module See page 155 Fluke Connect® ir3000 Connector See page 155 80T-150UA **TL220** SureGrip™ Industrial Test Lead Set See page 144 Universal Temperature Probe See page 146 80PK-8 Pipe Clamp Temperature Probe ToolPak Meter Hanging Kit See page 154 See page 146 **Recommended Kits** Buy more, Save more

#### **Included Accessories**

For more details see page 172

Fluke Connect® 789 ProcessMeter™ and Temperature Kit

TL71 Test Lead Set, AC72 Alligator Clips, four AA Alkaline Batteries (installed), User Manual and Quick Reference Guide.

#### **Ordering Information**

| ordoring in           | <u> </u>  |
|-----------------------|---|
| FLUKE-787B            | ProcessMeter™   |
| FLUKE-789             | ProcessMeter™   |
| FLUKE-789/<br>T3000FC | Fluke Connect<br>789 ProcessMeter <sup>™</sup><br>& Temperature Kit |
| FLUKE-IR3000<br>FC    | Fluke Connect<br>Infrared Connector                                 |
| FVF-SC2               | FlukeView Forms<br>Software (incl.<br>Interface Cable)              |

# Fluke 715, 707, 707Ex and 705 Loop Calibrators

Complete family of Volt/mA calibrators



Fluke 705





Fluke 707

### Fluke 715 Volt/mA Calibrator

- Source voltage to 200 mV or 20 V
- Measure loop current (0 to 20 mA, 4-20 mA) signals with 0.01 % accuracy and 1 μA resolution
- Measure voltage output process signals from PLCs, transmitters
- Source or simulate 4-20 mA loop current
- 24 V loop supply with simultaneous current measurement
- Ramp and Step Ramp output functions
- Three year warranty

### Fluke 707 and 705

- Innovative output adjustment dial on 707 provides 1 μA and 100 μA resolution and one-hand operation
- Large display and simple interface for ease of use
- Simultaneous mA and % readout for quick, easy interpretation of readings
- mA accuracy of 0.015 % on the Fluke 707 and 0.02 % on the 705
- HART™ mode on 707 connects 250 ohm resistor in series with 24 V loop for compatibility with HART communicators
- Push button 25 % steps for fast, easy linearity checks
- "Span Check" for fast confirmation of zero and span
- Selectable slow and fast linear step ramp provide ramping outputs for valve slewing, remote testing and loop functional tests
- 24 V internal loop supply, so you can power and read a transmitter at the same time without carrying a DMM
- 0 to 20 mA or 4-20 mA default start up modes
- Three year warranty

### **Specialty Models**

### Fluke 707Ex Intrinsically Safe Loop Calibrator

The fast onehanded tool for mA loop checks in Ex zones.

The 707Ex is an intrinsically safe loop calibrator for use in explosion endangered areas. The Fluke 707Ex is certified in accordance with the ATEX directive (Ex II 2 G Ex ia IIC T4) in Zones 1 and 2.

- Simultaneous mA and % readout for quick, easy, interpretation of readings.
- mA accuracy of 0.015%, superior to other loop calibrators

See page 135 for more information.

### **Recommended Accessories**



|                     | 105/101   | 115                          |
|---------------------|---|------------------------------|
| Voltage measurement |   |                              |
| Range               | 0 V to 28 V   | 0 mV to 200 mV / 0 V to 25 V |
| Resolution          | 1 mV  | 10 μV / 1 mV                 |
| Accuracy            | 705: 0.025 % Rdg + 1 LSD<br>707, 707Ex: 0.015 % Rdg + 2 LSD | 0.01 % Rdg + 2 LSD           |
| Current measurement |   |                              |

| Range      | O mA to 24 mA  | 0 mA to 24 mA  |
|------------|--|----------------|
| Resolution | 0.001 mA   | 0.001 mA       |
| Accuracy   | 705: 0.02 % Rdg + 2 LSD<br>707, 707Ex: 0.015 % Rdg + 2 LSD | 0.01 % + 2 LSD |

| Current sourcing              |  |                                |
|-------------------------------|--|--------------------------------|
| Range                         | 0 mA to 20 mA or 4 mA to 20 mA                                     | 0 mA to 20 mA or 4 mA to 20 mA |
| Accuracy                      | 705: 0.025 % Rdg + 2 LSD<br>707, 707Ex: 0.015 % Rdg + 2 LSD        | 0.01 % Rdg + 2 LSD             |
| Drive capability              | 705: 1000 Ω @ 24 mA<br>707: 1200 Ω @ 24 mA<br>707Ex: 700 Ω @ 20 mA | 1000 Ω @ 24 mA                 |
| Loop power while measuring mA | 24 V   |                                |
| Voltage sourcing              | 0 mV to 200 mV or 0 V to 2   |                                |
| Display current and % of span | Yes  | mA or %                        |
| Auto step, auto ramp          | Yes  |                                |
| Span Check                    | Yes  |                                |
| Battery life                  | 18 hours typical, at 12 mA   |                                |

### **Included Accessories**

Fluke 705/707: C10 Yellow Holster, Test Leads, AC175 Alligator Clips, Single 9V Alkaline Battery, Instruction Sheet.

Fluke 707Ex: Red Ex-holster, Test Leads, AC175 Alligator Clips, Single 9V Alkaline Battery, Instruction Sheet

Fluke 715: Yellow Holster (H80M excl. TPAK), Test Leads and AC175 Alligator Clips, Single 9V Alkaline Battery, Instruction Sheet.

### **Ordering Information**

FLUKE-715

FLUKE-705 Loop Calibrator
FLUKE-707 Loop Calibrator
FLUKE-707EX Intrinsically Safe
Loop Calibrator

Contact your local distributor for price and availability. www.fluke.com/au/wtb

Volt/mA Calibrator

107

www.fluke.com/au/PCT Process Calibration Tools

# Fluke 709, 709H and 710 **Precision Loop Calibrators**



Fluke 710



Fluke 709H



HART is a registered trade mark of the HART Communications Foundation.

The Fluke 709 and 709H mA Loop Calibrators and 710 Valve Tester are designed to save time and produce high-quality results. These calibrators are built around a user friendly interface with a Quick-Set rotary encoder knob. This tool reduces the time it takes to measure, or source, current and power up a loop. The protective holster easily fits into a technician's hand and the large backlit display is easy to read, even in dark, cramped worked areas.

- Best-in-class accuracy at 0.01 % reading
- HART Communication (709H, 710) communicate with and test HART smart instruments
- Compact rugged design
- Intuitive user interface with quick-set knob for fast setup, easy to use
- 24 V DC loop power with mA measure mode
- Resolution of 1 µA on mA ranges
- Built in selectable 250  $\Omega$  resistor for HART communications
- Simple two wire connection for all measurements
- Valve test (source and simulate defined mA values with % keys)
- Upload logged mA measurements and HART device data using the 709H with optional 709H/TRACK software

### **HART Communication**

The Fluke 709H offers a built-in HART modem for communication capability to perform the following commands:

- Read message, tag, descriptor and calibration date
- Read sensor PV information and PV output information
- Read long tag
- Write PV ranges (upper and lower)
- Enter/exit fixed current mode and set zero offset
- Trim DAC zero (mA output 4 mA) and trim DAC gain (mA output 20 mA)

The Fluke 710 has key valve-testing functions include preconfigured valve signature test, speed test, step test, manual test and bump/partial stroke test. The instrument comes with ValveTrack<sup>™</sup> desktop software where you can upload valve test results, logged measurements and HART device configurations captured in the field.

| <b>Key Features</b>                | 709             | 709H             | 710              |
|------------------------------------|-----------------|------------------|------------------|
| mA measure<br>(range and accuracy) | 0-24 mA @ 0.01% | 0-24 mA @ 0.01 % | 0-24 mA @ 0.01 % |
| mA source/simulate                 | 0-24 mA @ 0.01% | 0-24 mA @ 0.01 % | 0-24 mA @ 0.01%  |
| DCV measure                        | 0-30 V @ .01 %  | 0-30 V @ .01 %   | 0-30 V @ .01 %   |
| DCV source                         |                 |                  |                  |
| 24 V loop power                    | •               | •                | •                |
| Auto step/ramp                     | •               | •                | •                |
| Documenting and log data           |                 | Option           | •                |
| HART communication                 |                 | •                | •                |
| Intrinsically safe                 |                 |                  |                  |
| Valve testing                      | Analog          | Analog           | Analog/HART      |
| Non-contact clamp                  |                 |                  |                  |
| Fluke Connect                      |                 |                  |                  |



### **Included Accessories**

709: AC175 Alligator Clip Set, TL75 Test Leads, Soft Case, Six AAA Batteries (installed), Product Manual (CD), Quick Reference Guide, Safety Information. **709H:** 754-8016 Alligator Clip Set, 75X-8014 Stackable Lead Set, TP220-4201 Test Probes, AC280-5001 SureGrip Hook Clips, Soft Case, Six AAA Batteries (installed), Product Manual (CD), Quick Reference Guide, Safety Information. 710: Stackable Test Lead Set, Extended Tooth Alligator Clip Set, TP220 Test Probes, AC280 SureGrip™ Hook Clips, Lemo to USB Cable ValveTrack™ Software (free download), Softcase, Six AAA batteries (installed).

| Ordering Inf         | formation                                       |
|----------------------|---|
| FLUKE-710            | Valve Tester                                    |
| FLUKE-709            | Precision Loop<br>Calibrator                    |
| FLUKE-709H           | Precision Loop<br>Calibrator with<br>HART       |
| FLUKE-709H/<br>TRACK | HART Data-Logging<br>Communications<br>Software |

Contact your local distributor for price and availability. www.fluke.com/au/wtb

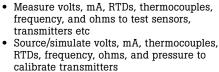
# Fluke 750 Series Documenting Process Calibrators

need to carry.



Fluke 754





Whether you're calibrating instruments,

troubleshooting a problem or running routine maintenance, Fluke's 753 and 754 Series Process Calibrators can help you get the job done faster. They do so many different tasks, so quickly and so well and they are the only process calibrators you

- Power transmitters during test using loop supply with simultaneous mA measurement
- Measure/source pressure using any of Fluke's 50 Pressure Modules
- Measure and source simultaneously with one compact, rugged, reliable tool
- Create and run automated as-found/as-left procedures to satisfy quality programs or regulations and record and document results.
- Advanced features like autostep, custom units, user entered values during test, one-point and two-point switch testing, square root DP flow testing, programmable measurement delay and more
- Control the temperature of selected Hart Scientific Dry Blocks
- Handle fast pulsed RTD transmitters and PLCs in RTD source mode with 1 ms response time
- Three year warranty

### Fluke 753: A complete Documenting Calibrator

The Fluke 753 is a complete multifunction documenting calibrator and includes a PC interface that lets you load procedures, lists and instructions created with software—or unload data for printing, archiving, and analysis. The 753 can hold a full week of calibrations and procedures.

### Fluke 754: Get HART-ability™

The Fluke 754 offers all of the capabilities of the 753, plus the ability to calibrate, maintain and troubleshoot HART instrumentation. Integrated HART communication functions permit you to monitor, control and calibrate HART instrumentation. It handles fast pulsed instruments such as RTD transmitters and PLCs responding to pulses within 1 ms.

### **Instrumentation Management Software**

The Fluke 753 and 754 are compatible with Fluke 750SW DPC/TRACK2 software and with software from Cornerstone, Emerson, Honeywell, On Time Support, Prime Technologies, Yokogowa, Intools, Meridium and Beamex.

For more information, visit www.fluke.com.au

| Functions     | Measure  | Sourcing                           |
|---------------|--|------------------------------------|
| DC voltage    | 0.020 % reading + 0.005 % full scale                         | 0.01 % output + 0.005 % full scale |
| DC current    | 0.01 % reading + 5 μA  | 0.01 % output + 0.003 mA           |
| Resistance    | 0.05 % reading + 50 mΩ                                       | 0.01 % output + 240 mΩ             |
| Frequency     | 0 to 50 KHz, ± 0.5 Hz to 1100 Hz                             | 0 to 50 KHz, ± 0.1 Hz to 1099.9 Hz |
| Thermocouples | 0.3 °C   | 0.2 °C                             |
| RTDs          | 0.3 °C   | 0.1 °C                             |
| Pressure      | To 0.025 % of full scale, per pressure module specifications |                                    |

| General Specifications |   |  |
|------------------------|---|--|
| Battery life           | Typically over eight hours  |  |
| Internal battery pack  | Li ion 4400 mAh   |  |
| Battery replacement    | Via twist lock fastener without opening calibrator; no tools required |  |
| Weight                 | 1.2 kg  |  |
| Size (HxWxD)           | 245 mm x 136 mm x 63 mm   |  |
| RTDs                   | 0.3 °C  |  |
| Pressure               | To 0.025 % of full scale, per pressure module specifications          |  |

### **Recommended Accessories**





**750PXX**Pressure Modules
See page 124

**750SW** DPC/TRACK2 Software See page 165



700PTP-1 Pneumatic Test Pump See page 172

**C799**Field Soft Case
See page 153





**700HTP-2** Hydraulic Test Pump *See page 172* 

**754HCC** Smart Instrument Communication Cable

### **Bundle Package**



### Fluke 754/750SW 754DPC and 750SW DPCTRACK2 Bundle Package

Purchase the Fluke 754 with the Fluke DPC/TRACK2™ software at a special bundle package price.

For more information, go to www.fluke.com/au/754

### **Included Accessories**

Stackable Test Leads (3 sets), TP220
Test Probes (3 sets) with extended
Tooth Alligator Clips (3 sets), AC280
Hook Clips (2 sets), BP7240 Li-ion
Battery Pack, BC7240 Battery
Charger, C799 Field Soft Case, USB
Communication Cable, Getting
Started Guide, Instruction Manual on
CDROM, NIST Traceable Certificate
of Calibration, DPCTrack™ 2 Sample
Software that enables upload and
printing of calibration records, 754 HHC
HART Communication Cable (754 only).

### **Ordering Information**

FLUKE-753 Documenting Process
Calibrator

FLUKE-754 Documenting Process
Calibrator HART

FLUKE-754 /750SW 754DPC and 750SW DPCTRACK2 Bundle Package

FLUKE-750SW DPC/TRACK2 Software

# Fluke 154 HART Calibration Assistant





Fluke 154





# HART Calibration assistance at your fingertips.

# Combine with a Fluke Calibrator for a total HART Callibration Solution.

The 154 puts HART device configuration at your fingertips. An Android™ based tablet user interface makes HART configuration easy. The external wireless modem allows you to connect the modem to the transmitter being tested so you can communicate to the device remotely. HART transmitters can often be found in confined spaces that are difficult to access, or are out of reach. The Fluke 154 helps reduce the need to stand right next to the device being tested or configured so you can work from a safer, more convenient location.

When you combine the Fluke 154 Communicator with a Fluke 750 Series Documenting Process Calibrator, or a Fluke 720 Series Multifunction Process Calibrator you have a complete HART calibration and configuration solution.

- Full HART Device Description (DD) support of all HART devices
- Configure HART devices
- Perform HART trim on HART devices when used with a Fluke 750 or 720 Series Calibrator
- Monitor device PV, SV, TV, QV and other measured HART variables
- Quarterly HART DD updates for free
- Convenient wireless connectivity to HART modem
- Easy to use, fast connect and view HART data
- Store HART device configurations
- Long range wireless communication up to 76.2 metres
- · Three year warranty

| Tablet                   |   |
|--------------------------|---|
| Operating System         | Android 5.0 or newer                      |
| Processor                | ARM or Atom                               |
| Memory RAM               | 1 GB                                      |
| Memory ROM               | 2 GB                                      |
| Screen                   | 960x540 qHD                               |
| Communication Port       | Bluetooth                                 |
| HART Modem               |   |
| Enclosure                |   |
| Dimensions (LxWxH)       | 10.16 cm x 2.5 cm x 6.9 cm                |
| Total Unit Weight        | 0.16 kg                                   |
| HART Cable Length        | 1.2 m                                     |
| HART Cable Connectors    | Mini-Grabber                              |
| HART Interface           |   |
| Interface                | Capacitive coupling                       |
| Output                   | 600 mVpp                                  |
| Leakage                  | < 10 uA                                   |
| Connections              | Across loop resistor or HART field device |
| Specifications           | HART 4, HART 5, HART 6, HART 7            |
| HART Physical Layer Spec | HCF_SPEC-54                               |
| Specification            | Bluetooth v2.0                            |
| Frequency                | 2.4 GHz                                   |
| Class 1 Master Distance  | 275 ft (83.8 m)                           |
| Battery Type             | Rechargeable Li-ion                       |
| Battery Life             | 19 hours continuous use                   |
| Humidity                 | 0 % to 90 % (non-condensing)              |

### **Fluke 154 Application**



### **Included Accessories**

Tablet Charger and USB, Micro-cable, Fluke HART App (installed), HART Modem, USB Mini-Cable, Hook Test Clips, Alligator Clips, Magnetic Hanging Strap, Case, Manual installed on Tablet.

### **Ordering Information**

Fluke 154

HART Calibration Assistant

Contact your local distributor for price and availability.

www.fluke.com/au/wtb

# Fluke 725 and 726 Multifunction Process Calibrators



Fluke 725





### More calibration power!

- Two separate channels; measure, source and view process signals simultaneously
- Measure volts, mA, RTDs, thermocouples, frequency, and resistance to test sensors and transmitters
- Source/simulate volts, mA, thermocouples, RTDs, frequency, and pressure to calibrate transmitters
- Measure or source pressure using any of 50 Fluke 750Pxx Pressure Modules
- Source mA with simultaneous pressure measurement to conduct valve and I/P tests
- Perform fast linearity tests with auto step and auto ramp
- Power transmitters during test using 24 V loop supply and simultaneous mA measurement
- · Store frequently-used test setups for later use
- Three year warranty

### 726 additional features:

- More precise measurement and calibration source performance, accuracies of 0.01%
- Transmitter error% calculation
- Memory storage for up to 8 calibration results
- Frequency totaliser and frequency pulse train source mode
- HART mode inserts 250 ohm resistor in mA measure and source for compatibility with HART instrumentation
- Integrated pressure switch test
- Custom RTD curves, add calibration constants for certified RTD probes for enhanced temperature measurement

| <b>Function or Source</b> | Range or Type  | Resolution                                   | Accuracy                                    | Notes  |
|---------------------------|--|--|---|--|
| Voltage                   | 0 to 100 mV<br>725: 0 to 10V (source)<br><b>0 to 20V (source)</b><br>725/726: 0 to 30V (measure) | 0.01 mV<br>0.001 V<br>0.001 V<br>0.001 V     | <b>0.01%</b><br>0.02% Rdg +<br>2 LSD        | Max load, 1 mA   |
| mA                        | 0 to 24  | 0.001 mA                                     | 0.01%; 0.02%<br>Rdg +2 LSD                  | Max load,<br>725/726:<br>1000Ω<br>725Ex: 250Ω                      |
| mV<br>(TC terminals)      | -10.00 mV to +75.00 mV   | 0.01 mV                                      | 0.01%<br>0.025% of<br>range + 1 LSD         |  |
| Ohms                      | 15Ω to 3200Ω<br><b>5Ω to 4000</b> Ω  | 0.01Ω to 0.1Ω                                | 0.10Ω to 1.0Ω<br><b>0.015%</b>              |  |
| Hz - CPM                  | 2.0 to 1000 CPM<br>1 to 1000 Hz<br>1.0 to 10.0 kHz<br>10.0 to 15.0 kHz                           | 0.1 CPM<br>1 Hz<br>0.1 kHz<br><b>0.1 kHz</b> | ±0.05%<br>±0.05%<br>±0.25%<br><b>±0.05%</b> | Source;<br>5V p-p<br>1V - 20 V p-p<br>squarewave,<br>-0.1 V offset |
| Loop Supply               | 725/726: 24 V DC<br>725Ex: 12 V DC   | N/A  | 10%   |  |
| T/C                       | J, K, T, E, L, N, U, XK  | 0.1 °C                                       | to 0.7 °C<br>to 0.2 °C                      |  |
| T/C                       | B, R, S, BP  | 1 °C   | to 1.7 °C<br>to 1.2 °C                      |  |
| RTDs                      | <b>Cu (10)</b> , Ni 120 (672)<br>Pt 100, 200, 500, 1000 (385)<br>Pt 100 (3916),                  | 0.01 °C                                      | to 0.15 °C                                  |  |
|                           | Pt 100 (3926)  | 0.1 °C                                       | to 0.2 °C                                   |  |

| Simultaneous function capability   | Channel A | Channel B   |
|--|-----------|-------------|
| 24.000 mA DC   | M         | M or S      |
| 24.000 mA DC with 24 V loop supply   | M         | _           |
| 100.00 mV DC   | _         | M or S      |
| 30.000 V DC measure  | M         | _           |
| 20.000 V DC measure; 10.000 V DC source; 20.000 V DC source                                | _         | M or S      |
| 15 to 3200 Ohms (725); <b>5 to 4000 Ohms</b> (726)   | _         | M or S      |
| Thermocouple J, K, T, E, R, S, B, M, L, U, N, XK, BP                                       | _         | M or S      |
| RTD <b>Cu 10</b> , Ni120; Pt100 (392); Pt100 (JIS); Pt100, 200, 500, 1000 (385), XK and BP | _         | M or S      |
| Pressure (requires Fluke 750PXX Modules)   | M         | M used as S |
| Frequency; 10 kHz; (15 KHz)  | _         | M or S      |

M = Measure, S = Source/Simulate
Unique 726 features are in bold

TL220

SureGrip™ Industrial
Test Lead Set
See page 144

Sopk-27
Industrial Surface
Temperature Probe
See page 146

T50PKX
Pressure Module

See page 124

### **Included Accessories**

TL75 Test Lead Set (TL75), AC70A Test Clip Set (725), AC72 Test Clip Set (726), Stackable Test Lead Set, Four AA Batteries, Replacement Fuse (725), User Manual on CD, NIST Traceable Calibration Certificate.

### **Ordering Information**

FLUKE-725

Multifunction Process Calibrator

FLUKE-726

Precision Multifunction Process Calibrator

Contact your local distributor for price and availability. www.fluke.com/au/wtb

# Fluke 712B, 714B and 724 Temperature Calibrators



Fluke 712B



### **Accuracy and simplicity**

The Fluke 712B and 714B are designed for both simplicity, ease of use and high accuracy. They are a powerful combination of temperature and loop calibration.

### Fluke 714B Thermocouple Calibrator

- Measure and simulate 17 different thermocouple types and millivolts
- Measure 4-20mA signals while simultaneously sourcing a temperature signal
- Hanging tool designed in and included with every unit
- Configurable 0% and 100% source settings for quick 25% linearity checks
- Linear ramp and 25% step auto ramp based on 0% and 100% settings
- Dual inputs and backlit display for easy interpretation of measurements
- Power down settings remembered at power up for easy restart of tests
- 1 and 2 year specifications and traceable certificate of calibration
- · Three year warranty

### Fluke 712B RTD Calibrator

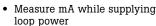
- Measure and simulate 13 different RTD types and resistance
- Measure 4-20mA signals while simultaneously sourcing a temperature signal
- Configurable 0% and 100% source settings for quick 25% linearity checks
- Linear ramp and 25% step auto ramp based on 0% and 100% settings
- Dual inputs and backlit display for easy interpretation of measurements
- 1-year and 2-year specifications and traceable certificate of calibration
- Three year warranty

| <b>General Specifications</b>                                 | 712B   | 714B            |
|---|--|-----------------|
| Operating Temperature   | −10 °C to 50 °C  |                 |
| Operating Altitude  | 2,000 metres   |                 |
| Relative Humidity<br>(% RH operating without<br>condensation) | Non condensing 90 % (10 °C to 30 °C), 75 % (30 °C to 40 °C), 45 % (40 °C to 50 °C) (Without condensation)                                  |                 |
| Vibration Requirements  | MIL-T-28800E, Class 2  |                 |
| Drop Text Requirements  | 1 metre  |                 |
| IP Rating   | IEC 60529: IP52  |                 |
| Safety  | IEC 61010-1, Max 30 V to earth, Polluti  | ion Degree 2    |
| Power Supply  | 4 AA NEDA 1.5A IEC LR6 batte   | ries            |
| DC mA Measurement   |  |                 |
| Resolution  | 0-24 mA  |                 |
| Range   | 0.001 mA   |                 |
| Accuracy (% of reading + counts)                              | 0.010 % + 2 µA   |                 |
| Ohms Measurement  |  |                 |
| Ohms range  | 0.00 Ω to 400.00 Ω,<br>400.0 Ω to 4000.0 Ω   |                 |
| Accuracy (% of reading +counts)                               | 0.015 % + 0.05 Ω, 0.015 % + 0.5 Ω  |                 |
| Ohms Source   |  |                 |
| Ohms Range  | 1.0 $\Omega$ to 400.0 $\Omega$ , 1.00 $\Omega$ to 400.00 $\Omega$ , 400.0 $\Omega$ to 1500.0 $\Omega$ , 1500.0 $\Omega$ to 4000.0 $\Omega$ |                 |
| Accuracy (% of reading + counts)                              | 0.015 % + 0.1 Ω, 0.015 % + 0.05 Ω, 0.015 % + 0.5 Ω, 0.015 % + 0.5 Ω  |                 |
| Resolution  |  |                 |
| 0.00 Ω to 400.00 Ω  | 0.01 Ω   |                 |
| 400.0 Ω to 4000.0 Ω   | 0.1 Ω  |                 |
| Millivolt Measurement & Source Resolution                     |  | -10 mV to 75 mV |
| Range   |  | 0.01 mV         |
| Accuracy (% of reading +counts)                               |  | 0.015 % + 10 μA |

### **Specialty Model**

### Fluke 724 Temperature Calibrator

- Easy to read dual display allows for input and output simultaneous view
- Source/measure TCs, RTDs, volts and ohms



 25 % and 100 % stepping, auto-step and auto ramp

### **Recommended Accessories**



**TPAK**Magnetic Meter Hanger
See page 154



12.345

100.0

**AC220** SureGrip Alligator Clips See page 141

### Fluke 712/724



TL175 TwistGuard™ Test Leads See page 141



**TL220** SureGrip™ Industrial Test Lead Set See page 144



80PK-24 SureGrip Air Temperature Probe See page 146





C101 Meter Hard Case See page 153



C25 Large Soft Case See page 152

### **Included Accessories**

Fluke 714B/712B: Magnetic Hanging Tool, Batteries, Manual, Traceable Calibration Certificate and Test Leads.

Fluke 724: TL75 Test Leads, AC175 Test Clips, Stackable Test Leads (1 pair), Spare Fuse and User Manual.

### **Ordering Information**

FLUKE-714B Thermocouple

Temperature Calibrator

FLUKE-712B RTD Calibrator

FLUKE-724 Temperature Calibrator

Contact your local distributor for price and availability.
www.fluke.com/au/wtb

# FLUKE

Calibration

# **Field Metrology Wells**

# Fluke Calibration 9142, 9143 and 9144



Fluke 9144



# Field temperature calibration with precision

Whether you need to calibrate 4-20 mA transmitters or a simple thermostatic switch, a Fluke Calibration Field Metrology Well is the right tool for the job. With three models covering the range of -25 °C to 660 °C, this family of Metrology Wells calibrates a wide range of sensor types. The optional process version (models 914X-X-P) provides a built-in two-channel thermometer readout that measures PRTs, RTDs, thermocouples, and 4-20 mA transmitters which includes the 24 V loop supply to power the transmitter.

- Lightweight, portable, and fast
- 9142 -25 °C to 150 °C ± 0.2 °C 9143 33 °C to 350 °C ± 0.2 °C
- **9144** 50 °C to 660 °C  $\pm$  0.35 °C to 420 °C  $\pm$  0.5 °C at 660 °C
- Cool to -25 °C in 15 minutes and heat to 660 °C in 15 minutes
- Built-in two-channel readout for PRT, RTD, thermocouple, 4-20 mA current
- True reference thermometry with accuracy to ±0.01 °C
- Automate calibration with the Fluke 754 or Fluke 1586A or use on-board automation with process version
- One year warranty

|          |   | Well inserts    |  |
|----------|---|-----------------|--|
| Models   |   | X in the mode   | el number to be replaced with A, B, C, |
|          |   | D, E, or F as a | ppropriate for the desired insert.     |
| 9142-X   | Field Metrology Well, -25 °C to 150 °C  | 9142-INSA       | Insert A, 9142, misc holes             |
| 9142-X-P | Field Metrology Well, -25 °C to 150 °C, | 9142-INSB       | Insert B, 9142, comp holes             |
| 9142-A-P | process version                         | 9142-INSC       | Insert C, 9142, 6 x 0.25 in holes      |
| 9143-X   | Field Metrology Well, 33 °C to 350 °C   | 9143-INSA       | Insert A, 9143, misc holes             |
| 9143-X-P | Field Metrology Well, 33 °C to 350 °C,  | 9143-INSB       | Insert B, 9143, comp holes             |
| 9143-X-P | process version                         | 9143-INSC       | Insert C, 9143, 6 x 0.25 in holes      |
| 9144-X   | Field Metrology Well, 50 °C to 660 °C   | 9144-INSA       | Insert A, 9144, misc holes             |
| 0144 7 0 | Field Metrology Well, 50 °C to 660 °C,  | 9144-INSB       | Insert B, 9144, comp holes             |
| 9144-X-P | process version                         | 9144-INSC       | Insert C, 9144, 6 x 0.25 in holes      |

# Fluke Calibration 9103 and 9140 **Field Dry-Well Calibrators**



performance, size, weight, convenience, ease of calibration, software, and price. In addition, the heating and cooling rate of each of these dry-wells is adjustable from the front panel, thermal switches can be checked for actuation testing, and multiple-hole inserts are available for a variety of probe sizes.

Fluke Calibration's 9103 and 9140 Field Dry-Well Calibrators beat every other comparable dry-well in the industry in

- Lightweight and very portable
- Two models ranging from -25 °C to 350 °C
- Accuracy to ± 0.25 °C
- Stability to ± 0.02 °C
- RS-232 and Interface-it software included
- Easy to recalibrate
- One year warranty



| Models   | Specify X insert | , X = A, B, C, or D included  |
|--|------------------|---|
| 9103-X Field Dry-Well Calibrator, -25 °C to 140 °C 9140-X Field Dry-Well Calibrator, 35 °C to 350 °C | Insert A:        | 1/16" (1.6 mm), 1/8" (3.2 mm),<br>3/16" (4.8 mm), 1/4" (6.35 mm),<br>3/8" (9.5 mm) & 1/2" (12.7 mm) |
|  | Insert B:        | 2 at 3/16" (4.8 mm), 2 at 1/4" (6.35 mm) & 2 at 3/8" (9.5 mm)                                       |
|  | Insert C:        | 6 at 1/4" (6.35 mm)   |
|  | Insert D:        | 2 at 3mm, 2 at 4 mm & 2 at 6 mm   |

### **Recommended Accessories**





HART DRYWELL CABLE 754/Dry-Well/Microbath Interface Cable

Carrying Case (914X)

### Fluke 9308/9316





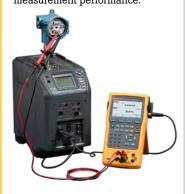
9308

### **Complete Solution**

# Fluke 754 with 914X **Series Field Metrology**

By combining the automating and documenting capabilities of the Fluke 754 Documenting Process Calibrator (see page 109) with Fluke Calibration's intelligent and stable family of field drywells and micro-baths, you have the capability to test the entire loop.

This combination of equipment allows you to easily verify the characteristics of the temperature sensor and measurement electronics. Using this information, the entire loop can be adjusted to optimise system measurement performance.



For more information, go to http://au.flukecal.com

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# Fluke Calibration 9100S and 9102S Handheld **Dry-Well Temperature Calibrators**



Fluke 9102S



Fluke 9100S



The Fluke Calibration 9100S and 9102S are the world's smallest, lightest and most portable dry-wells. With an easy-to-use interface and temperature range to 375 °C the 9100S is ideal for checking RTDs, thermocouple, and small bimetal thermometers in the field. For work in the temperature range of -10 °C to 122 °C the 9102S is ideal for dial gauges, digital thermometers, bulb switches, and other sensors that need calibration below ambient.

### 9102S Handheld Dry-Well

- Smallest dry-wells in the world
- Interchangeable and customisable inserts available
- Ranges from  $-10~^{\circ}\text{C}$  to 122  $^{\circ}\text{C}$
- Accuracy to ±0.25° C
- Stability of ±0.05 °C at 0 °C
- One year warranty

### 9100S Handheld Dry-Well

- High performance, convenience and easy-to-use Ranges from 35 °C to 375 °C Accuracy  $\pm$  0.25 °C at 50 °C;  $\pm$  0.25 °C at 100 °C; ± 0.5 °C at 375 °C
- NIST traceable calibration
- · One year warranty

# Fluke Calibration 9190A Ultra-Cool **Field Metrology Well**



Fluke 9190A



The Fluke Calibration 9190A Ultra-Cool Field Metrology Well is the most accurate and stable, cold temperature dry-block on the market. It's ideal for applications that demand strict quality control and regulatory process compliance. These applications include on-location validation and calibration of RTDs, thermocouples, thermometers, and sensors used with process control equipment such as medical freezers, laboratory refrigerators, cold rooms, blood banks, sterilisers (autoclaves), and freeze dryers.

- Wide temperature range -95 °C to 140 °C
- · Accuracy using built-in reference thermometer readout: ± 0.05 °C full range
- Display accuracy: ± 0.2 °C full range
- Best-in-class stability ± 0.015 °C full range
- Fast cooling time
  - 23 °C to -90 °C: 80 minutes 23 °C to -95 °C: 90 minutes

  - 140 °C to 23 °C: 60 minutes
- · One year warranty

| Model Name | Description  |
|------------|--|
| 9190A-X    | Ultra-Cool Field Metrology Well, -95 °C to 140 °C, w/9190-INSX "X" in the model number to be replaced with A, B, C, D, E, and F as appropriate for the desired insert.                           |
| 9190A-X-P  | Ultra-Cool Field Metrology Well, -95 °C to 140 °C, w/9190-INSX, with Process Electronics "X" in the model number to be replaced with A, B, C, D, E, and F as appropriate for the desired insert. |

| Accessory  | Description   |
|------------|---|
| 9190-INSA  | Insert "A" 9190A, imperial miscellaneous holes                              |
| 9190-INSB  | Insert "B" 9190A, imperial comparison holes                                 |
| 9190-INSC  | Insert "C" 9190A, 0.25 inch holes   |
| 9190-INSD  | Insert "D" 9190A, metric comparison holes                                   |
| 9190-INSE  | Insert "E" 9190A, metric miscellaneous holes with 0.25 inch hole            |
| 9190-INSF  | Insert "F" 9190A, metric comparison miscellaneous holes with 0.25 inch hole |
| 9190-INSZ  | Insert "Z" 9190, blank  |
| 9190-INSY1 | Insert "Y1" 9190A, custom insert with blank insulator.                      |
| 9190-INSY2 | Insert "Y2" 9190A, custom insert with custom insulator.                     |





| Ordering Ir | iformation  |
|-------------|---|
| 9100S-A-256 | HDRC Handheld<br>Dry-Well, Block A,<br>Hight-Temp   |
| 9100S-B-256 | HDRC Handheld<br>Dry-Well, Block B,<br>High-Temp  |
| 9100S-C-256 | HDRC Handheld<br>Dry-Well, Block C,<br>High-Temp  |
| 9100S-D-256 | HDRC Handheld<br>Dry-Well, Block D,<br>High-Temp  |
| 9102S-256   | HDRC Handheld<br>Dry-Well, Low-Temp   |
| 9190A-X     | Ultra-Cool Field<br>Metrology Well, –95 °C<br>to 140 °C, with<br>9190-INSX                              |
| 9190A-X-P   | Ultra-Cool Field<br>Metrology Well, -95 °C<br>to 140 °C, with<br>9190-INSX, with<br>Process Electronics |

For more information, go to http://au.flukecal.com

# Process Calibration Tools - TEMPERATURE

# Fluke Calibration 1586A/2638A **Data Acquisition Systems**



Fluke 1586A



# **1586A Super DAQ Precision Temperature**

The 1586A Super DAQ automates calibration when connected to a Fluke Calibration temperature source. It is a powerful thermometer readout and the most accurate and flexible temperature data acquisition system on the

- Measure thermocouples, PRTs, thermistors, DC voltage, DC current, and resistance
- Best-in-class temperature measurement accuracy
- Fluke DAQ 6.0 software incl. to visualise & handle data
- PRTs: ±0.005 °C
- Thermocouples: ±0.3 °C (Type K,T,J w/ internal CJC)
- Thermistors: ±0.002 °C
- One year warranty



Fluke 2638A



# **2638A Hydra Series III Data Acquisition**

The Fluke Hydra Series III provides best-in-class thermocouple accuracy in a portable system. Price performance breakthrough in a stand alone data acquisition system.

- DC accuracy of 0.0024 %
- Thermocouple accuracy of 0.5 °C
- Up to 66 universal differential isolated inputs
- On-screen colour trend graphing of up to four channels at a time
- Input types: AC V, DC V, AC I, DC I, thermocouple, PRT (2, 3, 4 w), thermistor, resistance (2-4 w), frequency
- 6.5-digit bench DMM function for front-panel inputs
- /C models include Accredited Calibration
- 2638A-100 Extra Universal Input Module
- Dedicated low burden AC/DC current channels
- 20 universal channels and two dedicated low burden current channels (AC/DC) per module
- One year warranty

# Fluke Calibration 4180/4181 **Precision Infrared Calibrators**



Fluke 4180



### Accredited performance for point and shoot calibrations

Now it's easy to increase your IR temperature measurement accuracy with the 4180 and 4181 Precision Infrared Calibrators. These infrared temperature calibrators give more consistent, accurate and reliable calibrations because emissivity is radiometrically calibrated, and the target size minimises size of source effect errors. In addition, these infrared calibrators simplify calibration because they uniquely compensate for errors caused by thermometer emissivity settings.

- Calibrated radiometrically for meaningful, consistent results
- Accurate, reliable performance from -15 °C to 500°C
- Large target size of 152 mm is required for calibrating most thermometers
- Accredited radiometric calibration report
- One year warranty

### **Recommended Accessories**













1586-2586/C High Capacty Module (1586A Super DAQ)



2638A-100



4180-APRT 2" Aperture, (4180 or 4181)

### **Included Accessories**

Optional: ISO 17025 Accredited Calibration available for 1586A models (add "/C" to the below model number).

### **Ordering Information**

1586A

Super-DAQ Precision Temperature Scanner,

1586A/1DS Super-DAQ Precision

Temperature Scanner, 1 DAQ-STAQ Multiplexer

1586A/2DS Super-DAQ Precision

Temperature Scanner, 2 DAQ-STAQ Multiplexers

1586A/DS -HC

Super-DAQ Precision Temperature Scanner, 1 High-Capacity Module, 1 DAQ-STAQ Multiplexer

1586A/1HC Super-DAQ Precision Temperature Scanner, 1 High-Capacity Module

1586A/2HC Super-DAQ Precision Temperature Scanner, 2 High-Capacity Modules

2638A/20

Data Acquisition Unit/ Data Logger: 20 universal channels includes one relay board (2638A-RLY) and one (2638A-100) connector

2638A/40

Data Acquisition Unit/ Data Logger: 40 universal channels includes two relay boards (2638A-RLY) and two (2638A-100) connectors

2638A/60

Data Acquisition Unit/ Data Logger: 60 universal channels includes three relay boards (2638A-RLY) and three (2638A-100)

115

connectors

Precision Infrared 4180

Calibrator, -15 °C to 120 °C

4181 **Precision Infrared** Calibrator, 35 °C to 500 °C

www.fluke.com/au/PCT **Process Calibration Tools** 

# Fluke Calibration 6109A/7109A **Portable Calibration Baths**



Fluke 6109A



### Four times more calibration throughput with twice the accuracy of Micro-Baths and dry-block calibrators

The Fluke Calibration 6109A and 7109A Portable Calibration Baths let process industry professionals calibrate four times more sanitary sensors per batch in less time and with twice the accuracy of other baths in this class. Up to four tri-clamp sanitary sensors fit easily into these baths for calibration at  $\pm$  0.1 °C temperature display accuracy. Throughput is even higher for sanitary RTDs with small or no flanges.

- · Calibrate up to four tri-clamp sanitary sensors at the same time
- · Wide temperature ranges cover most process applications:
  - 6109A: 35°C to 250°C - 7109A: -25°C to 140°C
- Excellent display accuracy of ± 0.1 °C provides 4:1 test uncertainty ratio (TUR) for critical applications
- One year warranty

|                                      | 6109A                                     | 7109A                               |
|--------------------------------------|---|-------------------------------------|
| Range (at 25 °C ambient tempurature) | 35 °C to 250 °C                           | -25 °C to 140 °C (-15 °C cover off) |
| Accuracy (MAX possible error)        | 0.1 °C                                    | 0.1 °C                              |
| Display resolution                   | 0.01, 0.001                               | .0.1 , 0.001 °C                     |
| Stability                            | 0.015 °C                                  | 0.01 °C                             |
| Typical uniformity                   | 0.03 °C up to 200 °C 0.04 °C above 200 °C | 0.02 °C                             |

# Fluke Calibration 1502A/1504 **Tweener Thermometer Readouts**



Fluke 1502A



### Best performance thermometers in their price range

The 1502A and 1504 Tweener Thermometer Readouts are low-cost high-accuracy digital thermometers featuring accuracy of up to ±0.006 °C (Fluke 1502A) and up to ±0.002 °C (Fluke 1504).

The **1502A** is designed to be used with  $25\Omega$  and  $100\Omega$ RTDs and SPRTs.

The 1504 Thermometer Readout is designed to be used with thermistors or RTDs with a nominal resistance of  $1,000\Omega$  or greater. One year warranty.

# Fluke Calibration 1620A Precision Thermo-Hygrometer



Fluke 1620A



### The most accurate temperature and humidity graphical data loggers on the market

Now you can easily monitor and record conditions throughout your entire facility with the DewK's new Ethernet and wireless capabilities, and set your upgraded LogWare III software to notify you immediately of changing conditions.

The 1620A accepts inputs from up to two sensors, which may be mounted directly on the unit or remotely. Each sensor comes with a NVLAP-accredited calibration for temperature and relative humidity from Fluke Calibration, containing its own NIST-traceable calibration data. The 1620A-S reads temperature to ± 0.25 °C over its calibrated range of 15 °C to 35 °C. Relative humidity readings are to ± 2 % RH from 20 % RH to 70% RH.

One year warranty.

# **Recommended Accessories** Fluke 6109A/7109A 7109-CASE 7109-2027 Carrying Case Holding Fixture **7109-2080** Fluid Overflow Kit 7109-2051 Single Probe Clamp Kit Fluke 1502A/1504 9301 2505 Carrying Case, fits Tweener and 12 in probe 2508 2361 Spare Power Supply 100 to 240 V AC (1620A)

### **Ordering Information**

6109A Portable Calibration

Bath, 35°C to 250°C

6109A-P Portable Calibration Bath with Process

Electronics 35 °C to 250°C

7109A Portable Calibration

Bath, -25°C to 140°C

7109A-P Portable Calibration

Bath with Process

Electronics, -25°C to 140°C

1502A Tweener PRT

Readout

1502A-2506 Tweener PRT

1504-2506

1620A-H

Readout, with

IEEE-488 1504 Tweener Thermistor

Readout

Tweener Thermistor Readout, with

IEEE-488

The "DewK"

Thermo-Hygrometer, High-Accuracy

Value Kit

1621A-H The "DewK"

Thermo-Hygrometer,

High-Accuracy Value Kit

1620A-S The "DewK"

Thermo-Hygrometer,

Standard-Accuracy

Value Kit

1621A-S The "DewK"

Thermo-Hygrometer, Standard-Accuracy

Value Kit

9936A LogWare III

Software

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# Fluke Calibration 1523 and 1524 **Reference Thermometers**



Fluke 1523



The 1523/1524 Reference Thermometers from Fluke Calibration measure, graph and record PRTs, thermocouples and thermistors. You can measure up to 0.3 seconds per sample and plot and scale trends in real time. Both thermometers have memory for up to 25 readings with statistics. The 1524 has two inputs with data logging memory for 15,000 measurements with date and time

- High accuracy PRTs: ± 0.011 °C; Thermocouples: ± 0.24°C; Thermistors: ± 0.002 °C
- A simple user interface to see trends quickly
- Smart connectors to load probe information automatically
- Use a PC and optional LogWare II software to monitor and log more data over time
- One year warranty

| Models  | Included accessories  |
|---------|---|
|         | Fluke 1523 Bundled with:  |
| 1523-P1 | 5616 PRT (-200 °C to 420 °C, 100 ohm (1/4 x 12 inch)),<br>Universal TC INFO-CON Connector, TPAK and Case  |
| 1523-P2 | 5628 PRT (-200 °C to 660 °C, 25 ohm (1/4 x 12 inch)),<br>Universal TC INFO-CON Connector, TPAK and Case   |
| 1523-P3 | 5627A PRT (–200 °C to 420 °C, 100 ohm (1/4 x 12 inch)),<br>Universal TC INFO-CON Connector, TPAK and Case |
|         | Fluke 1524 Bundled with:  |
| 1524-P1 | 5616 PRT, Universal TC INFO-CON Connector, TPAK and Case  |
| 1524-P2 | 5628 PRT, Universal TC INFO-CON Connector, TPAK and Case  |
| 1524-P3 | 5627A PRT, Universal TC INFO-CON Connector, TPAK and Case   |

# Fluke Calibration 1551AEx and 1552AEx Stik Thermometer Readouts



### Best substitute for precision mercury-filled glass thermometers

The Fluke 1551A and 1552A Stik Thermometers are an accurate and repeatable substitute to mercury-in-glass thermometers. Whether working outdoors in environments where potentially explosive gases may be present or on the floor of a processing plant, these intrinsically-safe, battery operated, portable reference thermometers are designed to go where you work.

- User-configurable temperature Trend/Stability indicator
- Optional data logging to internal memory
- 300-hour battery life
- NVLAP-accredited, NIST-traceable calibration included
- Accuracy of ± 0.05 °C (± 0.09 °F) over full range
- Intrinsically safe (ATEX and IECEx compliant) Ex ib IIB T4 Gb
- Two models to choose from (-50 °C to 160 °C or -80 °C to 300 °C)
- One year warranty

| Models    |   |
|-----------|---|
| 1551A-9*  | 1551A Ex Thermometer, Fixed RTD, -50 °C to 160 °C, 4.8 mm x 229 mm  |
| 1551A-12* | 1551A Ex Thermometer, Fixed RTD, -50 °C to 160 °C, 6.35 mm x 305 mm |
| 1551A-20* | 1551A Ex Thermometer, Fixed RTD, -50 °C to 160 °C, 6.35 mm x 508 mm |
| 1552A-12* | Thermometer, Fixed PRT, -80 °C to 300 °C, 6.35 mm x 305 mm          |

<sup>\*</sup>Datalogging option models also available as -DL

# **Recommended Accessories** Fluke 1523/1524 5616-12-P 5610-9-P Precision PRT 305 mm x 6.35 mm Precision Thermistor 229 mm x 3.2 mm





1523/1524 Readout & Probe Carrying Case

2384-P. 2384-T INFO-CON Connectors, PRT (gray cap) or TC (blue cap)

### Fluke 1551AEx/2AEx





1551-CASE

### Fluke Calibration 7526A **Precision Process Calibrator**



The Fluke Calibration 7526A Precision Process Calibrator offers the best balance of economy and accuracy for benchtop calibration of temperature and pressure process instrumentation.

Easily calibrate RTD and thermocouple readouts, pressure gauges, temperature transmitters, digital process simulators, data loggers, multimeters and more.

- Sources and measures DC voltage, current, resistance, RTDs and thermocouples
- Precision pressure measurement using Fluke 750P Series Pressure Modules
- Measures 4-20 mA loop current
- Includes certificate of calibration traceable to national standards
- Thermocouple output/input:  $-10 \text{ mV to } 75 \text{ mV } \pm (30 \text{ ppm of }$ reading +2 μV)
- Transmitter output: 0 mA to 24 mA (input with loop power)  $\pm (100 \text{ ppm} + 1 \mu\text{A})$
- Resistance output: 5  $\Omega$  to 400  $\Omega$ ±0.015 Ω

# Fluke 717, 718, 718Ex and 719 Pressure Calibrators

Accurate and rugged, temperature calibration tools



Fluke 719





### Fluke 717 Pressure Calibrators

- Measure up to 10,000 psi/690 bar sensor (10000G model)
- Compatible with non-corrosive gases and liquids

### Fluke 718 Pressure Calibrators

- 1, 30, 100 and 300 psi ranges available
- Pump to 300 psi, 20 bar with internal pump (718–300G)
- 718-1G includes special low volume pump and high measurement resolution for low pressure calibration

# Fluke 719 Electric Pressure Calibrators

- Electric pump enables one-handed pressure pumping and makes pressure calibration quicker and easier
- Best in class 0.025 % pressure measurement accuracy
- Programmable pump limit settings can eliminate over-pressurisation—set 'pump to' pressure values
- Two ranges, 30 psi and 100 psi

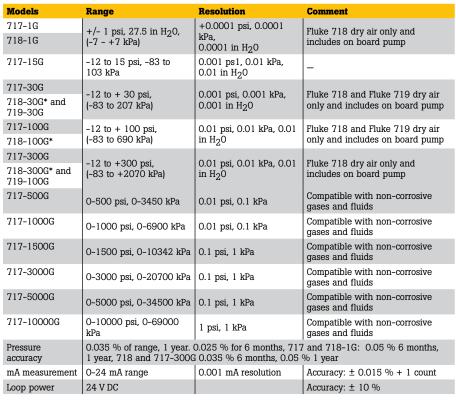
Fluke 718

.180

Fluke 717

### Fluke 717, 718 and 719 common features

- Pressure switch test makes a difficult task easy, captures set, reset and deadband values of a pressure switch
- 717 and 718 measure pressure to 0.025 % of full scale with internal sensor
- Measure mA with 0.015 % accuracy and 0.001 mA resolution, while sourcing 24 V loop power
- Three year warranty



<sup>\*</sup>Intrinsically safe models available, see page 135.

### **Specialty Model**

### Fluke 718Ex Intrinsically Safe Pressure Calibrator

The Fluke 718Ex offers a convenient, self contained solution for pressure measurements and calibration.



- 30, 100, and 300 psi ranges (2, 7, and 20 bar)
- Pressure measurement to 0.05% of full span, using an internal pressure sensor.
- Pressure measurement to 200 bar using any of eight intrinsically safe Fluke 750PEx Pressure Modules

For more information, see page 135

### **Recommended Accessories**



**700ILF** In-Line Filter See page 163



700HTP-2 Hydraulic Test Pump See page 163



1,180

700LTP-1 Low Pressure Test Pump See page 163



Large Soft Case See page 152

### **Included Accessories**

Fluke 717/718/719: Protective Yellow Holster with Test Lead Storage, Instruction Sheet, 9 V Alkaline Battery (1x 717, 2x 718 & 719), Test Leads and Alligator Clips, Hose Kit (719), NIST-Traceable Calibration Report & Data.

Fluke 718Ex: Protective Red Holster, TL75 Test Leads, AC72 Test Clips, User Manual (CD), Fluke 718Ex CCD, NIST-Traceable Calibration Report & Data.

### **Ordering Information**

FLUKE-717 10,000G - 1G

Pressure Calibrator, 10,000 PSI - 1 PSI (10 models)

FLUKE-718 300G, 100G, 30G Pressure Calibrator

FLUKE-718Ex 300G, 100G, 30G Intrinsically Safe Pressure Calibrator

FLUKE-719 100G, 30G Electric Pressure Calibrator 100PSI, 30 PSI

Contact your local distributor for price and availability. www.fluke.com/au/wtb

### Fluke 719Pro Pressure Calibrators



Fluke 719Pro





### Intergrated electric pump - now to 300PSI/20 bar

The Fluke 719Pro is an exciting enhancement of the popular original 719 pressure calibrators. Notable improvements include expanding the pressure measurement range of the 100 PSI model up to 150 PSI and the addition of a 300 PSI range. The 719Pro adds a backlit display and precision temperature measurement with the addition of an accessory RTD probe available as a new accessory.

- Electric pump for one handed pressure calibration
- Best in class pressure measurement uncertainty of 0.025%
- Variable release rate bleed valve for easy pressure adjustment
- 30 PSI, 150 PSI and the long requested 300 PSI (2,10 and 20 bar) pressure ranges
- Programmable pressure calibrator pump limit eliminates over-pressurisation and allows the user to program target pressures for pumping
- Extended pressure measurement range with any of 50 750PXX Pressure Modules
- Source mA with simultaneous pressure measurement to test valves and I/Ps
- Simulate mA signals to troubleshoot 4-20 mA loops
- Test pressure switches with built in switch test function
- Power transmitters during test using 24 V loop supply with simultaneous mA measurement
- Three year warranty

| Pressure measurement | Range                           | Resolution            | Accuracy                |
|----------------------|---------------------------------|-----------------------|-------------------------|
| Fluke-719Pro-30G     | -12 to 30 PSI /-0.8 to 2 bar    | 0.001 PSI, 0.0001 bar | ± 0.025 % of            |
| Fluke-719Pro-150G    | -12 to 150 PSI /-0.8 to 10 bar  | 0.01 PSI, 0.001 bar   | full scale, 6<br>months |
| Fluke-719Pro-300G    | -12 to 300 PSI / -0.8 to 20 bar | 0.01 PSI, 0.001 bar   | Inontris                |

| Function                                  | Range         | Resolution | Accuracy (1 year)   |
|---|---------------|------------|---|
| mA DC (simulation & measurement)          | 0-24 mA DC    | 0.001 mA   | ± 0.015 % of reading ± 2 counts                           |
| Volts DC (measurement only)               | 30 V DC       | 0.001 V    | ± 0.015 % of reading ± 2 counts                           |
| Temperature (measurement only, Pt100 RTD) | -50 to 150 °C | 0.01 °C    | Temperature ± 0.1 °C                                      |
| Loop power supply                         | 24 V DC       | N/A        | 24 mA at 24 V   |
| Temperature effect (all functions)        |               |            | Add ± 0.002 % F.S./°C for temps outside of 15 °C to 35 °C |

| •                                       | · ·              |
|---|------------------|
| Environmental                           |                  |
| Operating temperature                   | -10 °C to +50 °C |
| Storage temperature (without batteries) | -20 °C to +60 °C |

| 300 pump cycles to 150 PSI minimum; 1000 pump cycles to 30 PSI; 100 pump cycles to 300 PSI minimum |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |
| 24.13 cm x 11.18 cm x 7 cm   |  |  |  |
| With holster 1.2 kg  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| 4 pin miniature circular   |  |  |  |
| 6 pin miniature circular   |  |  |  |
| SI;  |  |  |  |

### **Pressure Modules**

### Fluke 750 Series Pressure Modules

- 50 Pressure Modules
- 0.025 % reference uncertainty
- Ranges from 1.000 in H<sub>2</sub>O (0.2491 kPa) to 10,000 psi (68.948 MPa)
- Gage, differential, dual range, absolute and vacuum measurement models
- Rugged cases protect the modules from harsh environments
- Temperature compensated 0 °C to 50 °C

For more information see page 124



Fluke Process Calibrators in this catalogue displaying the Pressure Enabled symbol display readings from the 750 Series Pressure Modules.

### **Recommended Accessories**





FLUKE-720RTD RTD Probe for 721 and 719PRO See page 163





FLUKE-71X-TRAP Liquid and Dirt Trap for 718, 719 & 719PRO See page 163

### **Included Accessories**

Test Leads with Alligator Clips, Printed User Manual/CD-ROM, Fluid Trap, Carrying Case, 1/4 inch NPT to 1/4 inch ISO Adapter, Accessory Hose Kit with (2) 1/8 inch Quick Fit Adapters and 1 metre of hose, Traceable Certificate of Calibration.

### **Ordering Information**

FLUKE-719PRO-30G

**Electric Pressure** Calibrator,

30PSIG

FLUKE-719PRO-150G

**Electric Pressure** Calibrator, 150PSIG

**Electric Pressure** 

FLUKE-719PRO-300G

Calibrator. 300PSIG

FLUKE-71X-TRAP

Liquid & Dirt Trap for Fluke 718, 719 and 719Pro

# Fluke 721 and 721Ex Precision Pressure Calibrators



Fluke 721

# Pressure calibration and temperature measurement for custody transfer applications

The Fluke 721 and 721Ex Precision Pressure Calibrators with dual isolated pressure sensors are the ideal tool for gas custody transfer applications allowing you to take simultaneous static and differential pressure measurements with a single tool.

The 721 and 721Ex can be configured by selecting either a 16 PSI (1.1 bar) or 36 psi (2.48 bar) low pressure sensor then add any of 7 high pressure ranges including 100, 300, 500, 1000, 1500, 3000 or 5000 psi (6.9, 20, 24.5, 69, 103.4, 200, 345 bar).

- Intrinsically Safe (721Ex version only) IECEx and Atex Ex ia IIB T3 Gb (Zone 1)
- Ideal for gas flow calibration (custody transfer) applications
- Two isolated, stainless steel, pressure sensors with 0.025% accuracy
- Switch test on both pressure inputs
- Pt100 RTD input for temperature measurement, (probe optional)
- Measures 4-20 mA signals
- Internal 24 V loop power supply can power a transmitter under test (721 models only)
- Three year warranty



|  | Low Pressure Sensor                     |                        |          | High Pressure Sensor                      |                      |                            |
|--|---|------------------------|----------|---|----------------------|----------------------------|
| Model  | Range 1                                 | Resolution             | Accuracy | Range 2                                   | Resolution           | Accuracy                   |
| Fluke-721-1601<br>Fluke-721Ex-1601<br>16PSIG, 100PSIG  |   | 0.001psi,<br>0.0001bar |          | -12psi to +100psi<br>-0.83bar to 6.9bar   | 0.01psi<br>0.0001bar | 0.025%<br>of full<br>scale |
| Fluke-721-1603<br>Fluke-721Ex-1603<br>16PSIG, 300PSIG  |   |                        |          | -12psi to +300psi<br>-0.83bar to 20bar    | 0.01psi<br>0.001bar  |                            |
| Fluke-721-1605<br>Fluke-721Ex-1605<br>16PSIG, 500PSIG  |   |                        |          | -12psi to +500psi<br>-0.83bar à 34.5bar   | 0.01psi<br>0.001bar  |                            |
| Fluke-721-1610<br>Fluke-721Ex-1610<br>16PSIG, 1000PSIG | -14psi to +16psi<br>-0.97bar to 1.1bar  |                        |          | Opsi to +1000psi<br>0.00bar to 69bar      | 0.1psi<br>0.001bar   |                            |
| Fluke-721-1615<br>Fluke-721Ex-1615<br>16PSIG, 1500PSIG |   |                        |          | Opsi to +1500psi<br>0.00bar to 103.4bar   | 0.1psi<br>0.001bar   |                            |
| Fluke-721-1630<br>Fluke-721Ex-1630<br>16PSIG, 3000PSIG |   |                        |          | Opsi to +3000psi<br>0.00bar to 200bar     | 0.1psi<br>0.01bar    |                            |
| Fluke-721-1650<br>Fluke-721Ex-1650<br>16PSIG, 5000PSIG |   |                        |          | 0 psi to +5000 psi<br>0.00 bar to 345 bar | 0.1psi<br>0.01bar    | 0.035%<br>of full<br>scale |
| Fluke-721-3601<br>Fluke-721Ex-3601<br>36PSIG, 100PSIG  | -14psi to +36psi<br>-0.97bar to 2.48bar |                        |          | -12psi to +100psi<br>-0.83bar to 6,9bar   | 0.01psi<br>0.0001bar |                            |
| Fluke-721-3603<br>Fluke-721Ex-3603<br>36PSIG, 300PSIG  |   |                        |          | -12psi to +300psi<br>-0.83bar to 20bar    | 0.01psi<br>0.001bar  |                            |
| Fluke-721-3605<br>Fluke-721Ex-3605<br>36PSIG, 500PSIG  |   |                        |          | -12psi to +500psi<br>-0.83bar to 34.5bar  | 0.01psi<br>0.001bar  | 0.025%                     |
| Fluke-721-3610<br>Fluke-721Ex-3610<br>36PSIG, 1000PSIG |   |                        |          | Opsi to +1000psi<br>0.00bar to 69bar      | 0.1psi<br>0.001bar   | of full<br>scale           |
| Fluke-721-3615<br>Fluke-721Ex-3615<br>36PSIG, 1500PSIG |   |                        |          | Opsi to +1500psi<br>0.00bar to 103.4bar   | 0.1psi<br>0.01bar    |                            |
| Fluke-721-3630<br>Fluke-721Ex-3630<br>36PSIG, 3000PSIG |   |                        |          | Opsi to +3000psi<br>0.00bar to 200bar     | 0.1psi<br>0.01bar    |                            |
| Fluke-721-3650<br>Fluke-721Ex-3650<br>36PSIG, 5000PSIG |   |                        |          | Opsi to +5000psi<br>0.00bar to 345bar     | 0.1psi<br>0.01bar    | 0.035%<br>of full<br>scale |

### **Speciality Model**

### Fluke 721Ex Precision Pressure Calibrator

The ideal tool for gas custody transfer applications in potentially explosive atmospheres.



For more information, see page 135

### **Recommended Accessories**



RTD Probe for 721 & 719Pro See page 163 **720URTDA**Universal RTD Adapter for 721 and 719Pro
See page 163

### **Included Accessories**

Fluke 721/Ex: Soft Case, Four AA Batteries, Manual, Traceable Calibration Certificate, Test Leads

Calibration Certificate, Test Leads.

Ordering Information

FLUKE-721-3650 Dual Sensor Pressure Calibrator

FLUKE-721-3630 Dual Sensor
Pressure Calibrator

FLUKE-721-3615 Dual Sensor

Pressure Calibrator

FLUKE-721-3610 Dual Sensor Pressure Calibrator

FLUKE-721-3605 Dual Sensor

Pressure Calibrator

FLUKE-721-3603 Dual Sensor Pressure Calibrator

FLUKE-721-3601 Dual Sensor

Pressure Calibrator

FLUKE-721-1650 Dual Sensor Pressure Calibrator

FLUKE-721-1630 Dual Sensor

Pressure Calibrator

**FLUKE-721-1615** Dual Sensor Pressure Calibrator

FLUKE-721-1610 Dual Sensor

Pressure Calibrator

FLUKE-721-1605 Dual Sensor

Pressure Calibrator

FLUKE-721-1603 Dual Sensor Pressure Calibrator

FLUKE-721-1601 Dual Sensor

Pressure Calibrator

Intrinsically Safe models available (add Ex to the above model numbers).

FLUKE-720RTD RTD Probe for Fluke

721 and 719Pro

**FLUKE-** Universal RTD **720RTDUA** Adapter for Fluke

721 and 719Pro

# Fluke 729 Automatic Pressure Calibrator



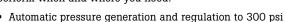


### Portable automatic pressure calibrator simplifies pressure calibration

The Fluke 729 Automatic Pressure Calibrator has been designed specifically with process technicians in mind to simplify the pressure calibration process and provide faster, more accurate test results. Technicians know that calibrating pressure can be a time consuming task, but the 729 makes it easier than ever with an internal electric pump that provides automatic pressure generation and regulation in an easy-to-use, rugged, portable package.

The Fluke 729 can also automatically test multiple pressure test points and automatically document the results. Calibration is as easy as typing in the starting and ending pressure and the number of test points and tolerance level; the 729 does the rest.

With three ranges to choose from 30 psi (2 bar, 200 kPa), 150 psi (10 bar, 1 MPa) and 300 psi (20 bar, 2 MPa), the Fluke 729 Automatic Pressure Calibrator is designed to perform when and where you need.



- Easily document the process using on-board test templates
- Automatic internal fine-pressure adjustment
- Measure, source and simulate 4 to 20 mA signals
- 24V loop power for powering transmitters for tests
- HART communication for testing HART smart transmitters
- Built-in leak testing for verifying test setups for leakage
- Fluke Connect® App compatibility
- Measure temperature with optional 720RTD probe
- Measure VDC for testing 1 V DC to 5 V DC output transmitters
- Compatible with Fluke 700G Series and 750 Series Pressure Modules
- Upload documented test results to DPCTrack2™ Calibration Management Software to manage your instrumentation, create scheduled tests and reports and manage calibration data
- Three year warranty





0.02 % of full scale One-year specification

Control specification 0.005 % full scale minimum

\*See manual for detailed specifications

| Model       | Psi range,<br>resolution   | Bar range,<br>resolution   | kPa range,<br>resolution  | Comment  |
|-------------|----------------------------|----------------------------|---------------------------|--|
| 729 30G     | -12.0000 to 30.0000 psi    | -0.82737 to<br>2.06842 bar | -82.737 to<br>206.843 kPa | No wireless communication                      |
| 729 150G    | -12.000 to<br>150.000 psi  | -0.8273 to 10.3421 bar     | -82.73 to<br>1034.21 kPa  | No wireless communication                      |
| 729 300G    | -12.000 to 300.000 psi     | -0.8273 to 20.6843 bar     | -82.73 to<br>2068.43 kPa  | No wireless communication                      |
| 729 30G FC  | -12.0000 to<br>30.0000 psi | -0.82737 to<br>2.06842 bar | -82.737 to<br>206.843 kPa | Wireless<br>communication<br>for Fluke Connect |
| 729 150G FC | -12.000 to<br>150.000 psi  | -0.8273 to<br>10.3421 bar  | -82.73 to<br>1034.21 kPa  | Wireless<br>communication<br>for Fluke Connect |
| 729 300G FC | -12.000 to<br>300.000 psi  | -0.8273 to 20.6843 bar     | -82.73 to<br>2068.43 kPa  | Wireless<br>communication<br>for Fluke Connect |

### **Recommended Accessories**





750 SW DPC/TRACK2

See page 165

Series Pressure Modules See page 124



### 720URTDA Iniversal RTD Adapter for 721 and 719Pro See page 163

### **Included Accessories**

Soft Case, Stackable Test Leads, AC280 Hook Clips, Alligator Clips, Test Probes, Magnetic Hanger Kit, Carrying Strap, Power Supply, Rechargeable Battery (installed), Hose Kit with Push Fit Adapters, Hanging Clip, USB Cable, 1/8 in FNPT to 1/4 in FNPT Adapter, 1/8 in FNPT to F-M20 Adapter, 1/8 in FNPT to 1/4 in FBSP Adapter, PTFE Tape, (2) Sintered Filters, Liquid Dirt Trap, Water Trap Drain and Valve Tuning Hoses, Wireless Adapter (FC Models only), Quick Start Guide, Safety Sheet.

**Ordering Information** FLK-729 30G 30 psi, 2 Bar Automatic Pressure Calibrator FLK-729 150G 150 psi, 10 Bar Automatic Pressure

Calibrator

FLK-729 300G 300 psi, 20 Bar Automatic

Pressure Calibrator

FLK-729 30G FC 30 psi, 2 Bar

Automatic Pressure Calibrator with Fluke Connect

FLK-729 150G FC 150 psi, 10

Bar Automatic Pressure Calibrator with Fluke Connect

FLK-729 300G FC 300 psi, 20

Bar Automatic Pressure Calibrator with Fluke Connect 300 psi, 20

FLUKE-729 /750SW BU

Bar Automatic Pressure Calibrator and DPCTRACK2 Software Bundle

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**Process Calibration Tools** www.fluke.com/au/PCT

# Fluke 700G Precision Pressure Test Gauges



Fluke 700G

### Pressure Gauges designed to handle all your **Pressure Calibration needs**

With best-in-class accuracy and measurements, the Fluke 700G Series Precision Pressure Test Gauges were designed to handle all of your pressure calibration needs. The 700G Series Gauges are rugged and easy to use, with twenty three models ranging from ±10 inH20/20 mbar to 10,000 psi/690 bar including absolute pressure ranges.

When combined with the Fluke 700PTPK or 700HTPK you've got a complete pressure testing solution for up to 600 psi (40 bar) with the PTP-1 pneumatic pump and up to 10,000 psi (690 bar) with the HTP-2 hydraulic pump.

- Precision pressure measurement from ±10 inH20/20 mbar to 10,000 psi/690 bar
- Absolute pressure measurement ranges 15, 30, 100, 300 psia
- Accuracy to 0.05 % of full scale
- Reference class gauge accuracies to 0.04 % of reading
- Easy to use, rugged construction for reliable performance
- CSA; Class 1, Div 2, Groups A-D rating
- ATEX rating: II 3 G Ex nA IIB T6
- Combine the Pneumatic Test Pump Kits and Hydraulic Test Pump Kits with any Fluke-700G Series Gauge, 1,000 psi (69 bar) or less, to make a complete pressure testing
- Log up to 8,493 pressure measurements to memory (requires 700G/TRACK software)
- Three year warranty



| Specifications      |  |
|---------------------|--|
| Size (HxWxD)        | 12.7 cm x 11.4 cm x 3.7 cm   |
| Pressure connection | 1/4 in NPT Male  |
| Housing/Weight      | Cast ZNAL 0.56 kg with holster   |
| Display             | 5.5 digits, 16.53 mm high 20-segment bar graph, 0 to 100%                      |
| Power               | Three AA alkaline batteries  |
| Battery life        | 1,500 hours without backlight (continuous on), 2,000 hours at slow sample rate |

# 700G/TRACK Logging Software

The Fluke 700G/Track Data logging Software makes managing your instruments and calibration data easy to do. With the Fluke 700G-Track Software, you can gauge and record (log) multiple data sets, each of which is identified by a sequential run number.



- Use with Fluke 700G Series Gauges to perform real time data logging to a PC
- Download logging configurations to the 700G Series Gauges for a remote logging event
- · Configure logging event reading rate, duration and measurement units
- Upload measurements logged remotely and display or export measurements
- Includes communication cable for connection to a PC

### **Recommended Kits**

Buy more, Save more



### Fluke-700PTPK Pneumatic **Test Kit**

- Combine with any Fluke-700G Series Gauge, 1,000 psi (69 bar) or less, to make a complete pressure testing kit
- Connect the 700G Series gauge directly to the included PTP-1 hand pump



### Fluke 700HTPK Hydraulic **Test Kit**

- Combine with any Fluke-700G Series Gauge, 1,000 psi (69 bar) range or greater, to make a complete pressure testing kit
- Generate pressure up to 10,000 psi, 690 bar with the included 700HTP-2 test pump
- Hard case protects pump and gauge and allows gauge to remain connected to the pump



### Fluke-700PTPK2 Premium **Pneumatic Test Pump Kit**

- Pneumatic Hand Pump
- Premium, no tools required gauge connector
- One premium transmitter test hose kit and adapters



### Fluke-700HTPK2 **Premium Hydraulic Test Pump Kit**

- Hydraulic Hand PumpPremium, no tools required gauge connector
- One premium transmitter test hose kit and adapters

For more details see page 172

| Model         | Range                                     | Resolution                | Accuracy  | Burst<br>Pressure     |
|---------------|---|---------------------------|---|-----------------------|
| Fluke-700G01  | -10 to +10 inH20<br>-20 mbar to 20 mbar   | 0.001 inH20<br>0.001 mbar | Positive Pressure ± 0.1% of range   | 3 psi<br>210 mbar     |
| Fluke-700G02  | -1 to +1 psi<br>-70 mbar to 70 mbar       | 0.0001 psi<br>0.001 mbar  | Vacuum ± 0.1% of range  | 5 psi<br>350 mbar     |
| Fluke-700G04  | -14 psi to 15 psi<br>97 bar to 1 bar      | 0.001 psi<br>0.0001 bar   |   | 60 psi<br>4 bar       |
| Fluke-700G05  | -14 psi to 30 psi<br>97 bar to 2 bar      | 0.001 psi<br>0.0001 bar   |   | 120 psi<br>8 bar      |
| Fluke-700G06  | -12 psi to 100 psi<br>83 bar to 6.9 bar   | 0.01 psi<br>0.0001 bar    |   | 400 psi<br>26 bar     |
| Fluke-700G27  | -12 psi to 300 psi<br>83 bar to 20 bar    | 0.01 psi<br>0.001 bar     |   | 1200 psi<br>80 bar    |
| Fluke-700G07  | -12 psi to 500 psi<br>83 bar to 34 bar    | 0.01 psi<br>0.001 bar     | Positive Pressure ± 0.05% of  | 2000 psi<br>138 bar   |
| Fluke-700G08  | -14 psi to 1000 psi<br>97 bar to 69 bar   | 0.1 psi<br>0.001 bar      | range<br>Vacuum ± 0.1% of range   | 4000 psi<br>266 bar   |
| Fluke-700G10  | -14 to 2000 psi<br>97 bar to 140 bar      | 0.1 psi<br>0.01 bar       |   | 8000 psi<br>550 bar   |
| Fluke-700G29  | -14 psi to 3000 psi<br>97 bar to 200 bar  | 0.1 psi<br>0.01 bar       |   | 10000 psi<br>690 bar  |
| Fluke-700G30  | -14 psi to 5000 psi<br>97 bar to 340 bar  | 0.1 psi<br>0.01 bar       |   | 10000 psi<br>690 bar  |
| Fluke-700G31  | -14 psi to 10000 psi<br>97 bar to 690 bar | 1 psi<br>0.01 bar         |   | 20000 psi<br>1035 bar |
| Fluke-700GA4  | 0 to 15 psia<br>0 to 1 bar absolute       | 0.001 psi<br>0.0001 bar   |   | 60 psi<br>4 bar       |
| Fluke-700GA5  | 0 to 30 psia<br>0 to 2 bar absolute       | 0.001 psi<br>0.0001 bar   | 0.05% of range  | 120 psi<br>8 bar      |
| Fluke-700GA6  | 0 to 100 psia<br>0 to 6.9 bar absolute    | 0.01 psi<br>0.0001 bar    | 0.00% of falige   | 400 psi<br>27 bar     |
| Fluke-700GA27 | 0 to 300 psia<br>0 to 20 bar absolute     | 0.01 psi<br>0.001 bar     |   | 1200 psi<br>80 bar    |
| Fluke-700RG05 | -14 to +30 psi<br>-0.97 to +2 bar         | 0.001 psi<br>0.0001 bar   | Positive Pressure ± 0.04% of reading ± 0.01% of range, Vacuum ± 0.1% of range | 90 psi<br>6 bar       |
| Fluke-700RG06 | -12 to 100 psi<br>-0.83 to 6.9 bar        | 0.01 psi<br>0.0001 bar    |   | 400 psi<br>27 bar     |
| Fluke-700RG07 | -12 to 500 psi<br>-0.83 to 34             | 0.01 psi<br>0.001 bar     |   | 2000 psi<br>138 bar   |
| Fluke-700RG08 | -14 to 1000 psi<br>-0.97 to 69 bar        | 0.1 psi<br>0.001 bar      | Positive Pressure ± 0.04% of reading ± 0.01% of range,                        | 4000 psi<br>275 bar   |
| Fluke-700RG29 | -14 to 3000 psi<br>-0.97 to 200 bar       | 0.1 psi<br>0.01 bar       | Vacuum ± 0.1% of range  | 10000 psi<br>690 bar  |
| Fluke-700RG30 | -14 to 5000 psi<br>-0.97 to 340 bar       | 0.1 psi<br>0.01 bar       |   | 15000 psi<br>1035 bar |
| Fluke-700RG31 | -14 to 10000 psi<br>-0.97 to 690 bar      | 1 psi<br>0.01 bar         |   | 20000 psi<br>1380 bar |

**700R Ranges:** Temperature Compensation 0 e°C to 50°C to rated accuracy. For temperatures from -10 °C to 0 °C and 50 °C to 55 °C, add .005 % FS/°C.

### Media compatibility:

- 10 inH<sup>2</sup>O, 1, 15, 30 psi: any clean dry non-corrosive gas
- 100, 300, 500, 1000 psi: any liquids or gases compatible with 316 stainless steel and above 1000 psi: any non-flammable, non-toxic, non-explosive, non-oxidising liquid or gas compatible with

| Manual on C<br>Certificate of | Accessories D-ROM, Traceable Calibration, 1/4" NPT               |
|-------------------------------|--|
| to 1/4" ISO A                 |  |
| FLUKE-<br>700G01              | Information Pressure Gauge, ±10 inH <sub>2</sub> O WC (0.4 PSIG) |
| FLUKE-<br>700G02              | Pressure Gauge, ±30 inH <sub>2</sub> O WC (1 PSIG)               |
| FLUKE-                        | Pressure Gauge,  |
| 700G04                        | ± 15 PSIG  |
| FLUKE-                        | Pressure Gauge,  |
| 700G05                        | 30 PSIG  |
| FLUKE-                        | Pressure Gauge,  |
| 700G06                        | 100 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700G27                        | 300 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700G07                        | 500 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700G08                        | 1,000 PSIG   |
| FLUKE                         | Pressure Gauge,  |
| -700G10                       | 2,000 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700G29                        | 3,000 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700G30                        | 5,000 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700G31                        | 10,000 PSIG  |
| FLUKE-                        | Pressure Gauge,  |
| 700GA4                        | 15 PSIA  |
| FLUKE-                        | Pressure Gauge,  |
| 700GA5                        | 30 PSIA  |
| FLUKE-                        | Pressure Gauge,  |
| 700GA6                        | 100 PSIA   |
| FLUKE-                        | Pressure Gauge,  |
| 700GA27                       | 300 PSIA   |
| FLUKE-                        | Pressure Gauge,  |
| 700RG05                       | Reference, 30 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700RG06                       | Reference, 100 PSIG  |
| FLUKE-                        | Pressure Gauge,  |
| 700RG07                       | Reference, 500 PSIG  |
| FLUKE-                        | Pressure Gauge,  |
| 700RG08                       | Reference, 1000 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700RG29                       | Reference, 3000 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700RG30                       | Reference, 5000 PSIG   |
| FLUKE-                        | Pressure Gauge,  |
| 700RG31                       | Reference, 10000 PSIG  |
| 700G-<br>TRACK                | Data Logging Software and Cable                                  |
| FLUKE-<br>700HTPK             | Hydraulic Test Pump<br>Kit, 0 to 10000<br>PSI/690 BAR            |
| FLUKE-                        | Pneumatic Test Pump  |
| 700PTPK                       | Kit, 0 to 600PSI/40BAR   |
| FLUKE-<br>700HTPK2            | Premium Hydraulic  |

700HTPK2

700PTPK2

FLUKE-

Test Pump Kit

Test Pump Kit

Premium Pneumatic

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www.fluke.com/au/PCT **Process Calibration Tools** 

# Fluke 750P and 750PEx Series **Pressure Modules**



Fluke 750P





### **Precision pressure measurement for** Fluke 750 and 720 Series Calibrators

The Fluke 750P Series Pressure Modules are the ideal pressure modules to enable gage, differential and absolute pressure measurement with Fluke 750 and 740 Series DPCs and 725, 726 MPCs to measure pressure.

Covers pressure calibrations from 0 to 1 in H20 to 10000 psi (2.5 mBar to 690 bar).

- 0.025 % reference uncertainty
- 6-month and 1-year specifications
- Intrinsically safe models are Class I Div 1 Groups A-D T4, Ta = 0 °C to +50 °C, ATEX II 1G Ex ia  $\overrightarrow{IIC}$  T4 compliant
- · Three year warranty

| Model               | Parameter/Range                            | Burst<br>Rating <sup>6</sup> | Hi Side<br>Media² | Lo Side<br>Media² | Reference<br>Uncertainty |
|---------------------|--|------------------------------|-------------------|-------------------|--------------------------|
|                     |  | fferential                   | l=                |                   | 1                        |
| 750P00              | 0 to 1 in H <sub>2</sub> 0 (0 to 2.5 mBar) | 30X                          | Dry Air           | Dry Air           | ± 0.15 %                 |
| 750P01 <sup>4</sup> | O to 10 in H <sub>2</sub> O (O to 25 mBar) | 3X                           | Dry Air           | Dry Air           | ± 0.1 %                  |
| 750P02              | O to 1 psi (O to 70 mBar)                  | 3X                           | Dry Air           | Dry Air           | ± 0.050 %                |
| 750P22              | 0 to 1 psi (0 to 70 mBar)                  | 3X                           | 316 SS            | Dry Air           | ± 0.050 %                |
| 750P03              | 0 to 5 psi (0 to 350 mBar)                 | 3X                           | Dry Air           | Dry Air           | ± 0.02 %                 |
| 750P23              | O to 5 psi (O to 350 mBar)                 | 4X                           | 316 SS            | Dry Air           | ± 0.02 %                 |
| 750P04              | 0 to 15 psi (0 to 1 bar)                   | 3X                           | Dry Air           | Dry Air           | ± 0.0175 %               |
| 750P24 <sup>4</sup> | 0 to 15 psi (0 to 1 bar)                   | 4X                           | 316 SS            | Dry Air           | ± 0.0175 %               |
| Gage                |  |                              |                   |                   |                          |
| 750P05 <sup>4</sup> | 0 to 30 psi (0 to 2 bar)                   | 4X                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P06 <sup>4</sup> | 0 to 100 psi (0 to 7 bar)                  | 4X                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P27 <sup>4</sup> | 0 to 300 psi (0 to 20 bar)                 | 4X                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P07              | 0 to 500 psi (0 to 35 bar)                 | 4X                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P08              | 0 to 1000 psi (0 to 70 bar)                | ЗХ                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P09 <sup>4</sup> | 0 to 1500 psi (0 to 100 bar)               | ЗХ                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P2000            | 0 to 2000 psi (0 to 140 bar)               | ЗХ                           | 316 SS            | N/A               | ± 0.0175 %               |
| High                |  |                              |                   |                   |                          |
| 750P29 <sup>4</sup> | 0 to 3000 psi (0 to 200 bar)               | ЗХ                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P30              | 0 to 5000 psi (0 to 340 bar)               | ЗХ                           | 316 SS            | N/A               | ± 0.0175 %               |
| 750P31              | 0 to 10000 psi (0 to 700 bar)              | 2X                           | 316 SS            | N/A               | ± 0.0175 %               |
| Absolute            |  |                              |                   |                   |                          |
| 750PA3              | 0 to 5 psia (0 to 350 mBar)                | 4X                           | 316 SS            | N/A               | ± 0.03 %                 |
| 750PA4 <sup>4</sup> | 0 to 15 psia (0 to 1 bar)                  | 4X                           | 316 SS            | N/A               | ± 0.03 %                 |
| 750PA5              | 0 to 30 psia (0 to 2 bar)                  | 4X                           | 316 SS            | N/A               | ± 0.03 %                 |
| 750PA6              | 0 to 100 psia (0 to 7 bar)                 | 4X                           | 316 SS            | N/A               | ± 0.03 %                 |
| 750PA27             | 0 to 300 psia (0 to 20 bar)                | 4X                           | 316 SS            | N/A               | ± 0.03 %                 |
| 750PA7              | 0 to 500 psia (0 to 35 bar)                | 4X                           | 316 SS            | N/A               | ± 0.03 %                 |
| 750PA8              | 0 to 1000 psia (0 to 70 bar)               | ЗХ                           | 316 SS            | N/A               | ± 0.03 %                 |
| 750PA9              | 0 to 1500 psia (0 to 100 bar)              | ЗХ                           | 316 SS            | N/A               | ± 0.03 %                 |
| Vacuum              |  |                              |                   |                   |                          |
| 750PV3              | -5 psi (-350 mBar)                         | 4X                           | 316 SS            | Dry Air           | ± 0.03%                  |
| 750PV4              | -15 psi (-1 bar)                           | 4X                           | 316 SS            | Dry Air           | ± 0.03 %                 |
| Dual                |  |                              |                   | ,                 |                          |
| 750PD2              | -1 to 1 psi (-70 to 70 mBar)               | 4X                           | 316 SS            | Dry Air           | ± 0.05%                  |
| 750PD3              | -5 to 5 psi (-350 to 350 mBar)             | 4X                           | 316 SS            | Dry Air           | ± 0.03%                  |
| 750PD10             | -10 to 10 psi (-700 to 700 mBar)           | 4X                           | 316 SS            | Dry Air           | ± 0.025%                 |
| 750PD4              | -15 to 15 psi (-1 to 1 bar)                | 4X                           | 316 SS            | Dry Air           | ± 0.0175%                |
| 750PD5              | -15 to 30 psi (-1 to 2 bar)                | 4X                           | 316 SS            | N/A               | ± 0.0175%                |
| 750PD50             | -15 to 50 psi (-1 to 3.5 bar)              | 4X                           | 316 SS            | N/A               | ± 0.0175%                |
| 750PD6              | -15 to 100 psi (-1 to 7 bar)               | 4X                           | 316 SS            | N/A               | ± 0.0175%                |
| 750PD7              | -15 to 200 psi (-1 to 14 bar)              | 4X                           | 316 SS            | N/A               | ± 0.0175%                |
| 750PD27             | -15 to 300 psi (-1 to 20 bar)              | 4X                           | 316 SS            | N/A               | ± 0.0175%                |

For a complete list of Fluke Pressure Modules, go to au.fluke.com/PCT

- 1. Total uncertainty, % of full span for temperature range 0 °C to +50 °C, one year interval. Total uncertainty, 1.0 % of full span for temperature range -10 °C to 0 °C, one year interval. No 6 month specification available for range -10 °C to 0 °C, one year interval.
- "NONCORROSIVE GASSES" indicates dry air or non-corrosive gas as compatible media. "Stainless Steel 316-SS" indicates media compatible with Type 316 Stainless Steel.
- 3. Specifications % of Full Span unless otherwise noted.
  4. Intrinsically Safe pressure module available in this pressure range

### **Specialty Model**

### Fluke 750PEx **Pressure Modules**

The Fluke 750PEx Pressure Modules extend the measurement capabilities of the Fluke

725Ex Multifunction Process Calibrator. Pressure readings can be displayed in any of 10 different pressure units specified in the calibrator setup.



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For more information, see page 135

### **Recommended Accessories**



700PTP-1 Pneumatic Test Pump See page 163



700HTP-2 Hydraulic Test Pump See page 163



700LTP-1 Low-Pressure Test Pump See page 163



**700HTH-1** Hydraulic Test Hose See page 163



**700PMP** See page 163



700PRV-1 Pressure Relief Valve Kit See page 163



Hose Kit See page 163



Contact your local distributor for price and availability. www.fluke.com/au/wtb

FLUKE

# Fluke Calibration 2700G Series **Reference Pressure Gauges**



The Fluke Calibration 2700G Reference Pressure Gauges provide best-in-class measurement performance in a rugged, easy-to-use, economical package. Improved measurement accuracy allows it to be used for a wide variety of applications. It is ideal for calibrating pressure measurement devices such as pressure gauges, transmitters, transducers, and switches. In addition, it can be used as a check standard or to provide process measurements with data logging.

- Precision pressure measurement from 100 kPa (15 psi) to 70 MPa (10,000 psi)
- Accuracy to 0.02 % of full scale
- Easy-to-use, rugged construction for reliable performance
- Combine with a Fluke PTP or HTP pump kit or P551X comparison test pump for a complete pressure testing solution
- One year warranty

# Fluke Calibration P5510 **Pneumatic Comparison Test Pump**



Fluke P5510



The P5510 Pneumatic Comparison Test Pump is designed for testing pressure measuring instruments against master test instruments. This cost effective instrument provides precise control for important calibration requirements and include many features found in our line of pneumatic deadweight testers. One year warranty.

Higher pressure ranges available:

Fluke P5513 Gas Comparison Test Pump Pressure range 0 to 20 MPa (3k psi); Vacuum -80 kPa (-12 psi)

Fluke P5514 Gas Comparison Test Pump Pressure range 0 to 70 MPa (10k psi)

Fluke P5515 Gas Comparison Test Pump Pressure range 0 to 140 MPa (20k psi)

### P5531 Dirt/Moisture Trap

Designed to mount directly on the deadweight tester and featuring an acrylic chamber for visibility of contaminates this unit utilises the standard test port adapters for easy instrument connections.



### P5532 Dirt/Moisture Trap

This high pressure version is provided with an aluminium central chamber for safety and utlises the standard test port adapters.



### **Complete Bench Top Pressure Calibration Solution**



**Combine P5500 Comparison Test Pumps** with one or more 2700G Reference Pressure Gauges for a complete 0.02% accuracy calibration system

The 2700G has an easy-to-use interface that allows you to configure the sampling rate, tare value, damping and auto off time interval as well as reset the min/max pressure.

The unique test port design of the P5500 Series allows for hand tight connection of the 2700G without the use of PTFE tape.

- P5510: integrated pneumatic hand pump with pressure generation to 300 psi (2 MPa), vacuum to -12 psi (-80 kPa)
- P5513: pneumatic pressure adjustment to 3,000 psi (21 MPa) with fine adjust inlet and outlet valves and precise screw press
- P5514: hydraulic pressure generation and adjustment to 10 k psi (70 MPa) with fine screw press and reservoir
- P5515: integrated hydraulic pressure generation and adjustment to 20 k psi (140 MPa) with high volume priming pump and fine screw press

### **Included Accessories**

Fluke 2700G Gauges: 1/4 NPT Female to 1/4 BSP Male Adapter, 1/4 NPT Female to M20X1.5 Adapter, Universal AC Power Supply, USB Communication Cable, Manual on CD, Calibration Certificate showing traceability. Optional: ISO 17025 Accredited

Calibration available for 2700G and P551X/2700G models (add "/C" to the below model number).

### **Ordering Information**

2700G-BG100K Reference Pressure Gauge, -15 to 15 PSI

2700G-BG200K Reference Pressure Gauge, -15 to 30 PSI

2700G-BG700K Reference Pressure Gauge, -12 to 100 PSI

Reference Pressure 2700G-BG2M

Gauge, -12 to 300 PSI 2700G-BG3.5M Reference Pressure

Gauge, -12 to 500 PSI

2700G-BG7M Reference Pressure Gauge, -12 to 1000 PSI

2700G-G20M Reference Pressure Gauge, 0 to 3,000 PSI

2700G-G35M Reference Pressure Gauge, 0 to 5,000 PSI

2700G-G70M Reference Pressure Gauge, 0 to 10,000 PSI

Pneumatic Comparison P5510-2M Test Pump

P5513-20M Pneumatic Comparison Test Pump

Hydraulic Comparison P5514-70M\* Test Pump, Viton Seals 0-10 000 PSI (70 MPa)

P5515-140M\* Hydraulic Comparison

Test Pump, Viton Seals 0 to 20 000 PSI (140 MPa)

Ethylene Propylene Seals option also available, add -EP to the above model.

P5510-2700G-1 P5510 Pneumatic Calibrator, 2 MPA (300 PSI), 1 Gauge

**P5513-2700G-1** P5513 Pneumatic Calibrator, 20 MPA (3000 PSI), 1 Gauge

P5514-2700G-1 P5514 Pneumatic Calibrator, 70 MPA

(10,000 PSI), 1 Gauge P5515-2700G-1 P5515 Pneumatic

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Calibrator, 70 MPA (10,000 PSI), 1 Gauge

P551X-2700G Kits available with 3 gauge option, add -3 to the above model numbers.

P5531 Dirt/Moisture Trap 0 to 500 PSI (35 bar)

P5532 Dirt/Moisture Trap 0 to 3.000 PSI (210 bar)

# Fluke Calibration P3000 **Deadweight Testers**



Fluke P3000



The P3000 Series is the culmination of over 50 years of experience in the production and design of high performance pressure standards.

With features designed to improve accuracy and performance, increase reliability and simplify operation these deadweight testers can be used to calibrate virtually any pressure sensing device, including transducers, transmitters, gauges or pressure switches. All units provided with accredited calibration. One year warranty.

### P3000 Pneumatic Deadweight Tester

High performance gas deadweight testers with unique suspended piston design for vacuum calibration.

- 0.015% of reading accuracy standard (0.008% optional)
- 3 to 500 psi (0.2 to 35 bar) pressure
- Optional low range 0.03 to 1 bar vacuum (1 to 30 inHg)
- Integrated vacuum and pressure pump available to 2 MPa (300 psi)

### P3100 Hydraulic Deadweight Tester

Highly accurate oil deadweight tester with quick and easy-to use single and dual piston deadweight models

- Pressure ranges to 140MPa (20 k psi, 1400 bar)
- 0.015% of reading accuracy standard (0.008% optional)
- Built in pressure generation and adjustment
- Single or dual piston formats

### **P3200 Hydraulic Deadweight Tester**

Hydraulic deadweight tester specially designed to use water as a test medium.

- Pressure ranges to 70MPa (10 k psi, 700 bar)
- 0.015% of reading accuracy standard (0.008% optional)
- Built in pressure generation and adjustment is standard
- Single or dual piston formats
- Water media

### Accuracy\*

 $\pm 0.015\%$  of reading ( $\pm 0.008\%$  optional)

\*Accuracy based on % of reading from 10% to 100% of the piston range when used in accordance with the corrections found on the calibration certificate. Below 10% ± (accuracy class) x 10% of the piston range

| Mass and PCU Materials of Construction              |   |  |  |  |
|---|---|--|--|--|
| Standard weight material                            | Series 3 non-magnetic austenitic stainless steel                    |  |  |  |
| Weight density                                      | 7.8 g/cm <sup>3</sup>   |  |  |  |
| Optional fractional weights                         | Solution heat treated aluminum                                      |  |  |  |
| Weight density                                      | 2.7 g/cm <sup>3</sup>   |  |  |  |
| Models P3011, P3012, P3013, P3022, P3023, P3025 (V) | Piston Material:<br>Cylinder Material:<br>Coefficient of Expansion: | Ceramic<br>Martensitic steel<br>11 ppm/°C            |  |  |
| Models P3014, P3015, P3025 (P) P3031, P3032 (P & V) | Piston Material:<br>Cylinder Material:<br>Coefficient of Expansion: | Tungsten carbide<br>Martensitic steel<br>16.5 ppm/°C |  |  |

### **PressCal Software**

PressCal software provides a quick and effective solution to enhance the pressure measurement uncertainty of Deadweight Testers. PressCal features an easy-to-use user Interface that allows you to enter all the necessary corrections and parameters to accurately determine the pressure generated by the DWT.



PressCal also provides:

- Automatic certificate generation
- · Real-time auditing
- Customer details management
- Choice of 12 pressure units

### **Recommended Accessories**





5540 Metric & 5541 BSP **Adapter Sets** 

P5543 Angle Adapter

### **Included Accessories**

ISO 17025 Accredited Calibration Certificate, Operating Fluid (where applicable), Spare Seals, Adaptors for 1/8, ¼, 3/8, ½ NPT and BSP, and Metric Adaptors (M20 and M14)

### **Ordering Information**

-P indicates built-in pump optional.

P3011-KPA-P\* Vacuum Deadweight Tester (-100 KPA)

P3011-INHG-P\* Vacuum Deadweight

Tester (-30 INHG)

Vacuum Deadweight P3011-MBAR-P\* Tester (-1000 MBAR)

P3011-MMHG-P\* Vacuum Deadweight Tester (-760 MMHG)

P3012-KPA-P Gas Deadweight Tester, 100 KPA, with Pump

Gas Deadweight Tester, 1000 MBAR, with Pump P3012-MBAR-P

Gas Deadweight Tester, 400 INH20, P3012-INH20-P with Pump

P3013-KPA-P Gas Deadweight

Tester, 200 KPA, with Pump Gas Deadweight P3013-MBAR-P

Tester, 2000 MBAR, with Pump

Gas Deadweight P3013-INH20-P Tester, 800 INH20, with Pump

P3014-KGCM2-P Gas Deadweight Tester, 10 KGF/CM2,

Gas Deadweight P3014-PSI-P

Tester, 150 PSI. with Pump

with Pump

P3014-KPA-P Gas Deadweight Tester, 1000 KPA, with Pump

Gas Deadweight Tester, 1 MPA,

with Pump

P3014-MPA-P

Gas Deadweight P3015-BAR-P\* Tester, 35 BAR

P3015-KGCM2-P\* Gas Deadweight Tester, 35 KGF/CM2

P3015-PSI-P\* Gas Deadweight

Tester, 500 PSI Gas Deadweight P3015-KPA-P\* Tester, 3500 KPA

P3015-MPA-P Gas Deadweight Tester, 3.5 MPA

# FLUKE

### Calibration

# Fluke Calibration 700HPPK Pneumatic Test Pump Kit



Fluke 700HPPK





### Generated 21 MPa (3000 psi) easily in the field, without liquid contamination or the hazard of a pressurised gas cylinder.

The Fluke Calibration 700HPPK Pneumatic Test Pump Kit generates and adjusts pneumatic pressures up to 21 MPa (3000 psi), without requiring a nitrogen bottle or other external pressure supply. It supplies pressure to devices under test (DUTs) that include transmitters, controllers, pilots, digital and analog gauges, and more. It's the perfect solution for generating high pressure in the field, where conditions and operating surfaces can vary.

The 700HPPK is the ideal choice for calibration technicians, test engineers, and instrument technicians working in industries like natural gas transmission and distribution, process, aerospace and defense, who need a simple-to-use, safe and portable pressure source that they can depend on in a wide variety of conditions.

The 700HPPK contains both a calibration manifold and high pressure pump to generate and finely adjust pressures. A second model, the 700HPP, is available for people who only prefer a high pressure source. Use the 700HPPK Test Pump Kits with 2700G Reference Pressure Gauges or 700G Precision Pressure Gauges for a complete pressure calibration solution.

- Generate and adjust pneumatic pressures up to 21 MPa (3000 psi)
- Rugged, portable and stable enough to go anywhere on any surface
- Reaches pressure in 20 seconds to full scale into a 30 cm<sup>3</sup> volume
- Detachable pressure adjustment system for adjusting pressure, connecting reference and test devices on bench and in the field, and isolating and venting pressure
- Easily switch out reference gauges without requiring PTFE tape or tools
- 2 metre pressure line and assorted pressure fittings enable a wide variety of possible connections
- In-line filter and desiccant systems protect device from contamination from the DUT
- One year warranty

| General specifications                                     | 700НРР                 | 700НРРК           |  |
|--|------------------------|-------------------|--|
| Maximum working pressure                                   | 21 MPa, 3000 psi       |                   |  |
| Time to generate full scale pressure with 10 cc volume (g) | 20                     |                   |  |
| Weight   | 5.5 kg                 | 7.2 kg            |  |
| Dimensions   | 66 x 25 x 13 cm        | 66 x 30.5 x 13 cm |  |
| Reference gauge connection                                 | 1/4 NPT, quick connect |                   |  |
| Inlet supply contaminations protection filter              | Desiccant filter       |                   |  |
| DUT contamination protection filter                        | -                      | 100 micron        |  |
| Fine adjustment resolution                                 | -                      | 0.05 % reading    |  |
| Maximum leak rate  | -                      | 0.01 % reading    |  |



### **Included Accessories**

Fluke Calibration 700HPPK: Canvas Carrying Bag, High Pressure Pneumatic Quick Service Kit (seals for pump), Dry Pac Refill, Silicone Grease, High Pressure Hose, Test Port Adapters

### **Ordering Information**

700HPPK-NPT High Pressure

Pneumatic Pump/ Comparator, 21 MPA (3000 psi)

**700HPP-NPT** High Pressure

Pneumatic Test Pump, 21 MPA (3000 psi),

NPT

700HPPK-BSP High Pressure

Pneumatic Test Pump/ Comparator, 21 MPA (3000 psi), BCP

700HPP-BSP High Pressure

Pneumatic Test Pump, 21 MPA (3000 psi),

DQD

**700HPPK-MET** High Pressure

Pneumatic Pump/ Comparator, 21MPA (3000 psi), Metric

700HPP-MET

High Pressure Pneumatic Test Pump, 21MPA (300 psi), Metric

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For more information, go to http://au.flukecal.com

# Fluke Calibration 3130 Portable **Pressure Calibrator**



Fluke P3130



The Fluke 3130 Portable Pneumatic Pressure Calibrator is ideal for calibrating pressure transmitters, transducers, gauges and similar devices. The Fluke 3130 contains everything you need to generate, control and measure pressure, as well as read the output of the device under test.

- Measure and generate pressures from vacuum to 2 MPa (300 psi, 20 bar)
- Internal pump can generate vacuum to -80 kPa (-12 psi, -0.8 bar) or pressure to 2 MPa (300 psi, 20 bar)
- Supply pressure connection allowing the use of external gas supply up to 2 MPa (300 psi, 20 bar)
- Measure or generate 4-20 mA
- Measure 0 to 30 V DC
- Compatible with Fluke 750P Pressure Modules
- Variable volume for fine adjustment of pressures
- Pressure measurement accuracy of  $\pm$  (0.025% reading + 0.01% FS)
- Electrical measurement and 24 volt supply for close looped calibrations
- One year warranty

| Environmental                        |  |  |
|--------------------------------------|--|--|
| Temperature                          | Operating: -10 °C to +50 °C; Storage: -20 °C to +60 °C |  |
| Physical                             |  |  |
| Size in cm (LxWxD) and Weight        | 38.7 x 30.5 x 17.8, 7.7 kg                             |  |
| EMI/RFI Conformance                  | EN61326:2006 Annex A                                   |  |
| Connectors/Ports                     | 1/8 in NPT (External supply port and test port)        |  |
| Ranges                               |  |  |
| Pressure (internal pump)             | -80 kPa to 2 MPa (-12 to 300 psi, -0.8 to 20 bar)      |  |
| Pressure (external air)              | 0 to 2 MPa (0 to 300 psi, 0 to 20 bar)                 |  |
| mA                                   | 0 to 24.000 mA   |  |
| Volts                                | 0 to 30.000 V DC                                       |  |
| Instrumental Measurement Uncertainty |  |  |
| Pressure                             | 0.025 % of reading ± 0.01 % FS                         |  |
| mA                                   | 0.015 % of reading ± 0.002 mA                          |  |
| Volts                                | 0.015 % of reading ± 0.002 V                           |  |

# Fluke Calibration 2271A **Industrial Pressure Calibrator**



Fluke 2271A



### Everything you need to calibrate and test pressure transmitter gauges, all in one box

The Fluke Calibration 2271A Industrial Pressure Calibrator provides a complete, automated pressure testing solution for calibrating a wide variety of pressure gauges and sensors. Its modular design, allows it to be configured to meet different needs and budgets and expanded to cover a broad workload.

- · Calibrate a wide range of gauges and sensors with a single instrument
- Wide measurement range from -100 kPa to 20 MPa (-15 to 3000 psi)
- Removable pressure measurement modules make it easy to change or add measurement ranges
- Integrated electrical measurement module with HART communication provides a complete solution for calibrating pressure transmitters
- Built-in dual test ports enable you to connect multiple devices under test (DUTs)
- 0.02 % FS pressure measurement uncertainty
- · One year warranty

### **Recommended Accessories**

### **Fluke 3130**







CPS-2270-20M-P3K Contamination Preventior System, P3000 Test Port Connection

### Fluke 2271A



CASE-2271



CPS-2270-20M-P3K Contamination Prevention System, P3000 Test Port Connection

Imaae

PK-2271-NPT-HC20/P3K

Lines and Fittings Kit, 2271A NPT-HC2O/P3PK



Not Available

CPS-2270-20M-HC20 Contamination Prevention System 20 MPa, HC20 Test Port

Connection

Image Not Available

PK-2271-BSP-HC20/P3K Lines and Fittings Kit, 2271A-BSP-HC20/P3K

Image Not Available

PMM-CAL-KIT-20M Module Calibration Kit

### **Included Accessories**

Fluke Calibration 3130: Ruggedised Case, Rechargeable, NiMH Battery, Test Leads, Operating Manual.

Fluke Calibration 2271A: Mains Power Cord, Pressure Measurement Module, Electrical Measurement Module, Safety Information, Manual (CD), Test Port Adapters

### **Ordering Information**

Portable Gas 3130-G2M Pressure Calibrator Portable Gas 3130-G2M/C Pressure Calibrator with Accredited Calibration 2271A-NPT Industrial Pressure -HC20 Calibrator Chassis, NPT Manifold, HC20 **Test Port Connections** 

2271A-NPT -P3K

Industrial Pressure Calibrator Chassis, NPT Manifold, P3000 **Test Port Connections** 

2271A-BSP -HC20

**Industrial Pressure** Calibrator Chassis, BSP Manifold, HC20 Test Port Connections

For more information, go to http://au.flukecal.com



# Fluke 805 FC Vibration Meter

### Forget the pens, think meter





Fluke 805 FC



The Fluke 805 FC is not a vibration pen; it's a meter. A Fluke meter that eliminates the confusion of vibration screening and provides reliable measurements you can trust to make critical go or no-go maintenance decisions. With the Fluke 805 FC, you can identify the strength and severity of vibration and easily track the data over time to monitor an asset's condition.

- Innovative sensor design minimises measurement variations caused by device angle or contact pressure
- Consistent data quality at both low and high frequency ranges
- Four-level severity scale assesses urgency of problems for overall vibration and bearing condition
- Exportable data via USB
- Trending in Microsoft® Excel using pre-built templates
- Overall vibration measurement (10 Hz to 1,000 Hz) for acceleration, velocity and displacement units of measurement for a wide variety of machines
- Crest Factor+ technology provides reliable bearing assessment using direct sensor tip measurements between 4,000 Hz and 20,000 Hz
- Compare vibration levels with ISO-10816 severity scales and store results to the Fluke Connect Cloud
- Get authorisation to take next steps in an instant if machine health is at risk via Fluke Connect™ Share-Live™ video call
- Coloured lighting system (green, red) and on-screen comments indicate how much pressure needs to be applied to take measurements
- Temperature measurement with Spot Infrared Sensor increases diagnostic capabilities
- On-board memory holds and saves up to 3,500 measurements
- Flashlight for viewing measurement locations in dark areas
- One year warranty

| Low frequency range (overall measurement) | 10 Hz to 1,000 Hz  |
|---|--|
| High frequency range (CF+ measurement)    | 4,000 Hz to 20,000 Hz  |
| Severity levels                           | Good, Satisfactory, Unsatisfactory, Unacceptable   |
| Vibration limit                           | 50 g peak (100 g peak-peak)  |
| A/D converter                             | 16-bit   |
| Signal to noise ratio                     | 80 dB  |
| Sampling rate                             | Low frequency: 20,000 Hz;<br>high frequency: 80,000 Hz   |
| Real time clock backup                    | Coin battery   |
| Sensitivity                               | 100 mV / g ± 10%   |
| Measurement range                         | 0.01 g to 50 g   |
| Low frequency range (overall measurement) | 10 Hz to 1,000 Hz  |
| High frequency range (CF+ measurement)    | 4,000 Hz to 20,000 Hz  |
| Resolution                                | 0.01 g   |
| Accuracy                                  | At 100 Hz ± 5 % of measured value  |
| Acceleration                              | g, m/sec <sup>2</sup>  |
| Velocity                                  | in/sec, mm/sec   |
| Displacement                              | mils, mm   |
| Range                                     | -20 °C to 200 °C   |
| Accuracy                                  | ±2 °C  |
| Focal length                              | Fixed, at ~3.8 cm  |
| Frequency range                           | 10 Hz to 1,000 Hz  |
| Bias voltage (to supply power)            | 20 V DC to 22 V DC   |
| Bias Current (to supply power)            | Maximum 5 mA   |
| External interfaces                       | USB 2.0 (full speed) communication   |
| Data capacity                             | Database on internal flash memory  |
| Memory                                    | Up to 3,500 measurements   |
| IP rating                                 | IP54   |
| Drop test                                 | 1 metre  |
| Battery type                              | AA (2) Alkaline or Lithium-ion 2 V DC  |
| Battery life                              | 250 measurements   |
| Size (LxWxH) and Weight                   | 25.72 cm x 16.19 cm x 9.84 cm, 1.16 kg   |
| Connectors                                | USB mini-B 7-pin, stereo audio output jack<br>(3.5 mm Audio Plug), external sensor jack<br>(SMB connector)   |
|   | (overall measurement) High frequency range (CF+ measurement) Severity levels Vibration limit A/D converter Signal to noise ratio Sampling rate  Real time clock backup Sensitivity Measurement range Low frequency range (overall measurement) High frequency range (CF+ measurement) Resolution Accuracy Acceleration Velocity Displacement Range Accuracy Focal length Frequency range Bias voltage (to supply power) External interfaces Data capacity Memory IP rating Drop test Battery type Battery life Size (LxWxH) and Weight |

### **Recommended Accessories**



Fluke 805ES
External Assembly
Vibration Sensor
See page 164

### What is Crest Factor+?

Crest Factor (CF) is used to identify bearing faults and is the ratio of the peak value/RMS value of a time domain vibration signal. A key limitation of using Crest Factor is that it does not increase linearly as the bearing degrades. In fact, it can actually decrease as a bearing nears failure due to large RMS values.

To overcome this limitation, Fluke uses a proprietary algorithm known as Crest Factor + (CF+). CF+ values range from 1 to 16. As the bearing condition worsens, the CF+ value increases. Fluke has also included a four-level severity scale that identifies the bearing health as Good, Satisfactory, Unsatisfactory or Unacceptable.



### **Exporting and trending in Excel**

Import measurements from the 805 FC to Excel on your PC in order to trend the bearing parameters: overall vibration, CF+, and temperature. The user can now see a clear picture of the changing bearing condition and deteriorating health of the machine.



Sample trend plot using the Fluke  $805\ FC$  trending template.

### **Included Accessories**

USB Cable, Storage Case, Belt Holster, Quick Reference Guide, CD-ROM (includes MS Excel Template and Documentation) and two AA Batteries.

### **Ordering Information**

FLUKE-805FC

Fluke Connect® Vibration Meter

**FLUKE 805ES** 

External Vibration Sensor for 805 Vibration Meter

Contact your local distributor for price and availability. www.fluke.com/au/wtb

# Fluke 810 Vibration Tester

Take a vibration expert along



Fluke 810



### **Get answers now!**

The Fluke 810 Vibration Tester is the most advanced troubleshooting tool for mechanical maintenance teams who need an answer now. It is a unique new kind of troubleshooting tool, engineered to detect and evaluate the most common mechanical problems.

The Fluke 810 Vibration Tester uses a simple step-by-step process to report on machine faults the first time measurements are taken, without prior machine history.

- · Easily determine the root cause, location and severity of common mechanical faults
- Efficiently prioritise and plan equipment repair or replacement
- · Effectively deploy maintenance resources at the point of greatest impact
- Three year warranty

### **Simple 3 Step Process**

The Fluke 810 helps you locate and diagnose common mechanical problems and prioritise repair actions in three simple steps:



1. Setup: Vibration testing has never been easier. The Fluke 810 asks for basic machine information you already know, like RPM and horsepower. Its onboard info feature gives you field tips for setting up and taking measurements like a professional.



2. Measure: The Fluke 810 easily fits into your maintenance routine. Use it to quickly troubleshoot problems or monitor machine condition.



3. Diagnose: Fix it right the first time with the press of a button, the Fluke 810 identifies the root cause, its location, and the problem's severity.

### **Recommended Accessories**





Non-Contact Precision Laser Tachometer See Page 164



8100DC Ouick Disconnect Cable



Vibration Sensor

See Page 164







Sensor Magnetic Mount See Page 164

Sensor Mounting Pads (Pack of 10) See Page 164

### **Viewer PC Software**

- · Store and track your data
- Generate diagnostic reports and track the severity of your machine's condition
- Import and store JPEG images



### Interactive, self-paced training on DVD

Learn more about the basics of vibration and how to fully utilise the features and functionality of the Fluke 810. Fluke has partnered with Mobius Institute, an industry leader in vibration training, to develop an interactive training DVD included with each Fluke 810.

### **Diagnostic specifications** Analysis for Motors, fans, blowers, belts and chain drives, gearboxes, couplings, centrifugal pumps, piston pumps, sliding vane pumps, propeller pumps, screw pumps, rotary thread/gear/lobe pumps, piston compressors, centrifugal compressors, screw compressors, closed coupled machines, Standard faults Unbalance, looseness, misalignment and bearing failures Motor rotational speed range 200 rpm to 12000 rpm Diagnosis details Plain-text diagnosis, fault severity (slight, moderate, serious, extreme), repair details, cited peaks, spectra **Tester specifications** IP 54 IP rating 4 channel, 24 bit A/D converter Dynamic range 128 dB FFT resolution Battery Lithium-ion, rechargeable, 8 hours operating life Onboard storage capacity 2 GB internal + user accessible slot for additional storage **Sensor specifications** Sensor type Tri-axial accelerometer , 100 mV/g (± 5 %, 25 °C) **Tachometer specifications** Tachometer type Laser Diode Class 2

### **Included Accessories**

Tri-axial TEDS Accelerometer, Accelerometer Magnet Mount, **Accelerometer Mounting Pad Kit** with Adhesive, Accelerometer Quick Disconnect Cable, Laser Tachometer and Storage Pouch, Smart Battery Pack with Cable and Adapters, Shoulder Strap, Adjustable Hand Strap, Viewer PC Application Software, Mini-USB to USB Cable, Getting Started Guide, Illustrated Quick Reference Guide, User Manual CD, Instructional Training DVD, Hard Carrying Case.

### **Ordering Information**

FLUKE-810 Vibration Tester

Contact your local distributor for price and availability. www.fluke.com/au/wtb

# Fluke 820-2 LED Stroboscope



Fluke 820-2



### Rugged, easy-to-use, high intensity LED Stroboscope for stop motion diagnostics

The Fluke 820-2 LED Stroboscope is a simple, easy to use tool to stop motion for measurement and diagnostic purposes.

Investigate and observe potential mechanism failure with confidence on a variety of machinery, in a wide range of industries, without making physical contact with the machine. The Fluke 820-2 LED Stroboscope is a rugged, compact, portable strobe with high intensity LED head, ideal for stop motion diagnostics, mechanical troubleshooting, and process or product research and development.

- High intensity 7-LED array—4,800 Lux @ 6,000 FPM/30cm High efficiency LED solid-state light source with uniform flash characteristics allow for higher flash rates-30-300,000 FPM (flashes per minute)
- Digital pulse width modulation for exceptionally sharp images at high speeds
- Rugged, durable design utilises solid-state LEDs with no filaments, gases, hollow cavities, or glass
- Quartz-accuracy control system provides high accuracy-0.02% (± 1 digit)
- Multi-line LCD display
- Check the rotating speed of machinery without physical contact or need for reflective tape
- Advance or retard flash timing for viewing gear teeth, cutting surfaces, repeats, or "drifting" equipment.
- Simple push button operation with 2x and +2 buttons for easy adjustment
- Two year warranty

| Specifications    | 820-2  |
|-------------------|--|
| Range             | 30 to 300,000 FPM<br>0.5 to 5000 Hz  |
| Accuracy          | 0.02 %   |
| Resolution        | 30 to 999 FPM = 0.1<br>1000 to 300,000 = 1<br>0.5 Hz to 999 Hz = 0.1<br>1000 Hz to 5000 Hz = 1 |
| Frequency setting | FPM or Hz  |
| Light             |  |
| Colour            | Approx 6500 K  |
| Emission output   | 4,800 lx @ 6000 FPM at 30 cm   |
| Method            |  |
| External trigger  | Connector to externally control trigger  |
| High level        | 3 V to 32 V  |
| Low level         | <1 V   |



### Fluke RLD2 UV Refrigerant **Leak Detector Flashlight**

Leak detection made easy. The compact, easy-to-use, RLD2 UV flashlight uncovers refrigerant leaks instantly. Use the UV light to find the leakage area, then, use the laser pointer to pinpoint the exact leak location. With 100,000 hours of life, and four operating modes, this versatile leak detector is a must have for HVAC technicians.

- Six UV LEDs (395 nm wavelength) detect leak detection dyes
- Laser pointer clearly locates centre of the UV field for accuracy
- Three LED flashlight with 100,000 hour LED life
- Four operating modes: flashlight, UV light, laser light, UV/laser light combination
- Convenient detachable key chain carabiner and AAA battery included

### Use the 820-2 LED Stroboscope for:

- Turbines that vary in speed and change speed frequently
- Variable frequency drive motors that vary in speed, but do not change frequently
- Find belt rotation speed and look for belt slippage
- Find machine element components – fan blades, pump vanes, compressor screws and gear teeth
- RPM measurement and requency investigation
- Slip measurement



### **Included Accessories**

External Trigger Input Connector, Hard Carrying Case, Quick Reference Guide, Statement of Quality and three AA Batteries.

### **Ordering Information**

FLK-820-2 LED Stroboscope RLD2 Leak Detector

Contact your local distributor for price and availability. www.fluke.com/au/wtb

# Fluke 830 Laser Shaft Alignment Tool



Fluke 830



# The ideal test tool to precision-align rotating shafts in your facility.

The Fluke 830 Laser Shaft Alignment tool is easy-to-use, giving you fast, accurate and actionable answers that will keep your plant up and running. When it comes to laser shaft alignment, data is good but answers are better.

Unlike using the straightedge method or dial indicators the Fluke 830 performs the complicated alignment calculations for you, meaning you'll have the answers you need to quickly align your machine and get your plant up and running fast.

An enhanced user interface provides easy to understand results that don't require extensive alignment knowledge and the unique "All-in-One" result screen that shows you both coupling results and feet corrections (vertical and horizontal) in real terms making it easy to take corrective action. Since machine downtime is costly, test repeatability is critical.

- Single laser measurement technology means reduced errors from backlash resulting in better data accuracy
- Intuitive guided user interface quickly and easily complete machine alignments
- Compass measurement mode enables flexible, reliable and repeatable measurements using an activated electronic inclinometer
- Dynamic machine tolerance check provides continuous evaluation of alignment adjustments so you know when your machine in acceptable range
- Unique extend mode handles gross misalignment by virtually increasing laser detector size
- Data protection ensures your data is there when you need it with auto save and resume capability
- · Two year warranty

| Computer                 |   |  |  |
|--------------------------|---|--|--|
| CPU                      | Intel XScale PXA270 running at 312 MHz  |  |  |
| Memory                   | 64 MB RAM, 64 MB flash  |  |  |
| Display                  | Type: TFT, transmissive (sunlight-readable), 65,535 colours, backlit LED Integrated light sensor for automated adjustment of the brightness to the display according to the lighting conditions which extends battery life Resolution: 320 x 240 pixel; Dimensions: 89 mm diagonal Keyboard elements: Setup, measure, diagnose, menu, clear, enter, back keys, navigation cursor cross, alphanumeric keyboard and on/off button |  |  |
| LED indicators           | Multicolour LED for laser status and alignment condition  |  |  |
| External interface       | USB host and USB device (slave)<br>Integrated wireless communication, transmitting power 100 mW<br>RS232 (serial) for sensor<br>AC adapter/charger socket   |  |  |
| Environmental protection | IP 65 (dustproof and water spray resistant), shockproof Relative humidity 10 % to 90 %  |  |  |
| Temperature              | Operating temp: -10 °C to 50 °C, Storage temp: -20 °C to 60 °C  |  |  |
| Dimensions and Weight    | 220 mm x 165 mm x 45 mm, 742 g  |  |  |
| Sensor                   |   |  |  |
| Measurement principle    | Coaxial, reflected laser beam   |  |  |
| Environmental protection | IP 67 (submersible, dustproof)  |  |  |
| Ambient light protection | Yes   |  |  |
| Temperature              | Storage: -20 °C to 80 °C, Operating: 0 °C to 55 °C  |  |  |
| Dimensions               | 107 mm x 70 mm x 49 mm  |  |  |
| Weight                   | 177 g   |  |  |
| Laser                    | Type: Ga-Al-As semiconductor laser Wavelength (typical) 675 nm (red, visible) Safety class: Class 2, FDA 21 CFR 1000 and 1040 Beam power: < 1 mW Safety precautions: Do not look into laser beam  |  |  |

### **Recommended Accessories**



### FLUKE-830/MAGNET

Compact magnetic sensor prism mounting bracket See Page 164

### **Recommended Kits**

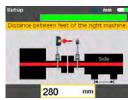
Buy more, Save more



### Fluke 830/SHIMS Precision Alignment Kit

For more details see page 164

# **Evaluate Alignment in** 3 Simple Steps



1. Set-up



2. Measure

| Diagnose<br>Current measurement | Adjustment   |
|---------------------------------|--------------|
| Vertical                        | 5/8          |
| Gap -0.01                       | The state of |
| Offset -0.16                    | +0.10 +0.04  |
| Horizontal                      | 100          |
| Gap -0.00                       | - 1          |
| Offset +0.07                    | -0.09 -0.11  |

3. Diagnose

### **Included Accessories**

Laser Sensor, Laser Prism, Chaintype Mounting Bracket with 150 mm Support Posts (2x), 300 mm Support Post (4x), Micro-fiber Cleaning Cloth, Sensor Cable, PC Cable, USB Drive, USB Cable, Tape Measure, Wireless Bluetooth Module, Power Adapter, Instruction Kit and Carrying Case.

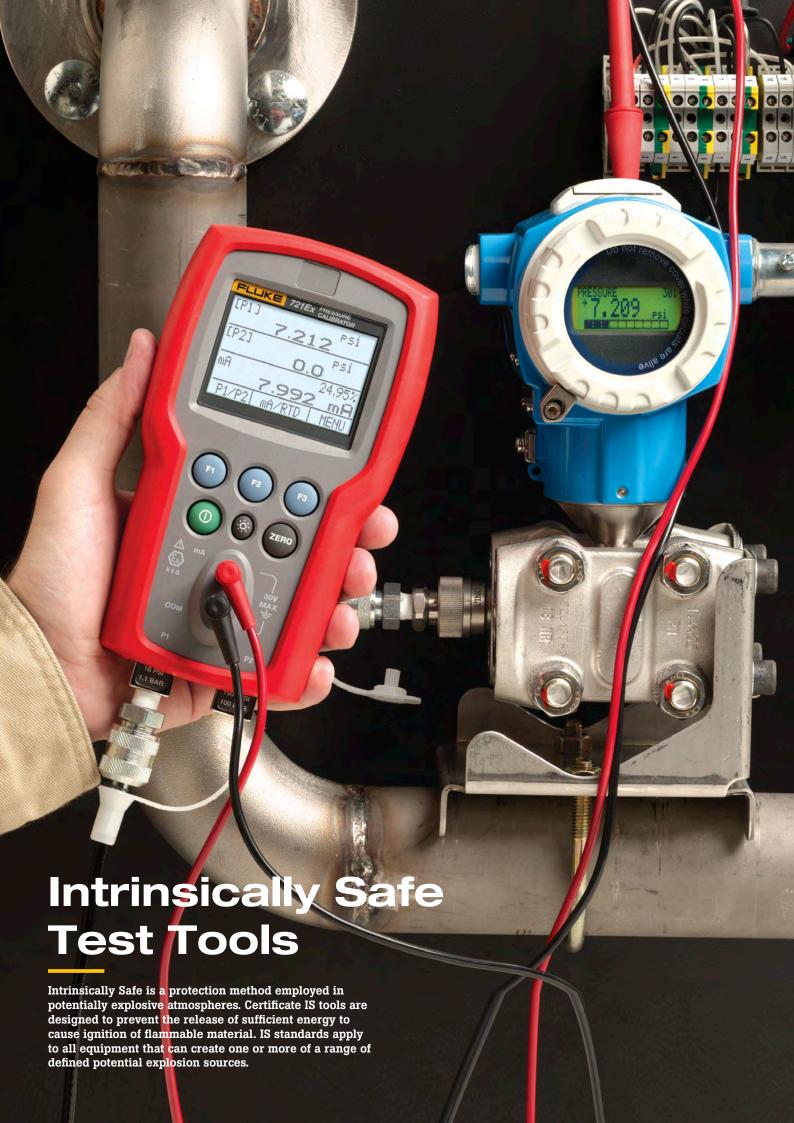
### **Ordering Information**

FLK-830 Laser Shaft Alignment Tool

FLUKE-830 Laser Alignment /SHIMS Tool Kit

Contact your local distributor for price and availability.

www.fluke.com/au/wtb



# **Intrinsically Safe Test Tools**

### for Hazardous Areas

Intrinsically Safe is a protection method employed in potentially explosive atmospheres. Certificate IS tools are designed to prevent the release of sufficient energy to cause ignition of flammable material. IS standards apply to all equipment that can create one or more of a range of defined potential explosion sources.



**ATEX** – The primary intrinsically safe standard, which has been set in the European Union with the Directive 94/9/EC, commonly called ATEX (ATmosphères EXplosibles).

| Fluke Pro | ducts  | ATEX         | certified                                | Certification   |
|-----------|--|--------------|--|---|
|           | 28 II Ex Intrinsically Safe                                    | <i>(</i>     | II 2G Ex ia IIC T4 Gb                    | Class I, Div 1, Groups A,B,C,D T4   |
|           | True-rms Multimeter  ANZEX 12.2008x Ex ia I Ma                 |              | I M1 Ex ia I Ma                          | Class I, Zone I, AEx ia IIC T4 Ex ia IIC T4 IP67  |
| PRISE :   | 707Ex Intrinsically Safe<br>mA Calibrator                      | <b>€</b>     | II 2G Ex ia IIC T4                       | N.I. Class I, Div 2, Groups A,B,C,D   |
| 9 10      | 718Ex Intrinsically Safe<br>Pressure Calibrator                | <b>&amp;</b> | II 1G Ex ia IIC T4                       | I.S. Class I, Div 1, Groups A,B,C,D T4  |
|           | 721Ex Intrinsically Safe<br>Precision Pressure<br>Calibrator   | <b>€</b>     | II 2G Ex ia IIB T3 Gb                    | IECEx: Ex ia IIB T3 Gb  |
|           | 750PEx Intrinsically Safe<br>Pressure Modules                  | <b>€</b>     | II 1G Ex ia IIC T4 Ga                    | IECEx: Ex ia llC T4 Ga  |
|           | 568Ex Intrinsically Safe<br>Infrared Thermometer               | <b>€</b>     | II 2G Ex ia IIC T4 Gb                    | Class I, Div 1, Groups A,B,C,D, T4<br>Class I, Div 2, Groups A,B,C,D, T4<br>Class I, Zone 1, AEx ia IIC T4 Gb |
|           | 700G Series Intrinsically<br>Safe Pressure Gauges              | <b>€</b>     | II 3G Ex ic IIB T6 Gc                    | CSA Class I, Div. 2 Groups A,B,C,D  |
|           | 1551A Ex/1552A Ex<br>Intrinsically Safe<br>"Stik" Thermometers | <b>€</b>     | II 2G Ex ib IIB T4 Gb                    |   |
|           | Fluke FL-45 Ex Intrinsically<br>Safe Flashlight                | <b>€</b>     | II 1G Ex ia IIC T5 Ga<br>I M1 Ex ia I Ma | Class I Div 1 and 2 Group A,B,C,D<br>Class II Div 1 and 2 Group E,F,G<br>Class III T5<br>IP67                 |
|           | Fluke FL-120 Ex Intrinsically<br>Safe Flashlight               | <b>€</b> ≥   | II 1G Ex ia IIC T4 Ga<br>I M1 Ex ia I Ma | Class I Div 1 and 2 Group A,B,C,D<br>Class II Div 1 and 2 Group E,F,G<br>Class III T4<br>IP6X                 |
|           | Fluke FL-150 Ex Intrinsically<br>Safe Flashlight               | <b>€</b>     | II 1G Ex ia IIC T4 Ga<br>I M1 Ex ia I Ma | Class I Div 1 and 2 Group A,B,C,D<br>Class II Div 1 and 2 Group E,F,G<br>Class III T4<br>IP67                 |
| Ø         | Fluke HL-200 Ex<br>Intrinsically Safe Headlamp                 | <b>€</b>     | II 1G Ex ia IIC T4 Ga                    | Class I Div 1 and 2 Group A,B,C,D<br>Class II Div 1 and 2 Group E,F,G<br>Class III T4<br>IP67                 |





| Ordorina | Infor | matic | <b>.</b> |
|----------|-------|-------|----------|
|          |       |       |          |
|          |       |       |          |
|          |       |       |          |

| Ordering inior   | mation   |
|--|--|
| FLUKE-28IIEX/AU  | Intrinsically Safe<br>True-RMS Digital<br>Multimeter                     |
| FLUKE-707EX  | Intrinsically Safe<br>Loop Calibrator                                    |
| <b>FLUKE-718EX</b> 30,100,300G ranges                        | Intrinsically Safe<br>Pressure Calibrator                                |
| FLUKE-721EX  | Intrinsically Safe<br>Pressure Calibrator                                |
| <b>FLUKE-750PEX</b> (750P: 01, 05, 06, 09, 24, 27, 29, A4Ex) | Intrinsically Safe<br>Pressure Modules                                   |
| FLUKE-568EX  | Intrinsically Safe<br>Infrared<br>Thermometer                            |
| FLUKE-700G   | Pressure Test<br>Gauges (23 ranges)<br>0 to 10 in H20 up<br>to 10,000psi |
| FLUKE-1551AEX<br>FLUKE-1552AEX                               | "Stik" Thermometer<br>1551A: -50 to 160C<br>1552A: -80 to 300C           |
| FLUKE-568EX  | Intrinsically Safe<br>Infrared<br>Thermometer                            |
| FL-45 EX   | 45 Lumen<br>Intrinsically Safe<br>Flashlight                             |
| FL-120 EX  | 120 Lumen<br>Intrinsically Safe<br>Flashlight                            |
| FL-150 EX  | 150 Lumen<br>Intrinsically Safe<br>Flashlight                            |
| HL-200 EX  | 200 Lumen<br>Intrinsically Safe<br>Headlamp                              |

Contact your local distributor for price and availability.
www.fluke.com/au/wtb



# Fluke Insulated Hand Tools





### Safe, rugged and with a lifetime warranty.

Forged from German steel, Fluke now offers a line of 11 premium insulated hand tools that are built to last a lifetime.

### **Fluke Insulated Screwdrivers**

Precision insulated tools fit and rip the fastener properly to apply maximum torque without damage to the head. Hardened chromium-molybdenum-vanadium steel blades minimise wear. Fluke offers three styles and multiple sizes—seven drivers in all. All certified to 1000 volts AC and 1500 V DC. Every screwdriver individually tested to 10,000 volts.

- The ergonomic handle adapts to the user's hand, causing less strain and work fatigue and providing maximum torque
- The full length, impact-proof handle core is coated with soft-grip outer material and has a hanging hole for extra security and an anti-roll handle design
- The slim insulated shaft allows access in hard to reach areas
- All blades are manufactured from German CMV steel for superior durability



Fluke insulated pliers and cutters give you a range of options when the job requires jaws with bite. All Fluke pliers and cutters are built with German CMV steel.

### **Long Nose Pliers**

- Unique milled wave patter gripping zones
- Straight, half-round, long and slim knurled jaws, specially profiled
- Side cutting edge for wire cutting

### Heavy-Duty, High-Leverage Diagonal Cutter

- · Cuts hard materials including steel and piano wire
- · Power joint and precision cutting edges

### **Fast Adjust Pump Pliers**

- 27 jaw adjustment steps for more accurate gripping of the workpiece with less slippage than other designs
- Self-locking on pipes and nuts: no slipping on the workpiece, with low hand force required
- Gripping surfaces with teeth hardened to HRC61 for low wear and reliable gripping
- Box-joint design; high stability because of double guide
- Pinch guard that prevents operators' fingers being pinched

### **Heavy Duty Combination Pliers**

- Secure hold by aggressive serrated jaws and 4-point gripping hole
- Slim shape for better access to wires in tight spaces
- Powerful gripping jaw, yet 20 % lighter weight than other designs









| Ordering In | formation  |
|-------------|--|
| ISLS3       | Insulated Slotted<br>Screwdriver<br>2.5 mm x 75 mm |
| ISLS5       | Insulated Slotted<br>Screwdriver<br>4 mm x 100 mm  |
| ISLS8       | Insulated Slotted<br>Screwdriver<br>6 mm x 125 mm  |
| IPHS1       | Insulated Phillips<br>Screwdriver 75 mm            |
| IPHS2       | Insulated Phillips<br>Screwdriver 100 mm           |
| ISQ1        | Insulated Squared<br>Screwdriver 100 mm            |
| ISQS2       | Insulated Squared<br>Screwdriver 125 mm            |
| INLP8       | Insulated Long Nose<br>Plier 200 mm                |
| INDC8       | Insulated Diagonal<br>Cutter 200 mm                |
| INPP10      | Insulated Pump Plier<br>250 mm                     |
| INCP8       | Insulated Lineman<br>Combination Plier             |

Contact your local distributor for price and availability. www.fluke.com/au/wtb

200 mm





# **Fluke Insulated Hand Tools Kits**









|                   | ~  |   |   | 111111   |
|-------------------|--|---|---|--|
| Hand Tool<br>Kits | IKSC7  | IKPL3   | IKST7   | IKPK7  |
| Description       | Insulated 7 Unit<br>Screwdriver Kit,<br>1,000 V            | Insulated 3 Unit<br>Pliers Kit, 1,000 V   | Insulated Hand<br>Tools Starter Kit,<br>1,000 V   | Fluke Pack30<br>Professional Tool<br>Backpack +<br>Insulated Hand<br>Tools Starter Kit   |
| Included          | 3 Slotted Tips,<br>2 Phillips Tips,<br>2 Square Drive Tips | Long Noise Pliers,<br>Heavy Duty<br>Diagonal Cutter,<br>Heavy Duty Combo<br>Pliers, Roll-up Tool<br>Pouch | 3 Slotted Tips,<br>2 Phillips Tips, Long<br>Nose Pliers, Diagonal<br>Cutter, Linesman<br>Combination Plier,<br>Roll-up Tool Pouch | Fluke Pack30<br>Professional Tool<br>Backpack, 3 Slotted<br>Tips, 2 Phillips Tips,<br>Long Nose Pliers,<br>Diagonal Cutter,<br>Combination Pliers,<br>Roll-up Tool Pouch |
| Warranty          | Lifetime   | Lifetime  | Lifetime  | 1 year*  |





<sup>\*</sup>Hand tools in kits all carry the limited lifetime warranty.









| Tools +<br>Hand Tool Kits | ІВТ6К   | IB875K  | IB117K   | IB179K  |
|---------------------------|---|---|--|---|
| Description               | Fluke T6 Electrical<br>Tester + Insulated<br>Hand Tools<br>Starter Kit  | Fluke 87V<br>Industrial<br>Multimeter +<br>Insulated Hand<br>Tools Starter Kit  | Fluke 117<br>Electrician's<br>Multimeter +<br>Insulated Hand<br>Tools Starter Kit  | Fluke 179<br>True-RMS Digital<br>Multimeter +<br>Insulated Hand<br>Tools Starter Kit  |
| Included                  | Fluke T6 Electrical<br>Tester,<br>3 Slotted Tips,<br>2 Phillips Tips,<br>Long Nose Pliers,<br>Diagonal Cutter,<br>Combination Pliers,<br>Roll-up Tool Pouch | Fluke 87V<br>Industrial<br>Multimeter,<br>3 Slotted Tips,<br>2 Phillips Tips,<br>Long Nose Pliers,<br>Diagonal Cutter,<br>Combination Pliers,<br>Roll-up Tool Pouch | Fluke 117 Electrician's Multimeter, 3 Slotted Tips, 2 Phillips Tips, Long Nose Pliers, Diagonal Cutter, Combination Pliers, Roll-up Tool Pouch | Fluke 179 True-RMS Digital Multimeter, 3 Slotted Tips, 2 Phillips Tips, Long Nose Pliers, Diagonal Cutter, Combination Pliers, Roll-up Tool Pouch |
| Warranty                  | 2 year*   | Lifetime  | 3 year*  | Lifetime  |

<sup>\*</sup>Hand tools in kits all carry the limited lifetime warranty.





| Accessories | RUP8  | CPAK8   |  |  |  |
|-------------|---|---|--|--|--|
| Description | Roll-up Tool Pouch.<br>Holds up to 3 pliers<br>and 5 screwdrivers,<br>rolls shut, closes<br>with hook and loop<br>fasteners | Multiple pockets,<br>protected inside,<br>magnetic strap,<br>holds up to 3 Pliers<br>and 7 Screwdrivers |  |  |  |
| Included    | Tools not included  | Tools not included  |  |  |  |
| Warranty    | 1 year  | 1 year  |  |  |  |

\*Insulated Hand Tool Lifetime Limited Warranty
Each Flake Insulated Hand Tool will be free from defects in material and workmanship for its lifetime. As used herein, "lifetime" is defined as seven years after Flake discontinues
manufacturing the product, but the warranty period shall be at least fifteen years from the date of purchase. This warranty does not cover damage from neglect, misuse, contamination,
alteration, accident or abnormal conditions of operation or handling, damage or normal wear and tear of mechanical components. This warranty covers the original purchaser only and is not

transferable.

To establish original ownership and prove date of purchase, please complete and return the registration card accompanying the product, or register your product on http://www.fluke.com/
registration. Pluke will, at its option, repair at no charge, replace or return the purchase price of a defective product purchased through a Fluke authorised sales outlet and at the applicable international price. Fluke reserves the right to charge for importation costs of repair/replacement parts if the product purchased in one country is sent for repair elsewhere.

If the product is defective, contact the authorised seleller you purchased the tool from for immediate replacement or your necessarily estimate service center to obtain return authorisation information, then send the product to that service center, with a description of the difficulty, postage and insurance prepaid [FOB Destination]. Fluke assumes no risk for damage in transit. Fluke will pay return transportation for product replaced in-warranty. Before making any non-warranty repair, Fluke will estimate cost and obtain authorisation, then invoice you for repair and return transportation.

THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED, FLUKE SHALL NOT BE LIABLE FOR ANY SEPCIAL, INDIRECTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, ARISING FROM ANY CAUSE OR THEORY, AUTHORISED RESELLERS ARE NOT AUTHORISED TO EXTEND ANY DIFFERENT WARRANTY ON FLUKE'S BEHALF.



| Ordering Information |   |  |  |  |  |
|----------------------|---|--|--|--|--|
| IKSC7                | Insulated 7 Unit<br>Screwdriver Kit,<br>1,000 V                                   |  |  |  |  |
| IKPL3                | Insulated 3 Unit<br>Pliers Kit, 1,000 V   |  |  |  |  |
| IKST7                | Insulated Hand Tools<br>Starter Kit, 1,000 V                                      |  |  |  |  |
| ІКРК7                | Pack30 Professional<br>Tool Backpack +<br>Insulated Hand Tools<br>Starter Kit     |  |  |  |  |
| ІВТ6К                | Fluke T6 Electrical<br>Tester + Insulated<br>Hand Tools Starter Kit               |  |  |  |  |
| IB875K               | Fluke 87V Industrial<br>Multimeter + Insulated<br>Hand Tools Starter Kit          |  |  |  |  |
| IB117K               | Fluke 117 Electrician's<br>Multimeter + Insulated<br>Hand Tools Starter Kit       |  |  |  |  |
| IB179K               | Fluke 179 True-RMS<br>Digital Multimeter +<br>Insulated Hand Tools<br>Starter Kit |  |  |  |  |
| RUP8                 | Roll-up Tool Pouch  |  |  |  |  |
| СРАК8                | Magnetic Tool Pouch   |  |  |  |  |

Contact your local distributor for price and availability. www.fluke.com/au/wtb

FLUKE ®

# TEST LEADS, CLIPS AND PROBES

| Model Number        | TL175 | TL26A | TL40 | TL71 | TL75      | TL76         | TL221            | TL222        | TL224      | <b>TL</b> 910 |
|---------------------|-------|-------|------|------|-----------|--------------|------------------|--------------|------------|---------------|
| Test Leads          |       |       |      |      |           |              |                  |              |            |               |
| 110/114/115/116/117 | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 175/177/179         | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 87V                 | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 287/289             | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 8845/8846           | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 120 Series          | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 190 Series          | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 323/324/325         | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 370 Series, 381     | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 705/707             | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 712                 | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 715                 | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 716/717             | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 718                 | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 725/726             | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 787/B/789           | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| 1577/1587 FC        | •     | •     | •    | •    | •         | •            | •                | •            | •          | •             |
| Clips and Probes    |       |       |      |      |           |              |                  |              |            |               |
| AC175               |       |       |      | •    | •         | •            |                  |              |            |               |
| AC87                |       |       |      |      |           |              | •                | •            | •          |               |
| AC89                |       |       |      |      |           |              | •                | •            | •          |               |
| AC220               |       |       |      |      |           |              | •                | •            | •          |               |
| AC280               |       |       |      |      |           |              | •                | •            | •          |               |
| AC238A              |       |       |      |      |           |              | •                | •            | •          |               |
| AC285               |       |       |      |      |           |              | •                | •            | •          |               |
| AC288               |       |       |      |      |           |              | •                | •            | •          |               |
| FTP-1               |       |       |      |      |           |              | •                | •            | •          |               |
| TLK290              |       |       |      |      |           |              | •                | •            | •          |               |
| TLK291              |       |       |      |      |           |              | •                | •            | •          |               |
| TP1                 |       |       |      |      |           |              | •                | •            | •          |               |
| TP2                 |       |       |      |      |           |              | •                | •            | •          |               |
| TP4                 |       |       |      |      |           |              | •                | •            | •          |               |
| TP38                |       |       |      |      |           |              | •                | •            | •          |               |
| TP74                |       |       |      |      |           |              | •                | •            | •          |               |
| TP80                |       |       |      |      |           |              | •                | •            | •          |               |
| TP175               |       |       |      |      |           |              | •                | •            | •          |               |
| TP220               |       |       |      |      |           |              | •                | •            | •          |               |
| TP912               |       |       |      |      |           |              |                  |              |            | •             |
| TP920               |       |       |      | •    | •         |              |                  |              |            |               |
| T5 Starter Kit      |       |       |      |      | (compatib | le with T5/T | '<br>'+/T+Pro/33 | O Series Cla | mp Meters) |               |
| TP165X              |       |       |      |      |           |              | 507/1577/1       |              |            |               |

# TEST LEADS, PROBES AND CLIPS

### Test Lead/Probe-in-One



### TL175 TwistGuard $^{^{TM}}$ Test Leads

- Probes meet IEC 61010-031 requirements for safety
- Patented extendable tip guard meets CAT III 1000 V, CAT IV 600 V requirements while providing the flexibility you need for CAT II measurements
- Probes always show correct category rating for tip length being used



### TL75 Hard Point™ Test Lead Set

One pair (red, black) comfort grip probes with PVC-insulated, right-angle shrouded 4 mm banana plugs.

Safety rating: CAT II 1000 V, 10 A (CAT III 1000 V, CAT IV 600 V with protective cap)



### **TL71 Premium Test Lead Set**

One pair (red, black) comfort grip probes with flexible silicone insulated, right-angle test leads.

- Heat and cold resistant
- Safety rating: CAT II 1000 V,10 A (CAT III 1000 V, CAT IV 600 V with protective cap)



### TL76 2mm/4mm Test Lead Set

One pair (red, black) silicone test leads with right angle shrouded 4 mm banana plugs.

- Removable lantern tip for easy access to terminal blocks, 2 mm diameter
- Safety rating: CAT II 1000 V, 10 A (CAT III 1000 V, CAT IV 600 V with protective cap)



### **TL40 Retractable Tip Test Lead Set**

One pair (red, black) flexible silicone insulated test leads with sharp needle point tips adjustable to desired length from 0 mm to 76 mm.

- Extra hard probe tips to provide long service life
- Safety rating: CAT II 600 V, 3 A rating



### TL26A 60 in 5-Way Test Lead Set

One pair (red, black) silicone-insulated leads with five different ways to connect.

- U-shaped nose for blade-shaped terminals
- Notched jaw for gripping screw heads, bare wire or terminals
- Serrated teeth for gripping threaded or wire-wrapped terminals
- Sharp needle cluster for piercing small gauge (#22-#28 AWG) wires
- Large piercing needle
- Safety rating: 30 V, 10 A



### **TL910 Electronic Test Probes**

One pair (red, black) leads with very small tips to access hard-to-reach electronic test points

- Includes three sets of spring-loaded gold tips and two sets of stainless steel tips
- Tip length up to 100 mm
- Tip diameter: 1 mm
- Safety rating: CAT II 1000 V, 3 A



### TP912 Replacement Tips for TL910

Five sets of spring-loaded, tips to refurbish TL910 Electronic Test Probes.

- Very small 1 mm tips to access hardto-reach electronic test points
- Probe tip length up to 100 mm
- Three sets of gold-plated and two sets of stainless steel tips



### **TP165X Remote Control Probe**

Probe with integrated test button simplifies measurement when accessing hard-to-reach points.

- Probe designed for 1500 Series Insulation and 1650/1660 Series Installation Testers
- Tip length up to .735 in
- Tip diameter: 1 mm
- Safety rating: CAT II 1000 V, (CAT III 1000 V, CAT IV 600 V with protective cap), 10 A

### Probe-in-one clips



### AC288 SureGrip™ Terminal Block Probe

One pair (red, black) of probes features a retractable probe tip for connections to clamp and screw type terminal blocks.

- Designed for increased safety, while providing the flexibility to reach deep connection points
- 1 mm diameter probe tip extends out to 8.4 mm length
- Recommended for use with the TL224, TL222, TL221 test leads
- Safety rating: CAT III 1000 V, CAT IV 600 V



### **AC175 Alligator Clip Set**

One pair (red, black) slide-on alligator clips.

- 8 mm clip opening
- Slide-on alligator clips are compatible with TL71, TL75, TL175 and TP175 test probes
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A



### **TP920 Test Probe Adapter Set**

Three pairs (red, black) push-on adapters.

- Încludes IC test adapters, extended probe tips, and medium alligator clips
- Maximum opening 7.6 mm
- Safety rating: IC test adapter CAT II 300 V, extended probe tips CAT II 300 V, medium alligator clips CAT II 1000 V

# TEST LEADS, PROBES AND CLIPS

### **Modular Test Leads**



# TL221 SureGrip™ Test Lead Extensions Set

One pair (red, black) siliconeinsulated leads with safety-shrouded, 4 mm banana plugs.

- Couplers have female connectors on both ends
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A



# TL222 SureGrip $^{\text{TM}}$ Silicone Insulated Test Leads

One pair (red, black) silicone-insulated test leads (red, black) with safety-shrouded, 4 mm banana plugs.

Right angle connectors on both ends



### TL224 SureGrip™ Insulated Test Leads

One pair (red, black) silicone-insulated test leads with safety-shrouded 4 mm banana plugs.

- Right angle connector on one end and straight connector on the other
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A



### **TL27 Heavy-duty Test Lead Set**

One pair (red, black) rugged, EPDM-insulated test leads with safety-shrouded 4 mm banana plugs.

- Straight connectors on both ends
- Safety rating: CAT III 1000 V, 10 A

### **Test Lead Holder**



### **H900 Test Lead Holder**

Heavy-duty holder for conveniently storing test lead wires.

- Mounting holes for securing to wall or other surfaces
- For test lead wires up to 8 mm in diameter
- Overall dimensions (LxWxH):
   279 mm x 89 mm x 32 mm

### **Modular Clips**



### AC285/-FTP SureGrip™ Alligator Clips

One pair (red, black) large alligator clips with insulated, nickel-plated steel jaws.

- Multi-purpose tooth pattern grips from fine gauge wire to a 20 mm bolt
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A
- AC285-FTP includes AC285 and adapters for FTP-1 or FTPL-1 Fused Test Probes



### AC220 SureGrip™ Alligator Clips

One pair (red, black) of small, insulated, nickel-plated jaws.

- Blunt tip grabs round screw heads up to 9.5 mm
- Safety rating: CAT IV 600 V, CAT III 1000 V. 10 A



### AC280 SureGrip™ Hook Clips

One pair (red, black) nickel-plated hookstyle clips.

- Hook opening 6.4 mm at front
- Base opening of 0.2 mm
- Safety rating: CAT IV 600 V, CAT III 1000 V, 3 A



### AC283A SureGrip™ Pincer Clips

One pair (red, black) nickel-plated pincers open to 5 mm.

- . 11.4 cm flexible insulated shaft
- Safety rating: CAT II



### AC89 Heavy Duty Insulation Piercing Test Clip

Ideal probe for establishing accurate contact through insulation.

- Pierces 0.25 mm to 1.5 mm insulated wire
- Safety rating: 1000 V, 10 A



### **AC87 Heavy Duty Bus Bar Clip Set**

One pair (red, black) flat, right angle clips designed for connecting to bus bars.

- Adjustable collar provides two ranges of jaw openings up to 30 mm
- Safety rating: CAT III 600 V, 5 A

### **Modular Test Probes**



### TP175 TwistGuard<sup>™</sup> Test Probes

- Modular test probes of the popular TL175 Test Leads
- Patented extendable tip guard meets CAT III 1000 V, CAT IV 600 V requirements while providing the flexibility you need for CAT II measurements
- 2 mm (0.08 in) diameter stainless steel probe tips



# TP220 SureGrip™ Industrial Test Probes

One pair (red, black) industrial test probes with stainless steel tip.

- Sharp, 12 mm tips
- Safety rating: CAT II 1000 V (CAT III 1000 V, CAT IV 600 V with protective cap), 10 A



### TP1 Slim Reach™ Test Probes

One pair (red, black) slender probes with flat stainless steel blade to hold securely in blade-type electrical wall sockets.

- Tip length up to 14.7 mm
- Safety rating: CAT II 1000 V, 10 A (CAT III 1000 V, CAT IV 600 V with protective cap)



### TP2 Slim Reach™ Test Probes

One pair (red, black) slender stainless steel probes for accessing closely-spaced or recessed terminals such as in electronic environments.

- 2 mm diameter tip
- Safety rating: CAT II 1000 V, 10 A (CAT III 1000 V, CAT IV 600 V with protective cap)

# TEST LEADS, PROBES AND CLIPS



### TP4 Slim Reach™ Test Probes

One pair (red, black) slender stainless steel probes for accessing closely-spaced or recessed electrical terminals.

- 4 mm diameter probe tip designed to fit securely into IEC (C13 and C14) electrical wall outlets
- Safety rating: CAT II 1000 V, 10 A



### **TP80 Electronic Test Probes**

One pair (red, black) electronics test probes.

- IC-insulated cap prevents shortening of IC legs for probing high density components or boards
- Tip length up to 3.9 mm
- Tip diameter: 1 mm
- Safety rating: CAT III 1000 V, 1 A



### **TP74 Lantern Tip Test Probes**

One pair (red, black) featuring nickel-plated brass ends.

- Banana-style 4 mm spring contacts
- Safety rating: CAT II 1000 V, 10 A (CAT III 1000 V, CAT IV 600 V with protective cap)



### TP38 Slim Reach™ Test Probes

One pair (red, black) slender stainless steel probes for accessing closely-spaced or recessed terminals.

- Tip length: 24 mm which includes the insulated part of the tip
- Probe tip insulated to 4 mm from the end
- Safety rating: CAT IV 600 V, CAT III 1000 V, 10 A

### **Patch Cords**



### TL932 Patch Cords (90 cm)

One pair (red, black) multi-stacking banana plug patch cords, 90 cm long.

- Nickel-plated, 4 mm banana plugs90 cm long PVC insulated leads
- 30 V RMS or 60 V DC, 15 A

TL930 Patch Cords (60 cm)

One pair (red, black) multi-stacking banana plug patch cords, 61 cm long.

- Nickel-plated, 4 mm banana plugs
- 61 cm long PVC insulated leads
- . 30 V RMS or 60 V DC, 15 A



### TL935 Patch Cords (60 cm, 90 cm, 120 cm)

Three sets (red and black pairs) of multistacking banana plug patch cords in different lengths.

- Nickel-plated, 4 mm banana plugs
- 60 cm, 90 cm, and 120 cm long PVC insulated leads
- . 30 V RMS or 60 V DC, 15 A



### **TL940 Mini-Hook Test Leads**

One pair (red, black) of test leads with multi-stacking 4 mm banana plugs and mini-hooks

- Mini-hooks attach to component leads up to 1.5 mm diameter
- 90 cm long PVC insulated leads
- . 30 V RMS or 60 V DC, 3 A



### **TL950 Mini-Pincer Test Leads**

One pair (red, black) of test leads with multi-stacking 4 mm banana plugs and mini-pincers.

- Mini-pincers open to 2.3 mm
- 90 cm long PVC insulated leads
- . 30 V RMS or 60 V DC, 3 A



### **TL960 Micro-Hook Test Leads**

One pair (red, black) of test leads with multi-stacking 4 mm banana plugs and micro-hooks.

- Micro-hooks attach to component leads up to 1 mm diameter
- 90 cm long PVC insulated leads
- . 30 V RMS or 60 V DC, 3 A



### **TL970 Hook and Pincer Set**

- TL940 Mini-Hook Test Lead Set
- . TL950 Mini-Pincer Test Lead Set
- . TL960 Micro-Hook Test Lead Set

### **Test Lead Sets and Kits**



# $\begin{array}{l} \textbf{FTP-1 / FTPL-1 SureGrip}^{\text{\tiny TM}} \ \textbf{Fused} \\ \textbf{Test Probes} \end{array}$

- · Built-in fuses for added protection
- 2 mm threaded probe tips include removable 4 mm lantern-style spring contacts
- FTPL-1 comes with a set of TL224 SureGrip™ Insulated Test Leads
- Safety rating: CAT II 1000 V (CAT III 1000 V, CAT IV 600 V with protective cap), 10 A



### TL238 SureGrip™ Test Lead Set for High Energy Environments

This kit is specially designed for high energy environments. Three-piece kit:

- TP238 SureGrip™ Insulated Test Probe Set
- TP280 SureGrip™ Test Probe Extender
- TL224 SureGrip™ Insulated Test Leads
- Safety rating:
  - -TP238 and TL224: CAT IV 600 V, CAT III 1000 V, 10 A
  - -TP280: CAT III 1000 V, 10 A



### TLK290 Flexible Socket Probe Set

Set includes three flexible socket probes and a large alligator clip for use with 4 mm shrouded test leads.

- Test probes are for use on motor and three-phase sockets
- Probes have flexible test points that fit securely between 4 mm and 8 mm sockets
- . Safety rating: CAT II 1000 V, 8 A



### **TLK291 Fused Test Probe Set**

One pair (red, black) fused test probes. Probes fit on modular leads or on fixedlead test tools.

- Each probe contains a 500 mA/1000 V/50 kA fuse
- Safety rating: CAT IV 600 V, CAT III 1000 V

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# TEST LEAD SETS AND KITS

| Model number            | TL27 | TL80A | TL81A | TL220      | TL223     | TL225           | TL238      | TLK-220        | TLK-225 | TLK287 | TLK289 | TLS430  |
|-------------------------|------|-------|-------|------------|-----------|-----------------|------------|----------------|---------|--------|--------|---|
| Test Lead Sets and Kits | s    |       |       |            |           |                 |            |                |         |        |        |   |
| 110/114/115/116/117     | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| 27 II                   | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| 175/177                 | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | =   |
| 179                     | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | (compatible with 430 Series II Power Quality Analysers) |
| 87V                     | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | patik   |
| 287/289                 | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | ole v   |
| 8845/8846               | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | /ith  |
| 120/B Series            | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | 430   |
| 190/-II Series          | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | Ser   |
| 323/324/325             | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | ies I   |
| 370 Series, 381         | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | I Pov   |
| 705/707                 | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | wer   |
| 712/713                 | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | Quai  |
| 715                     | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | lity /  |
| 716/717                 | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | Anal  |
| 718                     | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | yser  |
| 725/726                 | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      | 8   |
| 787B/789                | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| 1577/1587 FC            | •    | •     | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| Clips and Probes        |      |       |       |            |           |                 |            |                |         |        |        |   |
| AC175                   |      | •     | •     |            |           |                 |            |                |         |        |        |   |
| AC87                    | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| AC89                    | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| AC220                   | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| AC280                   | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| AC238A                  | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| AC285                   | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| FTP-1                   | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TLK290                  |      |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TLK291                  |      |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TP1                     | •    |       | •     | •          |           | •               | •          | •              | •       | •      | •      |   |
| TP2                     | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TP4                     | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TP38                    | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TP74                    | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TP80                    | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TP175                   | •    |       | •     | •          | •         | •               | •          | •              | •       | •      | •      |   |
| TP220                   | •    |       | •     | •          | •         |                 |            |                | •       | •      | •      |   |
| TP912                   |      |       |       |            |           |                 |            |                |         | •      |        |   |
| TP920                   |      |       | •     |            |           |                 |            |                |         |        |        |   |
| T5 Starter Kit          |      |       | (     | compatible | with T5/1 | '<br>Γ+/T+Pro/: | 330 Series | Clamp Met      | ers)    | 1      | 1      |   |
| TP165X                  |      |       |       |            |           |                 |            | -<br>1650/1660 |         |        |        |   |

#### TEST LEAD SETS AND KITS

#### **Test Lead Sets and Kits**



#### **TLK289 Industrial Master Test Lead Set**

Designed for electrical and electronics testing including clips and probes for dependable contact with a variety of test points. Includes:

- One pair each (red, black)
  - -AC285 Large Jaw Alligator Clips
  - -AC220 Plunger Style Alligator Clips
  - -AC280 SureGrip™ Hook Clips
  - -TP220 SureGrip™ Industrial Test Probes
- TPAK ToolPak™
- 80BK-A Integrated DMM Temperature Probe
- C116 Soft Carrying Case



#### **TLK287 Electronics Master Test Lead Set**

The perfect test lead set electronics test and design. Includes 11 items:

- Precision electronic probes with multiple spring-loaded sharp tips to maximise contact with SMD test points
- Micro-grabbers and leads to enable fine SMD testing
- Mini-alligator clips, grabbers, and probes
- Modular test leads and lead-probe combinations
- Couplers for long lead applications



#### **TL81A Deluxe Electronic Test Lead Kit**

This 11-item kit includes pouch and two each (red, black) of:

- Test leads with a safety-shrouded, right angle banana connector on one end and a stainless steel test probe on the other. Rated up to 10 A.
- Insulated alligator clips. Rated up to 10 A
- Insulated probe tip extenders. Rated up to 3 A
- Modular test probes with banana jack connector. Rated up to 10 A
- Modular hook-style clip test leads. Rated up to 5 A
- Modular pinch-style clip test leads. Rated up to 5 A
- Modular alligator clips. Rated up to 10 A
- Slide-on IC probe tip adapters (rated up to 3 A) and test lead couplers
- Bare spade lug. Rated up to 10 A



#### TL220 SureGrip™ Industrial **Test Lead Set**

Handy all-in-one set that includes essential test items for industrial environments. Three-item set includes:

- AC220 Plunger Style Alligator Clips
- TP220 SureGrip™ Industrial Test Probes CAT II 1000 V, 10 A without protective cap
- TL224 SureGrip™ Silicone Insulated Test Leads
- Safety rating: All CAT IV 600 V, CAT III 1000 V



#### TL80A Basic Electronic Test Lead Kit

The fundamental accessories for testing are included in this four-item kit.

- Medium alligator clip CAT II 1000 V, 10 A
- Extended probe tips CAT II 300 V, 3 A
- TL71 Premium Test Lead Set
- C75 Accessory Case



#### TLK-225 SureGrip<sup>Th</sup> **Master Accessory Set**

Set includes all the SureGrip™ leads, clips, and probes in a handy roll-up pouch. This 13-item set includes:

- AC220 Plunger Style Alligator Clips
- AC220 Fittinger Style Alligator Cl AC280 SureGrip™ Hook Clips AC238A SureGrip™ Pincer Clips AC285 Large Jaw Alligator Clips
- TP175 TwistGuard<sup>™</sup> Test Probes
- TL224 SureGrip™ Insulated Test Leads
- Six-pocket Storage Pouch
- Safety rating: all CAT IV 600 V, CAT III 1000 V



#### TL223 SureGrip™ **Electrical Test Lead Set**

All-in-one set includes three test lead accessories:

- AC220 Plunger Style Alligator Clips
- TP1 Slim Reach Test Probes
- TL224 SureGrip™ Insulated Test Leads
- Safety rating: CAT II 1000 V, 10 A (CAT III 1000 V, CAT IV 600 V with protective cap



#### TLK-220 SureGrip™ Industrial Test Lead Kit

Special-value SureGrip<sup>™</sup> five-piece kit for industrial applications, in a roomy carrying case. Kit includes:

- AC220 Plunger Style Alligator Clips
- AC285 Large Jaw Alligator Clips
- TP220 SureGrip™ Industrial Test Probes
- TL224 SureGrip™ Insulated Test Leads
- C116 Zippered Vinyl Case with Moveable Divider
- Safety rating: CAT II 1000 V (CAT III 1000 V, CAT IV 600 V with protective cap), 10 A



#### **T5 Starter Kit**

Special-value three-piece kit for the electrical professional with a Fluke T5 Voltage, Continuity and Current Tester. Kit includes:

- TP238 Insulated Test Probes
- AC285 Large Jaw Alligator Clips
- C33 Soft Carrying Case
- Safety rating: all CAT IV 600 V, CAT III 1000 V



#### **TLS430 Test Leads and Alligator Clips**

Test lead replacement set for the Fluke 430 Series II Three-Phase Power Quality Analysers.

- Set includes five each (4 black, 1 green) of test leads and alligator clips
- Safety rating: CAT IV 600 V, CAT III 1000 V



#### TL225 SureGrip™ Stray Voltage Adapter **Test Lead Kit**

The Fluke TL225 adds low input impedance to a multimeter, desensitising it to low energy and eliminating ghost or stray voltages. Four-piece kit includes:

- SV225 Stray Voltage Adapter
- TL224 SureGrip™ Insulated Test Leads
  TP238 Insulated Test Probes
- C75 Accessory Case
- Safety rating: All CAT IV 600 V, CAT III 1000 V, 10 A

# TEMPERATURE ACCESSORIES

|                        | I                          | Bead  | HVAC  | Immersion                            | Surface  | Air   | Piercing   | General<br>Purpose                                   | Industrial<br>Surface  | Pipe<br>Clamp  |
|------------------------|----------------------------|---|---|--------------------------------------|--|---|--|--|--|--|
|                        | 80BK-A                     | 80PK-1<br>80PJ-1                                | 80PK-11   | 80PK-22                              | 80PK-3A  | 80PK-24   | 80PK-25<br>80PT-25   | 80PK-26  | 80PK-27  | 80PK-8   |
| Lowest<br>Temperature  | -4                         | 40 ℃  | -30 °C  | -40 °C                               | 0 ℃  | -40 °C  | Type K: -40 °C Type T: -196 °C   | -40 °C   | -127 °C  | -29 °C   |
| Highest<br>Temperature | 260 °C                     | 105 °C  | 1090 °C   | 260 °C                               | 816 °C   | 350 °C  | 816 °C   | 600 °C   | 149 °C   |  |
| Probe Material         |                            | wire with insulation                            | Velcro  | Inconel 600                          | Type K sensor<br>with teflon<br>body                                       | Inconel   | 316 Stainless<br>Steel   | 304 Stainless<br>Steel                               | 304 Stainless<br>Steel   | Type K sensor with pvc body  |
| Probe Length           | 1 m lead<br>wire           | 1 m lead wire                                   | 19 m Velcro<br>cuff   | 21.27 cm                             | 9.525 cm   | 21.59 cm  | 10.16 cm   | 21.57 cm   | 20.32 cm   | for pipes from<br>6.4 mm<br>to 34.9 mm   |
| Cable Length           | 1 m                        | 1 m   | 1 m   | 1 m                                  | 1.3 m  | 1 m   | 1 m  | 1 m  | 1 m  | 1 m  |
| Connection             | Standard<br>banana<br>jack | Molded<br>thermocouple<br>plug                  | Molded<br>thermocouple<br>plug                                      | Molded<br>thermocouple<br>plug       | Molded<br>thermocouple<br>plug   | Molded<br>thermocouple<br>plug  | Molded<br>thermocouple<br>plug   | Molded<br>thermocouple<br>plug                       | Molded<br>thermocouple<br>plug   | Molded<br>thermocouple<br>plug   |
| SureGrip<br>Handle     | No                         | No  | No  | Yes                                  | No   | Yes   | Yes  | Yes  | Yes  | No   |
| Key Feature            | troublesho                 | for initial poting. Can be cured with a magnet. | Velcro probe<br>allows<br>hands free<br>temperature<br>measurement. | For use in<br>liquids or<br>in gels. | Exposed junction for direct contact with flat or slightly convex surfaces. | Perforated<br>baffle for<br>air and<br>non-<br>caustic gas<br>measurements. | Probe<br>material safe<br>for use in<br>foods. Sharp<br>tip pierces<br>solid surfaces. | Use for general purpose air or surface measurements. | Low conductivity stainless steel minimizes thermal shunting. Extra rugged. | Clamps<br>securely<br>to pipe.<br>Measurements<br>are repeatable<br>to 0.56 °C |
| Thermocouple<br>Types  | K                          | К, Ј  | K   | K                                    | К  | K   | К, Т   | K  | К  | K  |

| Temperature Compatibility |        |        |                    |                   |         |      |               |          |          |          |          |        |         |
|---------------------------|--------|--------|--------------------|-------------------|---------|------|---------------|----------|----------|----------|----------|--------|---------|
| Model Number              | 80AK-A | 80ВК-А | All 80PK<br>Probes | 80PJ-1/<br>80PJ-9 | 80PT-25 | 80TK | 80T-<br>150UA | 80PJ-EXT | 80PK-EXT | 80PT-EXT | 80CK-M   | 80CJ-M | 80PR-60 |
| 110/114/115/<br>116/117   | 116    | 116    | •                  |                   |         |      |               |          | <b>A</b> |          | •        |        |         |
| 27 II                     |        |        |                    |                   |         | •    | •             |          | *        |          | *        |        |         |
| 175/177                   |        |        | *                  |                   |         | •    | •             |          | *        |          | *        |        |         |
| 179                       | •      | •      | <b>A</b>           |                   |         |      |               |          | <b>A</b> |          | •        |        |         |
| 87V                       | •      | •      | <b>A</b>           |                   |         |      |               |          | <b>A</b> |          | •        |        |         |
| 287/289                   | •      | •      | •                  |                   |         |      | •             |          | <b>A</b> |          | <b>A</b> |        |         |
| 8845/8846                 |        |        | *                  |                   |         | •    | •             |          | *        |          | *        |        |         |
| 43B                       |        |        | *                  |                   |         | •    | •             |          | *        |          | *        |        |         |
| 120/B Series              |        |        | *                  |                   |         | •    | •             |          | *        |          | *        |        |         |
| 190/-II Series            |        |        | *                  |                   |         | •    | •             |          | *        |          | *        |        |         |
| 51/52/53/54<br>II         |        |        | •                  | •                 | •       |      |               | •        | •        | •        | •        | •      |         |
| 63                        |        |        |                    |                   |         |      |               |          |          |          |          |        | 66/68   |
| 714                       |        |        | •                  | •                 | •       |      |               | •        | •        | •        | •        | •      |         |
| 715                       |        |        | *                  |                   |         | •    | •             |          | *        |          | *        |        |         |
| 725/726                   |        |        | •                  | •                 | •       |      |               | •        | •        | •        | •        | •      |         |
| 787B/789                  |        |        | *                  |                   |         | •    | •             |          | *        |          | *        |        |         |
| 902                       | •      | •      | •                  |                   |         |      |               |          | •        |          |          |        |         |
| 1587 FC                   | •      | •      | •                  |                   |         |      |               |          | <b>A</b> |          | •        |        |         |
| 1577                      | •      |        | •                  |                   |         |      |               |          |          |          |          |        |         |
| 561                       |        |        | •                  |                   |         |      |               |          |          |          |          |        |         |

ullet Compatible; \* Requires 80TK; llot Requires 80AK-A; ullet116 only: requires 80AK-A

#### TEMPERATURE ACCESSORIES



#### 80PJ-1 or 80PK-1 Bead Probe

Type J or K thermocouple probe for general purpose applications. Ideal for troubleshooting.

- . 1 mm probe with Teflon® insulation
- Measurement range: -40 °C to 260 °C



#### 80PJ-9 or 80PK-9 General Purpose Probe

Type J or K thermocouple probe for air and non-caustic gases. The sharp tip pierces pipe insulation and the flat surface makes good contact.

- 15.25 cm stainless steel probe
- Measurement range: -40 °C to 260 °C



#### 80PK-26 SureGrip™ Tapered Probe

Type K thermocouple probe with tapered tip for speedy air, surface, non-caustic gas, and liquid measurements.

- 1 m lead
- . 203 mm stainless steel probe
- Measurement range: -40 °C to 816 °C



#### **80PK-3A Surface Probe**

Type K thermocouple with exposed junction for flat or slightly convex surfaces such as plates and rollers.

- 9.525 cm probe with Teflon® insulation
- Measurement range: 0 °C to 260 °C



#### 80PK-27 SureGrip $^{\text{TM}}$ Industrial Surface Temperature Probe

Type K thermocouple probe for surfaces in rugged environments.

- 1 m lead
- 20.32 cm stainless steel probe
- Measurement range: -127 °C to 600 °C



#### 80PK-25 or 80PT-25 SureGrip™ Piercing Probe

Type K or T thermocouple suitable for food industry, liquids, and gels. Sharp tip pierces solid surfaces.

- 1 m lead
- 10.16 cm stainless steel probe
- Measurement range:
  - -Type K: -40 °C to 350 °C
  - -Type T: -196 °C to 350 °C



#### 80PK-24 SureGrip™ Air Probe

Type K thermocouple probe for air and non-caustic gas measurements.

- 1 m lead
- 21.59 cm Inconel® probe
- . Bead protected by perforated baffle
- Measurement range: -40 °C to 816 °C



#### 80PK-22 SureGrip™ Immersion Probe

Type K thermocouple probe for use in liquids and gels.

- . 1 m lead
- 21.27 cm Inconel® probe
- Measurement range: -40 °C to 1090 °C



#### 80PK-8 and 80PK-10 Pipe Clamp Probe

Type K thermocouple clamps securely to pipes for fast temperature and superheat measurements.

- Durable ribbon sensor
- 80PK-8 for pipe diameters 6.4 mm to 34.9 mm
- 80PK-10 for pipe diameters 32 mm to 64 mm
- Measurements are repeatable to 0.56 °C
- Measurement range: -29 °C to 149 °C



#### 80PK-11 Type-K Velcro® Thermocouple Probe

Type K Velcro cuff for use with any temperaturemeasuring instrument that accepts type K thermocouples.

- Use multiples and leave in place for routebased routine maintenance
- 48 cm Velcro® cuff
- Measurement range: -30 °C to 105 °C



#### 80PK-18 Pipe Clamp Temperature Probe Kit

- Includes both 80PK-8 and 80PK-10
   Type K clamps
- Provides full range of pipe measurement sizes
- Includes soft carrying case



#### **80PR-60 RTD Temperature Probe**

This probe expands the utility of an RTD non-contact infrared thermometer by simultaneously taking contact and non-contact temperature readings.

- For use with the Fluke 66 and 68 Infrared Thermometers
- 90 mm platinum 1 KW probe
- 3.5 mm phono type jack
- Measurement range: -40 °C to 260 °C



#### **80AK-A Thermocouple Adapter**

Adapts type K thermocouple miniconnector to dual shrouded 4 mm banana pluq inputs.

- Measurement range and accuracy: probe dependent
- Suitable for low voltage applications (below 30 V AC, 60 V DC)



#### 80BK-A Integrated DMM Temperature Probe

Convenient, integrated type K thermocouple probe with standard shrouded 4 mm banana jack.

- Compatible with Fluke DMM with temperature measurement functions
- Measurement range: -40 °C to 260 °C



#### **80TK Thermocouple Module**

This module converts a DMM to a thermometer and is designed for use with type K thermocouples in low voltage applications.

- Voltage range: below 24 V AC, 60 V DC
- Measurement range: -50 °C to 1000 °C (probe dependent)



#### 80T-150UA Universal Temperature Probe

Adapts any DMM using shrouded 4 mm banana plugs. This fast, accurate integrated probe is designed for low-voltage applications.

- For air, surface, and non-corrosive applications
- Voltage range: below 24V AC, 60V DC 15.7 cm probe tip
- Measurement range: -50 °C to 150 °C
- Output: switchable, from 1 mV/°C to 1 mV/°F

# CURRENT CLAMPS: AC

#### **AC Current Clamp Specifications**

|                            | i200                                 | i200s                                 | i400                                 | i400s                             | i800  | i1000s  | i3000s   | i2000 Flex   | i3000s Flex  | i6000s  |
|----------------------------|--------------------------------------|---------------------------------------|--------------------------------------|-----------------------------------|---|---|--|--|--|---|
| AC current range           | 1 A to 200 A                         | 1 A to 200 A                          | 1 A to 400 A                         | 0.5 A to<br>400 A                 | 1 A to 800 A  | 0.2 A to<br>1000 A  | 1 A to 3000<br>A   | 2 A to 2000<br>A   | 3 A to 3000<br>A   | 60 A to<br>6000 A                               |
| Accuracy                   | ≤ 3% +<br>0.5 A<br>48 Hz to<br>65 Hz | ≤ 1 % +<br>0.5 A<br>48 Hz to<br>65 Hz | 2% + 0.06 A<br>45 Hz to<br>400 Hz    | 2% + .015                         | 0.1 A to 10 A<br>± 3% +<br>.01 A,<br>10 A to 200<br>A ± 2%,<br>200 A to 800<br>A ± 1% | 0.2 to 10 A:<br>3% + 0.1 A<br>10 A to 100<br>A:<br>2% + 0.5 A<br>100 A to<br>1000 A:<br>1% + 1 A<br>48 Hz to<br>65 Hz | 1 to 30 A:<br>2% + 0.1 A<br>1 to 300 A:<br>2% + 0.5 A<br>1 to 3000 A:<br>2% + 2 A<br>48 Hz to<br>65 Hz | ± 1% of<br>range<br>45 Hz to<br>65 Hz<br>Ranges:<br>20 A, 200 A,<br>2000 A | ± 1% of<br>range, 45 Hz<br>to 65 Hz<br>Ranges:<br>30 A, 300 A,<br>3000 A | ± 1% of<br>range<br>45 Hz to<br>65 Hz           |
| Bandwidth (-3 dB)          | 40 Hz to<br>40 kHz                   | 40 Hz to<br>40 kHz                    | 5 kHz to<br>20 kHz                   | 5 Hz to<br>10 kHz                 | 30 Hz to 10 kHz (typical)   | 5 Hz to<br>100 kHz  | 10 Hz to<br>100 kHz  | 10 Hz to<br>20 kHz   | 10 Hz to<br>50 kHz   | 10 Hz to 50<br>kHz, (- 3 dB)                    |
| Maximum conductor diameter | 20 mm                                | 20 mm                                 | 32 mm                                | 32 mm                             | 54 mm   | 54 mm   | 64 x 100<br>mm   | 177 mm   | 177 mm or<br>265 mm  | 193 mm or<br>289 mm                             |
| Maximum conductor size     | 150 mm²                              | 150 mm <sup>2</sup>                   | 400 mm <sup>2</sup>                  | 400 mm <sup>2</sup>               | 2x 240 mm <sup>2</sup><br>or<br>1x 500 mm <sup>2</sup>                                | 2x 240 mm <sup>2</sup><br>or<br>1x 500 mm <sup>2</sup>  | 64 mm  | 610 mm<br>circumfer-<br>ence   | 610 mm or<br>915 mm<br>circumfer-<br>ence                                | 610 mm or<br>915mm                              |
| Output<br>levels           | 1 mA/A                               | 10 mV/A<br>100 mV/A                   | 1 mA/A                               | 10 mV/A<br>1 mV/A                 | 1 mA/A  | 1 mV/A<br>10 mV/A<br>100 mV/A   | 10 mV/A<br>1 mV/A<br>0.1 mV/A  | 100 mV/A<br>10 mV/A<br>1 mV/A  | 100 mV/A<br>10 mV/A<br>1 mV/A  | 50 mV/A<br>5 mV/A<br>0.5 mV/A                   |
| Output cable               | 1.5 m<br>shrouded<br>banana<br>plugs | 2 m to BNC termination                | 1.5 m<br>shrouded<br>banana<br>plugs | 2.5 m to BNC termination          | 1.6 m<br>shrouded<br>banana<br>plugs  | 1.6 m to BNC termination  | 2.1 m to BNC termination   | 2 m with double shrouded banana plugs                                      | 2.1 m to BNC termination   | 2 m to BNC,<br>4 mm plug<br>adapter<br>supplied |
| Warranty                   | One-year                             | One-year                              | One-year                             | One-year                          | One-year  | One-year  | One-year   | One-year   | One-year   | One-year  |
| Safety<br>rating           | CAT III 600 V                        | CAT III 600 V                         | CAT III<br>1000 V<br>CAT IV 600 V    | CAT III<br>1000 V<br>CAT IV 600 V |   | CAT III 600 V   | CAT III 600 V  | CAT III 600 V  | CAT III 600 V  | CAT III 600 V                                   |

#### **AC Current Clamp Selection Guide**

|             | i200           | i200s        | i400           | i400s              | i800           | i1000s              | i3000s             | i2000 Flex1        | i3000s Flex        |
|-------------|----------------|--------------|----------------|--------------------|----------------|---------------------|--------------------|--------------------|--------------------|
| 110/114/116 |                | 1 A to 200 A |                | 0.6 A to<br>400 A* |                | 0.6 A to<br>1000 A* | 1 A to 3000 A      | 2 A to 2000 A      | 3 A to 3000 A      |
| 115/117     | 60 A to 200 A  | 1 A to 200 A | 60 A to 400 A  | 0.6 A to<br>400 A* | 60 A to 800 A  | 0.6 A to<br>1000 A* | 1 A to 3000 A      | 2 A to 2000 A      | 3 A to 3000 A      |
| 233         | 60 A to 200 A  | 1 A to 200 A | 60 A to 400 A  | 0.6 A to<br>400 A* | 60 A to 800 A  | 0.6 A to<br>1000 A* |                    | 2 A to 2000 A      |                    |
| 27II        | 2 A to 200 A   | 1 A to 200 A | 2 A to 400 A   | 1 A to 400 A*      | 2 A to 800 A   | 0.1 A to<br>1000 A* | 1 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 28II        | 1.8 A to 200 A | 1 A to 200 A | 1.8 A to 400 A | 1.8 A to 400 A     | 1.8 A to 800 A | 0.2 A to<br>1000 A* | 2 A to 3000 A      | 2 A to 2000 A      | 3 A to 3000 A      |
| 77 IV       |                | 1 A to 200 A |                | 1 A to 400 A*      |                | 0.1 A to<br>1000 A* | 1 A to 3000 A      | 2 A to 2000 A      | 3 A to 3000 A      |
| 175/177/179 | 3 A to 200 A   | 1 A to 200 A | 3 A to 400 A   | 1 A to 400 A*      | 3 A to 800 A   | 0.3 A to<br>1000 A* | 3 A to 3000 A      | 2 A to 2000 A      | 3 A to 3000 A      |
| 1577/1587FC | 3 A to 200 A   | 1 A to 200 A | 3 A to 400 A   | 3 A to 400 A*      | 3 A to 400 A   | 0.3 A to<br>1000 A* | 3 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 83V/88V     | 2 A to 200 A   | 1 A to 200 A | 2 A to 400 A   | 1 A to 400 A*      | 2 A to 800 A   | 0.1 A to<br>1000 A* | 1 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 87V         | 2 A to 200 A   | 1 A to 200 A | 2 A to 400 A   | 2 A to 400 A*      | 2 A to 800 A   | 0.2 A to<br>1000 A* | 2 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 287/289     | 1 A to 200 A   | 1 A to 200 A | 1 A to 400 A   | 0.5 A to<br>400 A* | 1 A to 800 A   | 0.2 A to<br>1000 A* | 1 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 43B         |                | 1 A to 200 A |                | 0.35 A to<br>400 A |                | 0.1 A to<br>1000 A  | 1 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 434/435-II  |                | 1 A to 200 A |                | 1.2 A to<br>400 A  |                | 0.3 A to<br>1000 A  | 1.2 A to<br>3000 A | i430Flex-<br>TF-II | i430Flex-<br>TF-II |
| 120/B       |                | 1 A to 200 A |                | 2.5 A to<br>400 A  |                | 0.25 A to<br>1000 A | 2.5 A to<br>3000 A | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 190/-II     |                | 1 A to 200 A |                | 1 A to 400 A       |                | 0.1 A to<br>1000 A  | 1 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |
| 8808A       | 1 A to 200 A   | 1 A to 200 A | 1 A to 400 A   | 0.5 A to<br>400 A* | 1 A to 800 A   | 0.1 A to<br>1000 A* | 1 A to<br>3000 A   | 2 A to<br>2000 A*  | 3 A to<br>3000 A*  |
| 8845A/8846A | 1 A to 200 A   | 1 A to 200 A | 1 A to 400 A   | 1 A to 400 A*      | 1 A to 800 A   | 0.2 A to<br>1000 A* | 1 A to<br>3000 A   | 2 A to<br>2000 A*  | 3 A to<br>3000 A*  |
| 787B/789    | 50 A to 200 A  | 1 A to 200 A | 50 A to 400 A  | 2 A to 400 A*      | 50 A to 440 A  | 0.2 A to<br>1000 A* | 2 A to<br>3000 A   | 2 A to<br>2000 A   | 3 A to<br>3000 A   |

#### **Current Clamps AC**



#### i800 AC Current Clamp

This AC current clamp is designed to extend the current measuring capability of a digital multimeter to 800 A AC. It is compatible with a digital multimeter that accepts shrouded 4 mm banana plugs and has an AC milliamp range.

- Current range: 100 mA to 800 A RMS AC
- Frequency range: 30 Hz to 10 kHz (-3 dB)
- Safety rating: CAT III 600 V RMS



#### i400 AC Current Clamp

This high-safety current clamp for digital multimeters is a single range 400 A AC clamp that is designed to offer maximum utility in a very compact shape. The division ratio is 1000:1.

- Current range: 1 A to 400 A AC
- Frequency range: 5 kHz to 20 kHz (-3 dB)
- Safety rating: CAT IV 600 V, CAT III 1000 V



#### i400s AC Current Clamp

This high-safety compact current clamp with BNC output is a companion to a ScopeMeter or Power Quality Meter to measure up to 400 A AC.

- Current range: 0.5 A to 400 A AC
- Frequency range: 5 Hz to 10 kHz (-3 dB)
  Optional PM9081/001 Dual Banana Plug
- Optional PM9081/001 Dual Banana Plug Male to Female BNC Adapter is available for digital multimeters
- Safety rating: CAT IV 600 V, CAT III 1000 V



#### i200 AC Current Clamp

This small-sized single-range current clamp features safety-shrouded 4 mm banana plugs. It is compatible with most Digital Multimeters or other current measurement devices that accepts shrouded 4 mm banana plugs and has an AC milliamp range.

- Current range: 1 A to 200 A AC
- Frequency range: 40 Hz to 40 kHz
- Safety rating: ČAT III 600 V



#### i200s AC Current Clamp

This small-sized dual-range current clamp offers voltage output using a safety-insulated BNC connector. A dual banana-to-BNC adapter allows the clamp to be connected to meters with banana inputs.

- Current ranges: 0.1 A and 200 A AC switchable
- Frequency range: 40 Hz to 10 kHz
- Safety rating: CAT III 600 V



#### i2000 Flex AC Current Clamp

This current probe can be used to measure currents up to 2000 A when used in conjunction with multimeters, recorders, or data loggers. The flexible and lightweight measuring head allows quick and easy installation on thick and hard-to-reach areas.

- Current range: 20 A, 200 A, and 2000 A AC switchable
- Frequency range: 10 Hz to 20 kHz
- Safety rating: CAT III 600 V



#### i1000s AC Current Clamp

This large AC current clamp expands applications in industrial and power environments by connecting directly to an oscilloscope using a reinforced coaxial cable and an insulated BNC connector. It is ideal for measuring distorted current waveform RMS and harmonics.

- Current range: 0.1 A to 1000 A AC
- Frequency range: 10 Hz to +9100 kHz
- Accurate displays due to a passive filter that eliminates noise and ring on rapidlyrising di/dt waveforms
- Safety rating: CAT III 600 V



#### i3000s AC Current Clamp

This AC current clamp is designed as a clamp-on unit for use with Oscilloscopes. It also includes a dual banana to BNC adapter for use with multimeters with 4 mm banana input plugs.

- Current range: 1 A to 3000 A
- Frequency range: 10 Hz to 100 kHz
- Safety rating: CAT III 600 V



#### i3000s Flex-24 or -36 AC Current Clamp

i3000s Flex-24 is available in a convenient four-pack (i3000s Flex 4 Pack)

The flex clamp uses the Rogowski (aircored coil) principle and can be used to measure three ranges of currents up to 3000 A when used in conjunction with oscilloscopes, recorders or data loggers. The flexible and lightweight measuring head allows quick and easy installation in hard-to-reach areas without batteries or an external power source. This clamp fits around large conductors and is available in 610 mm and 914 mm lengths.

- Current range: 30 A, 300 Å, and 3000 A switchable
- Frequency range: 10 Hz to 50 kHz
- Safety rating: CAT III 600 V



#### i5s AC Current Clamp

Also available in a convenient three-pack (i5sPO3)

This compact 5 A AC clamp, specially configured to provide low-current accuracy while taking measurements on secondary current transformers, expands the use of the Fluke 430 Series Three-Phase Power Quality Analysers.

- Current range: 10 mA to 5 A
- Frequency range: 40 Hz to 5 kHz
- Safety rating: CAT III 600 V (for insulated conductors only)



#### i6000s Flex-24 or -36 AC Current Clamp

This AC current clamp flexible and lightweight measuring head allows quick and easy installation in hard-to-reach areas without batteries or an external power source. This clamp fits around large conductors and is available in both 610 mm and 914 mm lengths.

- Current range: 60 A, 600 A, and 6000 A switchable
- Frequency range: 10 Hz to 50 kHz (-3 dB)
- Safety rating: CAT III 600 V

# AMPS: AC/

#### **AC/DC Current Clamp Specifications**

|                            | 80i-110s   | i410  | i1010   | i30   | i30s                          | i310s   |
|----------------------------|--|---|---|---|-------------------------------|---|
| DC range                   | 0.1 A to 100 A   | 1 A to 400 A  | 1 A to 1000 A                                       | 30 mA to 30 A                                   | 30 mA to 30 A                 | 0.1 A to 450 A  |
| AC range                   | 0.1 A to 70 A  | 1 A to 400 A  | 1 A to 600 A  | 30 mA to 20 A RMS                               | 30 mA to 20 A RSM             | 0.1 A to 300 A  |
| Accuracy                   | 0.1 A to 10 A; AC to<br>1 kHz: ± 3% + 50 mA;<br>up to 100 A add 15%;<br>up to 20 kHz add 12% | 3.5 % + 0.5 A for DC<br>or AC<br>(45 to 400 Hz)     | 2 % + 0.5 A for DC<br>or AC<br>(45 to 400 Hz)       | ± 1% of reading, ± 2 mA                         | ± 1% of reading,<br>± 2 mA    | 30 A range:<br>1 % + 50 mA<br>300 A range:<br>1 % + 300 mA                            |
| Bandwidth (-3 dB)          | 100 kHZ  | 3 kHz   | 10 kHz  | dc to 20 kHz (-0.5 dB)                          | dc to 100 kHz (-0.5 dB)       | dc to 20 kHz  |
| Zero error<br>adjustment   | •  | •   | •   | •   | •                             | •   |
| Maximum conductor diameter | 11.8 mm  | 30 mm   | 30 mm   | 19 mm   | 19 mm                         | 19 mm   |
| Maximum conductor size     | 35 mm²   | 1x 400 mm <sup>2</sup> or<br>2x 240 mm <sup>2</sup> | 1x 400 mm <sup>2</sup> or<br>2x 240 mm <sup>2</sup> | 120 mm²   | 120 mm²                       | 120 mm²   |
| Output levels              | 10 mV/A, 100 mV/A  | 1 mV/A  | 1 mV/A  | 100 mV/A  | 100 mV/A                      | 1 mV/A, 10 mV/A   |
| Output cable               | 1.6 metre with BNC termination   | 1.2 metre with<br>shrouded banana<br>plugs          | 1.2 metre with<br>shrouded banana<br>plugs          | 1.5 metre with<br>shrouded dual<br>banana plugs | 2 metres with BNC termination | 2 metres with BNC<br>termination and<br>a BNC to safety<br>shrouded banana<br>adapter |
| Battery life               | 40 hours   | 60 hours  | 60 hours  | 30 hours  | 30 hours                      | 30 hours  |
| Warranty                   | One-year   | One-year  | One-year  | One-year  | One-year                      | One-year  |
| Safety                     | CAT II 600 V;<br>CAT III 300 V   | CAT III 600 V                                       | CAT III 600 V                                       | CAT III 300 V                                   | CAT III 300 V                 | CAT III 300 V   |

#### **AC/DC Current Clamp Selection Guide**

|               | 80i-110s                                | i410                                   | i1010                                   | i30                | i30s                                   | i310s                                   |
|---------------|---|--|---|--------------------|--|---|
| 114/115/      | 0.1 A to 100 A DC/                      | 1.4 A to 400 A DC/                     | 1.4 A to 1000 A DC/                     | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
| 116/117       | 0.1 A to 70 A AC*                       | 6 A to 400 A AC                        | 6 A to 600 A AC                         | 60 mA to 20 A AC   | 60 mA to 20 A AC                       | 0.6 A to 300 A AC                       |
| 233           | 0.1 A to 100 A DC/                      | 1.4 A to 400 A DC/                     | 1.4 A to 1000 A DC/                     | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC*                       | 6 A to 400 A AC                        | 6 A to 600 A AC                         | 60 mA to 20 A AC   | 60 mA to 20 A AC                       | 0.6 A to 300 A AC                       |
| 27II          | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC*                       | 1 A to 400 A AC                        | 1 A to 600 A AC                         | 30 mA to 20 A AC   | 30 mA to 20 A AC                       | 0.1 A to 300 A AC                       |
| 28II          | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.2 A to 70 A AC*                       | 6 A to 400 A AC                        | 6 A to 600 A AC                         | 60 mA to 20 A AC   | 60 mA to 20 A AC                       | 2 A to 300 A AC                         |
| 77-IV         | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC*                       | 5 A to 400 A AC                        | 5 A to 600 A AC                         | 40 mA to 20 A AC   | 40 mA to 20 A AC                       | 0.4 A to 300 A AC                       |
| 175/177/179   | 0.11 A to 100 A DC/                     | 1.6 A to 400 A DC/                     | 1.6 A to 1000 A DC/                     | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.3 A to 70 A AC*                       | 30 A to 400 A AC                       | 30 A to 600 A AC                        | 300 mA to 20 A AC  | 300 mA to 20 A AC                      | 3 A to 300 A AC                         |
| 1577/1587 FC  | 0.1 A to 100 A DC/                      | 1.2 Å to 400 Å DC/                     | 1.2 A to 1000 A DC/                     | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.3 A to 70 A AC*                       | 30 Å to 400 Å AC                       | 30 A to 600 A AC                        | 300 mA to 20 A AC  | 300 mA to 20 A AC                      | 3 A to 300 A AC                         |
| 83V/88V       | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC*                       | 1 A to 400 A AC                        | 1 A to 600 A AC                         | 30 mA to 20 A AC   | 30 mA to 20 A AC                       | 0.1 A to 300 A AC                       |
| 87V           | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.2 A to 70 A AC*                       | 20 A to 400 A AC                       | 20 A to 600 A AC                        | 200 mA to 20 A AC  | 200 mA to 20 A AC                      | 2 A to 300 A AC                         |
| 287/289       | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC*                       | 1 A to 400 A AC                        | 1 A to 600 A AC                         | 30 mA to 20 A AC   | 30 mA to 20 A AC                       | 0.1 A to 300 A AC                       |
| 123/124       | 0.1 A to 100 A DC/<br>0.25 A to 70 A AC | 1 A to 400 A DC/<br>25 A to 400 A AC** | 1 A to 1000 A DC/<br>25 A to 600 A AC** |                    | 30 mA to 30 A DC/<br>250 mA to 20 A AC | 0.1 A to 450 A DC/<br>2.5 A to 300 A AC |
| 190 Series II | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC                        | 5 A to 400 A AC**                      | 5 A to 600 A AC**                       | 50 mA to 20 A AC** | 50 mA to 20 A AC                       | 0.5 A to 300 A AC                       |
| A808A         | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC*                       | 2 A to 400 A AC                        | 2 A to 600 A AC                         | 30 mA to 20 A AC   | 30 mA to 20 A AC                       | 0.2 A to 300 A AC                       |
| 8845A/8846A   | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 30 mA to 30 A DC/                      | 0.1 A to 450 A DC/                      |
|               | 0.1 A to 70 A AC*                       | 1 A to 400 A AC                        | 1 A to 600 A AC                         | 30 mA to 20 A AC   | 30 mA to 20 A AC                       | 0.1 A to 300 A AC                       |
| 705/707       | 0.1 A to 100 A DC,                      | 4 A to 400 A DC,                       | 4 A to 1000 A DC,                       | 40 mA to 30 A DC,  | 40 mA to 30 A DC,                      | 0.4 A to 450 A DC,                      |
|               | no AC*                                  | no AC                                  | No AC                                   | no AC              | no AC                                  | no AC                                   |
| 715           | 0.1 A to 100 A DC,                      | 4 A to 400 A DC,                       | 4 A to 1000 A DC,                       | 40 mA to 30 A DC,  | 40 mA to 30 A DC,                      | 0.1 A to 450 A DC,                      |
|               | no AC*                                  | no AC                                  | No AC                                   | no AC              | no AC                                  | no AC                                   |
| 787/789       | 0.1 A to 100 A DC/                      | 1 A to 400 A DC/                       | 1 A to 1000 A DC/                       | 30 mA to 30 A DC/  | 3 mA to 30 A DC/                       | 0.1 A to 450 A DC/                      |
|               | 0.2 A to 70 A AC*                       | 20 A to 400 A AC                       | 20 A to 600 A AC                        | 200 mA to 20 A AC  | 200 mA to 20 A AC                      | 2 A to 300 A AC                         |

<sup>\*</sup> Requires PM9081 Adapter \*\* Requires PM9082/001 Adapter

#### AC/DC CLAMPS



#### i410 AC/DC Current Clamp

This battery-powered Hall-effect probe measures 1 A to 400 A with large-claw clamp that gives access to difficult-to-reach areas. It is compatible with most multimeters and other devices that measure AC and DC current and accepts shrouded 4 mm banana pluras.

- On/Off LED indicator
- AC and DC current range: 1 A to 400 A
- Frequency range: 3 kHzSafety rating: CAT III 600 V



#### i410-KIT AC/DC Current Clamp and Carry Case Kit

This special-value kit for electrical professionals adds AC and DC current measurement capabilities to a digital multimeter. A roomy carrying case holds a meter and the current clamp plus test leads, probes and manuals. Kit includes:

- i410 AC/DC Current Clamp
- C116 Soft Carrying Case



#### i1010 AC/DC Current Clamp

This clamp measures both AC and DC currents with a large-jaw, battery-powered Hall-effect probe that gives access to difficult-to-reach areas. It is compatible with most Fluke multimeters and any other devices that measure AC and DC current and accept shrouded 4 mm banana plugs.

- On/Off LED indicator
- AC current range: 1 A to 600 A AC
  DC current range: 0.5 A to 1000 A DC
- Frequency range: DC to 10 kHz
- . Safety rating: CAT III 600 V RMS



#### i1010-Kit AC/DC Current Clamp and Carry Case Kit

This special-value kit for electrical professional adds AC and DC current measurement capabilities to a digital multimeter. A roomy carrying case holds a meter and the current clamp plus test leads, probes and manuals. Kit includes:

- i1010 AC/DC Current Clamp
- C116 Soft Carrying Case



#### i30 AC/DC Current Clamp

Based on Hall-effect technology, this battery-powered clamp measures both AC and DC current. It may be used in conjunction with multimeters, recorders and other suitable recording instruments for accurate non-intrusive current measurement.

- AC current range: 30 mA to 20 A RMS
- DC current range: 30 mA to 30 A
- Frequency range: DC to 20 kHz (-0.5 dB)
- Safety rating: CAT III 300 V



#### i30s AC/DC Current Clamp

Based on Hall effect technology, this batterypowered clamp measures both AC and DC current. It may be used with ScopeMeter and other suitable recording instruments for accurate non-intrusive current measurement.

- AC current range: 30 mA to 20 A RMS
- DC current range: 30 mA to 30 A
- Frequency range: DC to 100 kHz
- Safety rating: CAT III 300 V



#### i310s AC/DC Current Clamp

Based on Hall-effect technology, this battery-powered clamp measures both AC and DC current. This clamp is especially useful for current measurements on inverters, switching power supplies, industrial controllers, automotive diagnostics, and other applications requiring current measurements and/or waveform analysis.

- AC current range: 0.1 A to 300 A
- DC current range: 0.1 A to 300 A
- Frequency range: DC to 20 kHz
- Safety rating: CAT III 300 V



#### 80i-110s AC/DC Current Clamp

This clamp is compatible with ScopeMeters, power harmonics analysers, multimeters, or other voltage measurement devices that has BNC input connectors.

- AC current range: 0.1 A to 70 A
- DC current range: 0.1 A to 100 A
- Frequency range: 1 Hz to 100 kHz
- Optional PM9081/001 Dual Banana Plug Male to Female BNC Adapter is available for digital multimeters
- Safety rating: CAT II 600 V

#### Did you know?

# Does your current probe read zero current when you clamp it around a power cord?

That's because the power cord has both the hot and neutral current carrying wire in it. If both wires are in the jaws of the clamp meter, the fields cancel each other out, and the current clamp will read nothing. You need to put just one current-carrying conductor in the jaw of the current clamp. If you don't have access to the separate wires within the cord, use a line splitter tool to avoid breaking the circuit.

# CASES. HOLSTERS & HANGERS

| Fluke Tool   | 110/114/115/116/117 | 175/177/179 | 281/289 | 27 II/28 II | 61 | 77 IV | 83V/87V/88V | 233 | 287/289 | 323/324/325 | 373/374/375/376/902 | 353/355 | 365       | 1503/1507/1577/1587 | 9040/9062 | 430/173X/174X Series | 120B Series | 190 Series | 51/52/53/54 II | 561   | 570 Series | 705/707 | 712/714/715/717 | 718 | 724/725/726 | 753/754 | 787B | 789 | 922 | 971 | T5/T6/T+/T+Pro | T90/T110/T130/T150 | VT02/VT04/VT04A |
|--------------|---------------------|-------------|---------|-------------|----|-------|-------------|-----|---------|-------------|---------------------|---------|-----------|---------------------|-----------|----------------------|-------------|------------|----------------|-------|------------|---------|-----------------|-----|-------------|---------|------|-----|-----|-----|----------------|--------------------|-----------------|
| Soft Cases   |                     | 1           |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            | 1              |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| C23          | •                   |             |         |             | •  | •     |             | •   |         | •           |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     | •   | •   |                |                    |                 |
| C25          | •                   | •           |         | •           |    | •     | •           | •   |         | •           |                     |         |           | •                   | •         |                      |             |            | •              |       |            |         | •               |     |             |         | •    | •   | •   | •   |                |                    |                 |
| CAMO-<br>C25 | •                   | •           |         | •           |    | •     | •           | •   |         | •           |                     |         |           | •                   | •         |                      |             |            | •              |       |            |         | •               |     |             |         | •    | •   | •   | •   |                |                    |                 |
| C33          |                     |             |         |             |    | •     |             |     |         | •           | •                   |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         | •    |     |     |     | •              |                    |                 |
| C35          | •                   | •           |         | •           |    | •     | •           | •   |         |             |                     |         |           | •                   |           |                      | •           |            | •              |       |            | •       | •               | •   |             |         | •    | •   | •   |     |                |                    |                 |
| CAMO-<br>C37 |                     |             |         |             |    | •     |             |     |         | •           |                     |         | •         |                     |           |                      |             |            |                |       |            |         |                 |     |             |         | •    |     |     |     | •              |                    |                 |
| C43          |                     |             |         |             |    |       |             | •   |         |             |                     | •       |           |                     |           |                      | •           |            |                |       |            |         |                 | •   | •           |         |      |     |     |     |                |                    |                 |
| C50          | •                   |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            | •              |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| C75          |                     |             |         |             |    |       |             |     |         |             |                     |         | For       | mult                | tiple     | test l               | eads        | and        | acce           | ssori | es         |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| C90          |                     | •           |         |             |    | •     |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     | •   |     |                |                    | •               |
| C115         | •                   | •           |         | •           |    | •     | •           | •   |         |             |                     |         |           | •                   |           |                      | ٠           |            | •              |       |            | •       | •               | •   | •           |         | •    | •   |     |     |                |                    |                 |
| C116         | •                   | •           | •       |             |    | •     | •           | •   |         |             |                     |         |           | •                   |           |                      | •           |            | •              |       |            | •       | •               | •   | •           |         | •    | •   |     |     |                |                    |                 |
| C150         |                     |             |         |             |    | •     |             |     |         | •           | •                   |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         | •    |     |     |     | •              | •                  |                 |
| C280         | •                   | •           |         |             |    | •     | •           | •   |         |             |                     |         |           | •                   |           |                      | •           |            | •              |       |            | •       | •               | •   | •           |         | •    | •   |     |     |                |                    |                 |
| C345         |                     |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             | eads       |                |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| C550<br>C781 |                     | ĺ           |         |             |    |       |             |     |         |             |                     | Fo      | r mul<br> | 1                   | mete      | ers, t               |             | eads :     | and a          | acces | ssorie<br> | es<br>  |                 | _   | ۱ _         | _       |      |     |     |     |                | 1                  |                 |
| C789         |                     |             | •       |             |    |       |             |     |         |             |                     |         |           | •                   |           |                      | •           |            |                |       |            |         |                 | •   | •           | •       | •    | •   |     |     |                |                    |                 |
| Hard Case    | e                   |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| C20          |                     |             |         | •           |    |       |             |     | •       |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| C100         |                     | •           |         | •           |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         | •    |     |     |     |                |                    |                 |
| C101         |                     | •           |         | •           | •  |       | •           | •   | •       | •           | •                   |         |           | •                   | •         |                      |             |            | •              |       |            | •       | •               | •   | •           |         | •    | •   |     | •   |                | •                  |                 |
| CXT80        |                     |             |         | •           |    |       | •           | •   |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         | •    | •   |     |     |                |                    |                 |
| CXT170       | •                   | •           |         |             |    | •     |             |     |         |             |                     |         |           | •                   |           |                      |             |            | •              |       |            |         | •               |     |             |         | •    | •   |     |     |                |                    |                 |
| CXT280       |                     |             | •       |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         | •    | •   |     |     |                |                    |                 |
| CXT1000      |                     |             |         | ,           |    |       |             |     |         |             |                     | Fo      | r mul     | ltiple              | mete      | rs, a                | ccess       | ories      | and            | othe  | r too      | ls      |                 |     | ,           |         | ,    |     |     |     |                | ,                  |                 |
| C800         |                     | •           |         |             |    | •     | •           | •   |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         | •               |     |             |         | •    |     |     |     |                |                    |                 |
| C1600        |                     |             |         |             |    |       |             |     |         |             |                     | Fo      | r mul     | ltiple              | mete      | ers, a               | ccess       | ories      | and            | othe  | r too      | ls      |                 |     |             |         |      |     |     |     |                |                    |                 |
| Leather Cas  | ses                 |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| C510         |                     | •           |         |             |    | •     | •           |     |         |             |                     |         |           | •                   |           |                      |             |            | •              |       |            |         | •               |     | •           |         | •    | •   |     |     |                |                    |                 |
| C520A        |                     |             |         |             |    |       | •           |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     | •              |                    |                 |
| нвом         |                     |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         | •    |     | •   |     |                |                    |                 |
| Holster      |                     |             |         |             |    |       |             |     |         | _           |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| Н3           |                     |             |         |             |    |       |             |     |         | •           | •                   |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     |                |                    |                 |
| H5<br>H6     |                     |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                | •     |            |         |                 |     |             |         |      |     |     |     | •              | •                  |                 |
| H15          |                     |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     | T+/T<br>+Pro   | •                  |                 |
| Hangers      |                     |             |         |             |    |       |             |     |         |             |                     |         |           |                     |           |                      |             |            |                |       |            |         |                 |     |             |         |      |     |     |     | +Pro           |                    |                 |
| ToolPak      | •                   | •           |         |             |    | •     | •           | •   | •       |             |                     |         |           |                     | •         |                      |             |            | •              |       |            |         | 715             |     | •           |         |      | •   |     |     |                |                    |                 |

#### **Soft Cases**



#### **C12A Meter Case**

Zippered case with inside pockets and belt loop for convenient carrying.

- Made of polyester
- Dimensions (HxWxD): 172 mm x 128 mm x 38 mm



#### **C23 Soft Carrying Case**

Zippered case featuring a belt loop for convenient carrying and an inner pocket to store test leads or small accessories.

- Made of durable vinyl
- Ideal companion case to: Fluke 61/65 IR Thermometers and Fluke 321/322 Clamp Meters
- Dimensions (HxWxD): 225 mm x 95 mm x 58 mm



#### **C25 Large Soft Case for DMMs**

Zippered carrying case with padding and inside pocket for holding accessories.

- Made of polyester
- Dimensions (HxWxD): 218 mm x 128 mm x 64 mm











#### **CAMO-C25 Camouflage Carrying Case**

Zippered carrying case with padding and inside pocket for holding accessories.

- High quality 1000D fabric
- Dimensions (HxWxD): 203 mm x 121 mm x 46 mm



#### **C33 Soft Carrying Case**

Zippered carrying case with durable vinyl exterior and belt loop. Inner pocket stores test leads and small accessories.

- Made of polyester
- Dimensions (HxWxD): 280 mm x 115 mm x 55 mm



#### **C35 Soft Carrying Case**

Case top opens laterally to allow use of test tool without removing it from the case and includes a Velcro® strap to secure the tool.

- Made of durable polyester 600D
- Dimensions (HxWxD): 220 mm x 140 mm x 65 mm



#### CAMO-C37 Camouflage Carrying Case

Zippered carrying case with inner pocket for storing test leads and small accessories.

- High quality 1000D fabric
- Dimensions (HxWxD): 265 mm x 90 mm x 30 mm



#### C43 Soft Carrying Case

Zippered carrying case includes inner front pocket with closure and two pockets to store test leads or small accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD): 318 mm x 230 mm x 90 mm



#### **C50 Meter Case**

Zippered and padded case featuring an inside strap as well as a belt loop for convenient carrying. Also includes an inside pocket for holding accessories.

- Made of polyester
- Dimensions (HxWxD): 192 mm x 90 mm x 38 mm



#### **C60 Accessory Case**

The Fluke C60 is a soft case compatible with many Fluke test tools including: T6 and T5 Series, T+/T+PRO, 110 Series, 170 Series.

Made of polyester



#### **C75 Accessory Case**

Zippered carrying case designed for carrying small accessories.

Includes two inside pockets.

- Made of polyester
- Dimensions (HxWxD): 179 mm x 103 mm x 26 mm



#### **C90 Soft Case for DMMs**

Zippered carrying case featuring a belt loop. Also includes padding to protect the meter and an inside pocket for holding accessories.

- Made of polyester
- Dimensions (HxWxD): 205 mm x 90 mm x 72 mm



#### **C115 Soft Carrying Case**

Includes two padded pockets for protection of two test tools, and a pouch for test leads and other accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD): 240 mm x 205 mm x 75 mm



#### **C116 Soft Carrying Case**

Provides adjustable padded space with a moveable Velcro® divider.

- Made of durable polyester 600D
- Dimensions (HxWxD): 240 mm x 230 mm x 65 mm



#### **C150 Soft Carrying Case**

Zippered carrying case with inner pocket for storing test leads and small accessories.

- High quality 1000D fabric
- Dimensions (HxWxD): 298 mm x 114 mm x 56 mm



#### C280 Soft Case

Designed especially for larger format test tools. Includes detachable, extendable shoulder strap and an inner front pocket with closure and dual pouch pockets for test tools and accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD): 230 mm x 185 mm x 65 mm



#### C345 Soft Case

The perfect case for carrying a wide range of Fluke handheld test tools and accessories. Includes an elastic accessory strap and mesh accessory retainer as well as an outer pouch, outer zipper packet and two slash pockets for convenient accessory storage.

- Made of durable polyester 600D
- Dimensions (HxWxD):
  - 360 mm x 200 mm x 240 mm

#### CASES. HOLSTERS & HANGERS



#### C550 Tool Bag

Rugged, weather-resistant tool bag, features a large storage compartment with 25 pockets as well as steel-reinforced frame.

Dimensions (HxWxD): 333 mm x 513 mm x 231 mm



#### C570 Soft Case

Designed specifically for the Fluke 560 and 570 Series Infrared Theremometers

- Made of polyester
- Dimensions (HxWxD): 240 mm x 89 mm to 170 mm x 56 mm



#### **C195 Soft Carry Case**

- Zippered with multiple storage compartments & shoulder strap
- Dimensions (HxWxD): 513 mm x 331 mm x 231 mm



#### C125/C781 Meter Case

Zippered case, designed for carrying a meter as well as a detachable external pouch for holding test leads.

- Made of durable polyester 600D
- Dimensions (HxWxD): 269 mm x 141 mm x 90 mm



#### **C789 Meter and Accessory Case**

Large carrying case with three compartments, removable handle, and shoulder strap. Holds a meter and multiple accessories.

- Made of durable polyester 600D
- Dimensions (HxWxD): 308 mm x 256 mm x 77 mm



#### **C799 Soft Field Case**

For use with Fluke 750 Series Documenting Process Calibrators

- Allows instrument to be operated inside case with clear front protecting keyboard
- Dimensions (HxWxD): 305 x 229 x 165mm)

#### **Hard Cases**



#### **VT04-HARD CASE**

For Fluke VTO4/A Visual IR Thermometers



#### **C100 Universal Carrying Case**

Large, tough polypropylene case with carrying handle and snap-on lid.

Dimensions (HxWxD): 397 mm x 346 mm x 122 mm



#### C101 Hard Case

Tough polypropylene case with configurable diced foam interior to store and protect tools and accessories.

 Exterior dimensions (HxWxD): 305 mm x 360 mm x 105 mm



#### **C290 Hard Shell Protective Carry Case**

For use with Fluke 190 Series II SopeMeters

Dimensions (HxWxD): 1245 mm x 939 mm x 368 mm



#### C1600 Gear Box

A rugged, molded plastic case with a deep interior and lift-out tray.

- Includes five hook and loop straps to wrap cords and test leads
- Dimensions (HxWxD): 260 mm x 390 mm x 200 mm



#### **CXT Extreme Case Series**

- CXT1000: for multiple meters, accessories and other test tools (Dimensions (HxWxD): 343 mm x 465 mm x 178 mm
- CXT1000 features a diced foam interior for custom storage configuration
- Unbreakable, watertight, airtight, dust proof, chemical resistant and corrosion proof
- Includes an automatic purge valve for quick equalisation after changes in atmospheric pressure
- CXT80: for use with 87V, 80 Series, 187/189, 27 II/28 II series
- CXT170: for use with 170 Series, 114/115/116/117, 77 III, and 77 IV
- CXT280: for use with 287 or 289
- Dimensions (HxWxD): 279 mm x 318 mm x 127 mm

#### Leather Cases



#### **C520A Leather Tester Case**

Rugged leather case designed to hold Fluke electrical testers. It features a large belt loop and a top flap to secure the tester. Made of top-grain cowhide with heavy-duty stitching and reinforced rivets.

Dimensions (HxWxD): 256 mm x 154 mm x 106 mm



#### C510 Leather Meter Case

Rugged leather case features a large belt loop and a top flap to secure the tool. Made of top-grain cowhide with heavyduty stitching and reinforced rivets.

Dimensions (HxWxD): 287 mm x 179 mm x 106 mm

#### **Holsters**



#### **H3 Clamp Meter Holster**

Rugged fabric holster designed to hold Fluke 330 Series Clamp Meters. It features a built-in belt loop and a handy pocket with snap for test lead storage.

Dimensions (HxWxD):

231 mm x 90 mm x 64 mm



#### **H5 Electrical Tester Holster**

Rugged fabric holster designed to hold Fluke T3 and T5 Electrical Testers. It features a built-in belt loop and flap for test lead storage.

Dimensions (HxWxD): 192 mm x 90 mm x 38 mm



#### **H6 Infrared Thermometer Holster**

Durable nylon construction with Velcro® closures provides quick access and protection for infrared thermometers.

Dimensions (HxWxD): 302 mm x 178 mm x 57 mm



#### **HT6 Holster**

For use with models T6-600 and T6-1000 Flap for test lead storage and built-in belt dool



#### **H15 Electrical Tester Holster**

Rugged fabric holster designed to hold Fluke T90, T110, T130 and T150 Two-Pole Testers.

- High quality 1000D fabric Dimensions (HxWxD): 279 mm x 92 mm x 51 mm



#### **H80M Protective Holster** with Magnetic Hanging Strap

Convenient snap-on holster with a magnetic hanging system enables hands-free work while protecting digital multimeters or calibration tools.

- Includes a hanging magnet, general purpose hanger, and hook/loop straps Dimensions (HxWxD): 190 mm x 95 mm x 43 mm



#### C10 Meter Holster

Snap-on holster absorbs shocks and protects

- multimeters from rough handling.

  Compatible with Fluke 10 Series
- Multimeters
- Dimensions (HxWxD): 154 mm x 77 mm x 45 mm

#### **Hangers**



#### TPAK ToolPak™ Magnetic Meter Hanger

Hang your meter in a variety of ways for convenient hands-free operation. Attaches to back of many Fluke meters, including 110, 170, 180, 280 Series, 83V and 87V DMMs, 724, 725 and 789 Process Calibrators, 70 Series III DMMs, 1503, 1507, 1577 and 1587 FC Insulation Multimeters and 50 Series II Digital Thermometers.

#### Lights



#### L200 Probe Light

Small, rugged light that easily attaches to any Fluke test probe, illuminates the contact area and frees hands for work.

- Bright white LED with 120 hours of battery life
- Two 3 V watch batteries included



#### L205 Mini Hat Light

Rugged, high-intensity Xenon work light with pre-focused optical-quality reflector attaches to a baseball cap to allow handsfree work.

- Includes waterproof ABS case that won't crack or chip
- Two AAA batteries included



#### L206 Deluxe LED Hat Light

Attach this water-resistant light to a hard hat, a baseball hat, or even a panel door for hands-free bright light where needed. Includes a 360° rotating clip, special hardhat attachment, and neck lanyard. (Hat not included).

- Three LEDs with 40-hour battery life
- Three AAA battery included



#### L207 High Intensity Light with Collector's Cap

Powerful, lightweight, mini-Xenon light illuminates work area to free hands for work. Comes with Limited Edition Fluke collector's cap that adjusts for all-day comfort. Waterproof, rugged light attaches to bill of baseball cap.

- Xenon high intensity work light
- Two AAA batteries included



#### L210 Probe Light Kit

Two probe extenders 20 cm fit modular test probes and keep hands away from live circuits. Ultra-bright white LED provides 120 hours of battery life. Kit includes:

- L200 Probe Light
- SureGrip™ test probe extenders
- Two 3 V watch batteries included
- Probe extenders safety rating: CAT III 1000 V, 10 A



#### L211 Probe Light Kit

This special-value combo pairs the new L200 Probe Light with one of the most popular test leads by Fluke and a handy carrying case. Probe light attaches to any Fluke test probe to free both hands for work. Kit includes:

- L200 Probe Light
- TL71 Premium Test Lead Set
- C75 Accessory Case



#### L215 SureGrip™ Kit with Probe Light and Probe Extender

Kit includes:

- L200 Probe Light
- SureGrip™ Test Probe Extenders, 20 cm
- TP220 SureGrip™ Industrial Test Probes
- TL224 SureGrip™ Insulated Test Leads
- Foldable pouch with six pockets and hook & loop closure
- Safety rating:
  - -TP220: CAT II 1000 V, 10 A. (CAT III 1000 V, CAT IV 600 V with protective cap)
  - -TL224: CAT III 1000 V, CAT IV 600 V, 10 A
  - —Probe extenders: CAT III 1000 V, 10 A

# OTHER ACCESSORIES

#### **High Frequency**



#### **85RF High Frequency Probe**

Converts a DC voltmeter with an input impedance of 10 megohms into a high frequency (100 kHz to 500 MHz) RF voltmeter.

- Voltage range: 0.25 V to 3 V AC RMS
- Maximum input: 30 V RMS, 200 V DC
- AC to DC ratio: 1:1
- Ratio accuracy at 25 MHz and loaded with 10 megohms

#### **Fiber Optics**



#### **FOM Fiber Optic Meter**

Allows testing and maintenance of fiber optic cables without buying a new meter. It plugs directly into any digital multimeter with an mV DC function and a 10 megohm input impedance to quickly and accurately verify fiber optic cable system loss.

- Wave lengths: 1550, 1300, 850 & nm
- Light sources sold separately



#### FOS-850 and FOS-850/1300 Fiber Optic Light Source

Both of these fiber optics accessories are designed to offer a variety of light sources for testing different cable lengths.

- Wave lengths:
  - -FOS-850: 850 nm; FOS-850/

#### Miscellaneous



#### **VT04 Li-ion Rechargeable Battery**

VTO4 charger, power supply, USB socket plug and go 5 V DC 1 AMP 5 W.



#### **Fluke VT04 Battery**

Replacement Li-ion Rechargeable Battery for the VT04.



#### **PV350 Pressure Vacuum Module**

Single unit allows digital multimeters to make both pressure and vacuum measurements.

- Transducer sealed in 316 stainless steel compatible with variety of liquids and gases
- Vacuum measurement: to 76 cm Hg
- Pressure measurement: to 3447 kPa



#### IR189USB USB Cable Adapter

Included with FVFSC2 and FVF-Basic software.

 Small adapter to connect the cable to the 189, 287, 289, 1653B or the 1550C is included



#### MC6 and MC50, MeterCleaner $^{\text{\tiny TM}}$ Wipes, 6-Pack and 50-Pack

Pre-moistened, industrial-strength wipes remove dirt, oil, and grease from meters. Individually packaged, each wipe easily cleans one meter and is safe on rubber and plastic.

 Non-toxic and safe for the environment



#### SV225 Stray Voltage Adapter

Stray voltage can appear in electrical installations, due to the capacity between wires. This may result in erroneous readings on high impedance meters. The SV225 solves this without compromising safety.

- On energised wires, the meter will indicate the real voltage
- On non-energised circuits the meter will read close to zero (even if there are stray voltages)
- Can be used on all meters with standard input spacing
- Safety rating: CAT III 1000 V, CAT IV 600 V

**Note:** This adapter should not be used on low-voltage control circuits or where the circuit under test could be adversely-affected by this low impedance load. The adapter is designed to handle continuously-applied power system voltages without damage. However, this adapter can be used intermittently to determine whether a circuit is energised.

#### Fluke Connect®



#### ir3000 FC Connector for Fluke Connect®

- Get all the benefits of the Fluke Connect app, and be on the same page, even while in different places
- Wirelessly share measurements with your team—anywhere, anytime
- Connect the Fluke 289/287
  Multimeters, Fluke 1550C/1555
  Insulation Testers and Fluke 789
  ProcessMeter with the ir3000 FC.



#### **PC3000 Wireless PC Adapter**

- Fluke PC3000 FC Adapter and software
- Must be connected to the USB port in order to enable communication between FC modules and software.
- SW3000 supports up to two PC3000 FC Adapters





#### BP880 BNC to Female Double Stacking Banana Plug

Converts a BNC scope lead to a dual banana plug for connection to a digital multimeter to provide hands-free testing in controlled voltage environments.

- Voltage range: up to 500 V AC RMS
- 4 mm banana plug is nickel-plated, beryllium copper for low contact resistance



#### BP881 BNC to Male Double Stacking Banana

Easily connects a digital multimeter to a BNC patch cord to provide hands-free testing in controlled voltage environments. This adapter connects accessories that have a male BNC output.

- Voltage range: up to 500 V AC RMS
- 4 mm banana plug is nickel-plated, beryllium copper for low contact resistance



#### **TL28A Automotive Test Lead Set**

Silicone-insulated test leads (red, black) with large, solid copper alligator clips with 12.7 mm opening and serrated teeth.

- 1.5 m test leads
- Safety rating: 30 V, 10 A



#### TL82 Automotive Pin and Socket Adapter Set

This collection of male and female adapters provides firm connection to pin-and-socket connectors. Rated to 60 V DC. Set includes:

- Two retractable shrouded test leads (red, black) 1.2 m
- Eight pin-and-socket adapters with flexible tips (red, black):
   Size 22 contact 0.76 mm, rated 5 A
  - Size 22 contact 0.76 mm, rated 3 A - Size 20 contact 1.02 mm, rated 7.5A
  - Size 16 contact 1.60 mm, rated 13 A
  - Size 12 contact 2.36 mm, rated 23 A



#### TLK281 SureGrip™ Automotive Test Lead Kit

Sharp stainless steel probes can be used to contact the wire conductor or pinpoint tests on a circuit or relay while the large-jaw alligator clips ensure a good ground on the engine or connection to battery terminals. Rated to 60 V DC. Kit includes:

- TP81 Insulation Piercing Clip Set
- TL224 SureGrip™ Insulated Test Leads
- TP220 SureGrip™ Industrial Test Probes
- AC220 SureGrip™ Alligator Clips
- AC285 SureGrip™ Alligator Clips
- Soft Case



#### TLK282 SureGrip™ Deluxe Automotive Test Lead Kit

This kit includes everything in the TLK281 Kit plus a few extras. The back probe pins slide past weather-pack connectors on fuel injectors, TPS, and MAP sensors. A hook probe with plunger actuation allows quick connection to pins or exposed conductors. Rated to 60 V DC. Kit includes:

- TP81 Insulation Piercing Clip Set
- TP40 Automotive Back Probe Pins (five)
- TL224 SureGrip™ Insulated Test Leads
   TP220 SureGrip™ Industrial Test Probes
- AC220 SureGrip™ Alligator Clips
- AC285 SureGrip™ Alligator Clips
- AC280 SureGrip™ Hook Clips
- Soft Case



#### **TP40 Automotive Back Probe Pins**

Flexible and formable 31-75 mm pins provide an easy connection past weather-pack seals to connector conductors. These five pins are a must-have for fuel injectors, TPS, and MAP sensors, as well as for any under-hood or under-vehicle connector with weather-pack seals.

- 4 mm banana jack accepts digital multimeter and banana jack leads
- Easily connects to modular leads
- Rated to 60 V DC



#### **TP81/TP82 Insulation Piercing Clip Set**

Two stainless steel probes (red, black) pierce insulation on 14,16 and 18 gauge wire. Needle depth can be controlled to minimise insulation damage. Essential for use under hood or under dash. Can be used on fuel injectors or sensors while providing complete insulation to grounding. Probe connects to a banana jack that accepts all digital multimeter and banana jack leads (such as the TL224 SureGrip™ Insulated Test Leads).

- TP81 has non-rotating 4 mm banana jack to prevent leads from tangling
- Rated to 60 V DC
- TP82 is for use with test leads with 2 mm probes



#### **TP88 Rigid Back Probe Pins**

Better than a test probe alone, these rigid back probe pins easily pass between a weather-pack seal and wire. A sharp point ensures good contact to the electrical connector, and insulation protects the pin from shorting to other wires. Rated to 60 V DC

- Slides onto 2 mm test probes
- Probe length: 51 mm



#### RPM80 Inductive Pick-Up/External Trigger

- Provides RPM measurement capability when clipped on spark plug wire
- For use with Fluke 88 Series and 78 Series Digital Multimeters.



#### **Battery and Charger Compatibility**

Prevent the unexpected loss of power with our rugged and rechargeable battery packs and keep your Fluke Infrared Camera charged while you're on the road with our car chargers.

| Model Number   | Ti27/<br>TiR27 /<br>Ti29/<br>TiR29/<br>Ti32/<br>TiR32 | Ti29/<br>TiR29 | Ti32/<br>TiR32 | Ti90/<br>Ti95 | TiS10/<br>TiS20/<br>TiS20+/<br>TiS40/<br>TiS40 | TiS55/<br>TiS60/<br>TiS60+/<br>TiS65/<br>TiS75 | Ti100/<br>Ti105/<br>Ti110/<br>TiR105/<br>TiR110<br>TI125/<br>TiR125 | Ti200/<br>Ti300/<br>Ti300+/<br>Ti400/<br>Ti401/<br>Ti450/<br>Ti480 | TiX500/<br>TiX501/<br>TiX520/<br>TiX560/<br>TiX580 | TiX620/<br>TiX640/<br>TiX660/<br>TiX1000 |
|--|---|----------------|----------------|---------------|--|--|---|--|--|--|
| TI-SBC3B<br>Battery Charging Base                          | •   | •              | •              | •             | •  | •  | •   | •  | •  |  |
| TI-SBP3 Rechargeable Lithium-ion Smart Battery Pack        | •   | •              | •              | •             | •  | •  | •   | •  |  |  |
| <b>TI-SBP4</b> Rechargeable Lithium-ion Smart Battery Pack |   |                |                |               |  |  |   |  | •  |  |
| TI-CAR CHARGER   | •   | •              | •              | •             | •  | •  | •   | •  | •  |  |
| FLK-XBattery   |   |                |                |               |  |  |   |  |  | •  |
| FLK-XCharger   |   |                |                |               |  |  |   |  |  | •  |
| FLK-TI-BLUETOOTH   |   |                |                |               | •  | •  |   |  | •  |  |
| FLK-XPower Plug  |   |                |                |               |  |  |   |  |  | •  |
| FLK-XEthernet 5m   |   |                |                |               |  |  |   |  |  | •  |
| FLK-XHDMI Cable  |   |                |                |               |  |  |   |  |  | •  |

#### **Sun Visor Compatibility**

Instantly reduce LCD screen glare and reflections in bright sunlight or other areas where ambient lighting conditions are bright with our durable, heavy-duty plastic visor. It can be used inside or outside, and easily clips onto to your Fluke Infrared Camera without the need for any additional hardware.

| Model Number | Ti10/<br>Ti25/TiR/<br>TiR1/Ti20 | Ti27/<br>TiR27 | Ti29/<br>TiR29 | Ti32/<br>TiR32 | Ti90/Ti95 | Ti100/<br>Ti105/<br>Ti110/<br>TiR105/<br>TiR110 | Ti125/<br>TiR125 | Ti200/<br>Ti300/<br>Ti300+<br>Ti400<br>Ti401<br>Ti450/<br>Ti480 |
|--------------|---------------------------------|----------------|----------------|----------------|-----------|---|------------------|---|
| TI-VISOR     | •                               | •              | •              | •              |           |   |                  |   |
| TI-VISOR2    |                                 |                |                |                | •         | •   | •                |   |
| TI-VISOR3    |                                 |                |                |                |           |   |                  | •   |

#### **Tripod Base Compatibility**

Lightweight, one-piece mounting accessory quickly and easily attaches to your Fluke Infrared Camera and allows you to mount to a standard tripod or monopod for those applications or situations that require a more stable or semi-fixed platform.

| Model Number | 64 MAX | Ti27/<br>TiR27 | Ti29/<br>TiR29 | Ti32/<br>TiR32 | Ti90/<br>Ti95 | TiS10/<br>TiS20/<br>TiS20+/<br>TiS40/<br>TiS40 | TiS55/<br>TiS60/<br>TiS60+/<br>TiS65/<br>TiS75 | Ti100/<br>Ti105/<br>Ti110/<br>TiR105/<br>TiR110 | Ti125/<br>TiR125 | Ti200/<br>Ti300/<br>Ti300+<br>Ti400<br>Ti401<br>Ti450/<br>Ti480 |
|--------------|--------|----------------|----------------|----------------|---------------|--|--|---|------------------|---|
| TI-TRIPOD    | •      | •              | •              | •              |               |  |  |   |                  |   |
| TI-TRIPOD2   |        |                |                |                | •             |  |  | •   | •                |   |
| TI-TRIPOD3   |        |                |                |                |               | •  | •  |   |                  | •   |

# POWER QU

| Fluke Model<br>Number                   | i3000 Flex<br>4PK                        | i400s  | i430-FLEXI-TF-II                         | i5sPQ3                             | 3210-PR -TF-II                               |
|---|--|--|--|------------------------------------|--|
| Description                             | 4 phase 3000A Flexible current clamp set | Single phase 400A<br>current clamp<br>(4 required) | 4 phase 3000A Flexible current clamp set | 3 phase<br>5A Current<br>clamp set | 1000A Single phase<br>flexible current clamp |
| Fluke 1750                              |  |  |  |                                    | •  |
| Fluke 43X -II                           | •  | •  | •  | •                                  |  |
| Nominal Current<br>Range(s)             | 30 A<br>300 A<br>3000 A                  | 40 A<br>400 A                                      | 3000 A                                   | 5 A                                |  |
| Cont. AC Current<br>Range               | 1 A 30 A<br>1 A 300 A<br>1 A 2400 M      | 0.5 A 40 A<br>5 A 400 A                            | 30 A 3000 A                              | 0.01 A 6 A                         | 0.5 A 1000 A                                 |
| <b>Highest Current</b>                  | 4000 A                                   | 1000 A   | 100 kA                                   | 70 A                               | 1000 A                                       |
| Lowest Measurable<br>Current            | 1 A                                      | 0.5 A  | 30 A                                     | 10 mA                              | 0.5 A  |
| Basic Accuracy (48 65 Hz) <sup>1)</sup> | 2% + 2 A                                 | 2% + 0.15 A  | 1%                                       | 1%                                 | ± 1% of reading                              |
| Usable Frequency                        | 10 Hz 100 kHz                            | 45 Hz 3 kHz  | 10 Hz 7 kHz                              | 40 Hz 5 kHz                        | 40 Hz 5 kHz                                  |
| Flex Head Length                        |  | Clamp opening:<br>32mm                             | 61 cm                                    | Clamp opening:<br>15mm             | 61cm   |
| Output Level(s)                         | 10 mV/A<br>1 mV/A<br>0.1 mV/A            | 10 mV/A<br>1 mV/A                                  | 0.085 mV/A<br>@50 Hz                     | 400 mV/A                           | 2 mV/A                                       |
| Output Cable (m)                        | 2,1                                      | 2,5  | 2,5                                      | 2,5                                | 3  |
| Safety Rating                           | CAT III 600 V                            | CAT III 1000 V<br>CAT IV 600 V                     | CAT III 1000 V<br>CAT IV 600 V           | CAT III 600 V                      | CAT III 1000 V<br>CAT IV 600 V               |

 $<sup>^{\</sup>text{\tiny I}}$  Basic accuracy: % reading plus floorspec. n/a = not applicable

| Fluke Model<br>Number        | Fluke i17XX-<br>Flex 1500A<br>12 IN                       | Fluke i17XX-<br>Flex 3000A<br>24 IN                       | Fluke i17XX-Flex<br>6000A 36 IN                           | Fluke i17XX i40s-EL<br>Clamp-On Current<br>Transformer | Fluke i17XX-<br>Flex 1500A<br>12 IN                       | Fluke i17XX-<br>Flex 3000A<br>24 IN                       | Fluke i17XX-Flex<br>6000A 36 IN                           |
|------------------------------|---|---|---|--|---|---|---|
| Description                  | 1500 A Single<br>phase flexible<br>current clamp<br>IP 50 | 3000 A Single<br>phase flexible<br>current clamp<br>IP 50 | 6000 A Single<br>phase flexible<br>current clamp<br>IP 50 | 4/40A Current clamp<br>(3 required)                    | 1500 A Single<br>phase flexible<br>current clamp<br>IP 65 | 3000 A Single<br>phase flexible<br>current clamp<br>IP 65 | 6000 A Single<br>phase flexible<br>current clamp<br>IP 65 |
| Fluke 1742/46/48             |   |   |   | •  | •   | •   | •   |
| Fluke<br>1732/34/36/38       | •   | •   | •   | •  |   |   |   |
| Nominal Current<br>Range(s)  | 1A to 150A,<br>10A to 1500A                               | 3A to 300A,<br>30A to 3000A                               | 6A to 600A,<br>60A to 6000A                               | 40mA to 4A,<br>0.4A to 40A                             | 1A to 150A,<br>10A to 1500A                               | 3A to 300A,<br>30A to 3000A                               | 6A to 600A,<br>60A to 6000A                               |
| Cont. AC Current<br>Range    | 1 A 150 A<br>10 A to 1500 A                               | 1A 300 A<br>10 A 3000A                                    | 1 A 600 A<br>10 A 6000 A                                  | 1 A 150 A<br>10 A 1500 A                               | 1 A 150 A<br>10 A to 1500 A                               | 1A 300 A<br>10 A 3000A                                    | 1 A 600 A<br>10 A 6000 A                                  |
| <b>Highest Current</b>       | 1500 A  | 3000 A  | 6000 A  | 200 A  | 1500 A  | 3000 A  | 6000 A  |
| Lowest Measurable<br>Current | 1 A   | 3 A   | 6 A   | 0.04 A   | 1 A   | 3 A   | 6 A   |
| Basic Accuracy (48 65 Hz) 1) | 0,70%   | 0,70%   | 0,70%   | 0,50%  | 0,70%   | 0,70%   | 0,70%   |
| Usable Frequency             | 40 Hz 5 kHz   | 40 Hz 5 kHz   | 40Hz 5kHz   | 40Hz 5kHz  | 40 Hz 5 kHz   | 40 Hz 5 kHz   | 40Hz 5kHz   |
| Flex Head Length             | 30.5cm  | 61cm  | 122cm   | n/a  | 30.5cm  | 61cm  | 122cm   |
| Output Level(s)              | n/a   | n/a   | n/a   | n/a  | n/a   | n/a   | n/a   |
| Output Cable (m)             | 2   | 2   | 2   | 2  | 2   | 2   | 2   |
| Safety Rating                | CAT III 1000 V<br>CAT IV 600 V                            | CAT III 1000 V<br>CAT IV 600 V                            | CAT III 1000 V<br>CAT IV 600 V                            | CAT III 1000 V CAT IV<br>600 V                         | CAT III 1000 V<br>CAT IV 600 V                            | CAT III 1000 V<br>CAT IV 600 V                            | CAT III 1000 V<br>CAT IV 600 V                            |

#### Fluke 430 Series-II



#### i430-FLEXI-TF-II/4PK 6000 A Thin Flexible Current Probe

6000 A current range

- 61 cm (24 in) length
- · Available in single and 4 pack



#### i400s AC Current Clamp

400 A AC current range

- . 32 mm (1.25 in) jaw size
- Optional PM908 1/001 Dual Banana Plug Male to Female BNC Adapter is available for digital multimeters



#### I5SPQ3 5A Current Clamp, 3 pack

5A AC Current Clamp for 430 Series-II • 15 mm (0.6 in) jaw size



#### TLS430 Test Lead and Alligator Clip Set

- Test lead replacement set for the 430 Series-II
- Set includes five test leads and five alligator clips (4 black, 1 green)



Cable markers for 3-phase +N leads



#### **GPS430-II GPS Sync Module**

IEC61000-4-30 Class A Time Sync Module for 430 Series-II



#### C1740 SOFT CASE

Soft Case with compartments and shoulder strap for 430 Series II



#### C437-II Hard Case

Black waterproof case with wheels



#### **BP290 Battery**

430 Series-II Replacement Battery Pack



#### **BP291 Battery**

430 Series-II Double Capacity Replacement Battery Pack



#### BC430/820 Battery Charger

Battery Charger for 430 Series II

#### Fluke 1730 & 1740 Series



#### I17XX-FLEX iFlex® Current Clamps

- iFlex probes connect directly to the 173X Energy or Power Logger, displaying current measurements without error prone scaling factors
- Fluke 17XX iFlex cables are available in 12, 24, and 36 inch models
- · Available to order in single, 3 or 4 pack



#### **I17XX-FLEX IP65 Current Probes**

IP65 rating is obtained when connected to the 1740 Series only.

- 1.5KA 60 cm (24 in) length
- 3KA 60 cm (24 in) length
- 6KA 120 cm (48 in) length
- available in single, 3 and 4 packs



#### **3PHVL Voltage Cable Assembly**

Voltage Measurement Lead Set for 1730 & 1740

Flat, four wire cable



#### 17XX i40s-EL Clamp-on Current Transformers

- Suitable for making measurements up to 40A, and also measures accurately on 1A and 5A secondary current transformers
- The i40s-EL jaw is capable of being clamped on current conductors up to 15mm in diameter



#### **IP65 VOLT CONN**

IP65 rated Voltage Connector for wet measurement environments.

 Six pole connector with six leads for connection of voltage and instrument power.



#### **MP1-Magnet Probe 1**

Magnetic probe tips for voltage test leads with 4 mm banana connectors.



#### MP1-3R/1B Magnetic Voltage Probes

3 Red/1 Black Magnet Probes for 4mm Banana



#### I17XX-FLEX5M-EXT

Fluke 17XX iFlexi Extension Cable 5m



#### FLUKE-I17XX-TL 0.18M / 0.1M / 1.5MTest Lead Set

1000V CAT III, Non-Stack Conn; Available in: 0.18M / 0.1M / 1.5M; Red/Blk



#### Fluke 173X HANGER STRAP

Two piece hanging kit for the Fluke 173X Energy or Power Logger.



#### FLUKE-174X-HANGER

Hanger Kit includes strap and magnetic hanger used with 1740 Series.



#### **C17XX Soft Case**

Soft Case for 173X/174X Series

Image Not Available

#### FLUKE-174X GPS-REC

**GPS** Receiver Antenna



#### **F17XX CABLE MARKERS**

Cable Marker Kit for 173X and 174X Series



#### **BP1730-BATTERY**

173X & 174X Series Replacement Battery Pack



#### 1730-CABLE Auxilliary Input Cable

- Input -10 V to +10 V DC
- Binder to BNC connecting cable



#### 17XX AUX

Auxillary input adapter for 1740 Series



#### **Unit Upgrade Kits**

Upgrades your select 17XX Fluke unit to the specified higher end unit and includes accessories that would normally come with the upgraded model.

- 1732 to 1734 Upgrade Kit
- 1736 to 1738 Upgrade Kit
- 1742 to 1746 Upgrade Kit
- 1742 to 1748 Upgrade Kit
- 1746 to 1748 Upgrade Kit

#### Fluke 1750/ET



#### 3210-PR-TF-II 1000A Thin FLEXI 60 CM (24in)

1000A AC Current Range

• 60 cm length, 20 cm diameter



#### 3310-PR-TF-II 1000A Thin FLEXI 60 CM (24in)

5000A AC Current Range

• 60 cm length, 20 cm diameter



#### 3312-PR-TF-II 1000A Thin FLEXI 120 CM (48in)

5000A AC Current Range

• 120 cm lenth, 38 cm diameter



#### I5S-PR 1750, 5A Current Clamp

5 A AC current range

15 mm jaw size



#### I40S-PR 1750. 40A CURRENT CLAMP

40 A AC Current Range

• 15 mm (0.6 in) jaw size



#### 3140R AC CURRENT CLAMP

4000A AC Current Range



#### ST1760 X57320810100, Standard Ethernet Cable

Standard RJ45 Connection Plugs



#### CS1750/1760 SOFT CASE

Soft Carrying Case for 1750/1760



#### 1750/CASE Transit Case

Rugged-hard water tight transit case with rollers



#### TPS FLEX 18-TF-II Thin Flexible Current Probe

100 A/500 A AC current range • 45 cm length, 15 cm diameter



#### TPS FLEX 24-TF-II Thin Flexible Current Probe

200 A/1000 A AC current range • 61 cm length, 20 cm diameter



#### TPS FLEX 36-TF-II Thin Flexible Current Probe

3000 A/6000 A AC current range

• 91 cm length, 29 cm diameter



#### TPS Clamp 10 A/1 A Clip-on Current Transformer

Three 15mm (0.6 in) options available

- TPS Clamp 10 A/1 A Clip-on Current Transformer – 1A/10A AC
- TPS Clamp 200 A/20 A Clip-on Current Transformer – 20A/200A AC
- TPS Clamp 50 A/5 A Clip-on Current Transformer – 5A/50A AC



#### TPS VoltProbes

Five versions of Voltage Probes for the 1760

- TPS Voltprobe 1 KV
- TPS Voltprobe 10 V
- TPS Voltprobe 100 V
- TPS Voltprobe 400 V
- TPS Voltprobe 600 V

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| Compatibility Chart   | 120B Series | 190 Series | 190 Series II |
|---|-------------|------------|---------------|
| Voltage Probes  |             |            |               |
| VPS41 Voltage Probe Set 10:1, 40MHz, Bl (Black)   | •           |            |               |
| VPS410-II-X Ind. Voltage Probe 10:1, 500MHz, X = B (Blue), G (Grey), R (Red) or V (Green) |             |            | •             |
| VPS210-X Voltage Probes, 200MHz, R (Red), G (Grey)  |             | •          |               |
| STL120-IV Shielded Test Lead Set 1:1, B (Blue) & R (Red)                                  | •           |            |               |
| Probe Accessories   |             |            | '             |
| AS400 Probe Accessory Extension Set 1   |             |            | •             |
| RS400 Probe Accessory Replacement Set for VPS400 Series Voltage Probes                    |             | •          | •             |
| RS500 Probe Accessory Replacement Set for VPS510 Series Voltage Probes                    |             | •          | •             |
| AC Current Clamps   |             |            | 1             |
| i3000s AC Current Clamp   | •*          | •          | •             |
| i3000s Flex-24/36 AC Current Clamp, 610 mm (24 in. and 36 in.)                            | •*          | •          | •             |
| i1000s AC Current Probe   | •*          | •          | •             |
| i400s AC Current Clamp  | •*          | •          | •             |
| i200s AC Current Clamp  | •*          | •          | •             |
| i5s AC Current Clamp  | •*          | •          | •             |
| AC/DC Current Clamps  |             |            |               |
| 80i-110s AC/DC Current Clamp  | •*          | •          | •             |
| i1010 AC/DC Current Clamp   | •           |            |               |
| i410 AC/DC Current Clamp  | •           |            |               |
| i30s AC/DC Current Clamp  | •*          | •          |               |
| Automotive  |             |            |               |
| SCC128 Automotive Troubleshooting Kit for 120 Series                                      | •           |            |               |
| SCC198 Automotive Troubleshooting Kit for 190 Series                                      | -           | •          |               |
| SCC298 Automotive Troubleshooting Kit for Fluke 190 Series II                             |             |            |               |
| Test Lead Accessories   |             |            |               |
| TL175 TwistGuard™ Test Leads  |             | •          |               |
|   | •           | •          |               |
| Cables and Adapters   |             |            | I             |
| PM9091 50 Ohm Coaxial BNC Cable Set (3 x 1.5m)  |             | •          | •             |
| PM9092 50 Ohm Coaxial BNC Cable Set (3 x 0.5 m),  |             | •          | •             |
| PM9093 Male BNC to Dual Female BNC Adapter, 600 V Cat III                                 |             | •          | •             |
| PM9081 Dual Banana Plug (Male) to Female BNC Adapter, 600 V Cat III                       |             | •          | •             |
| PM9082 Dual Banana Jack (Female) to Male BNC Adapter, 600 V Cat III                       |             | •          | •             |
| BB120-II Shielded Banana to Female BNC Adapter*   | •           |            |               |
| TRM50 Coaxial Feed-through BNC Male to BNC Female Cable Terminator                        |             | •          | •             |
| Miscellanous  |             |            |               |
| CS20MA Current Shunt  |             | •          |               |
| EBC290 External Battery Charger for BP290 and BP291                                       | •           |            | •             |
| BC190/830 Mains Adapter/Battery Charger   |             | •          | •             |
| BC430/820 Mains Adapter/Battery Charger   | •           |            |               |
| BP190 Rechargable NiMH Battery Pack   |             | •          | •             |
| BP290 Li-ion Battery Pack, 2400 mAh   | •           |            | •             |
| BP291 Li-ion Battery Pack, 4800 mAh   |             |            | •             |
| OC4USB USB Interface Cable  | •           | •          | •             |
| BHT190 Break-Out Adapters for Industrial Bus Connections                                  | 125B only   | •          |               |
| HH290 Hanging Hook for ScopeMeter 190-Series II   |             |            | •             |
| * "s" version clamps require RR120-II Adapter when used with the Fluke 120R Series        |             |            |               |

 $<sup>\</sup>ensuremath{^*}$  "s" version clamps require BB120-II Adapter when used with the Fluke 120B Series

#### ORTABI COPE OSCILLO CCESSOR



#### **VPS420-X High Working Voltage Ruggedised Probe**

- Set includes: VPS420-X 100:1, 150 MHz
- X = Red, Blue, Grey or Green
- Hook Clip for Probe Tip (Black)
- Large Jaw Probe Clip (Black)
- Reference Lead with 4 mm Banana Plug
- Large Jaw Alligator Clip for 4 mm Banana plug (Black)



#### **AS400 Probe Accessory Extension Set**

For VPS400 Series Probes

- CAT III 1000 V/CAT IV 600 V
- Reference Lead w/ 4 mm Plug (Blk) 60cm
- Reference Lead with Hook Clip (Blk) 22cm
- Large Jaw Probe Clip (Black)
- $CA\bar{T} II \ 1000 \ V$
- 2 mm Test Probe for Probe Tip (1x, Black)
- 4 mm Test Probe for Probe Tip (1x, Black)



#### **RS400 Probe Replacement Set**

For VPS400 Series Probes and VPS210 Series Probes

- CAT III 1000 V/CAT IV 600 V
- 1 x Probe Hook Clip (black)
- Ground Lead w/ Mini Alligator Clip
- 2 x Insulation Sleeve (Black)
- CAT II 30V
- 2 x Ground Spring (Black)



#### **RS500 Probe Replacement Set**

For VPS510 Series Probes

- **CAT II 300 V**
- 1x Hook Clip (Black)
- 1x Ground Lead with Mini Alligator Clip
- 2 x Insulation Sleeves for Probe's Ground Contact (Black)
- 1 x BNC to Probe Tip Adapter (Black)
- CAT II 30 V
- 2 x Ground Browsers (Black)
- 1 x Insulated Mini Screwdriver, for Probe Adjustment purposes



#### **TP920 Test Probe Adapter Set**

Suited for STL120 Test Leads (STL120-III, not compatible), TL71, TL75 & TL76 Test Leads

Rated for 3 A max



#### PM9091 Set of 3x Coaxial Cables with **BNC Connectors**

- Length: 1.5m each
- Impedance: 50 ohm
- Colour: 2 x Red, 2 x Black, 2 x Grey
- Max signal voltage: 300 V RMS
- Max voltage to ground:
  - 600 V RMS CAT III per IEC/EN61010-031



#### PM9092 Set of Coaxial Cables with **BNC Connectors**

- Length: 0.5 m each
- Impedance: 50 ohm
- Colour: 1 x Red, 1 x Black, 1 x Grey
- Max signal voltage: 300 V RMS
- Max voltage to ground:
- 600 V RMS CAT III per IEC/EN61010-031



#### PM9093 Adapter BNC (Male) to Dual BNC (Female) in T model (6)

- Colour: 2 x Black
- Max signal voltage: 300 V RMS CAT III per IEC/EN61010
- Max voltage to ground: 600 V RMS CAT III per IEC/EN61010



#### PM9081 Adapter BNC (Female) to Dual **Banana Jack**

- Colour: 2 x Red, 2 x Black
- Max signal voltage: 600 VRMS CAT III, per IEC/EN61010
- Max voltage to ground: CAT III 600 VRMS / CAT II 1000 V per IEC/EN61010



#### PM9082 Adapter BNC (Male) to Dual Banana Jack

- Colour: 2 x Red, 2 x Black
- Max signal voltage: CAT III 600 VRMS per IEC/EN61010
- Max voltage to ground: CAT III 600 VRMS /CAT II 1000 V per IEC/EN61010



#### **HC120 Hook Clips**

- Colour: 1 x Red, 1 x GREY
- Max voltage: 600 VRMS, CAT III per IEC 1010-2-031
- Nickel plated steel



#### BB120-II Adapter BNC (Female) to Shielded Banana Jack

- Max signal voltage: 300 VRMS CAT III per IEC/EN61010
- Max voltage to ground: 600 V CAT III per IEC/EN61010



#### TRM50 Coaxial Feed-through BNC (Male) to BNC (Female) Cable Terminator

- Set of 2
- Impedance: 50 ohm
- Max voltage over ground: CAT III 1000 V
- Max power 1W



#### BHT190 Bus Health Test Break-out **Adapter Set**

- Board with M12 connectors (male to female, 5 pins)
- DB-9 Connectors (male to female, 9 pins + shield)
- RJ-45 Connector, with short patch cable providing male to female interconnection (8 pins)



#### **CS20MA Current Shunt for AC and DC** measurements on 4 to 20mA Control Loops

- Sensitivity: 10mV/mA
- Shunt resistance: 10 ohm
- Bandwidth: > 10 kHz
- Max voltage to ground: CAT III 30 VRMS per EN/IEC 61010



#### **EBC290 External Charger**

For Fluke 120B and 190 Series II ScopeMeter® Oscilloscope

- Charging time (BP291): Five hours, giving an operating time of up to seven
- DC input voltage: 15 V to 23 V, 714 mA nom. (DC input from BC190: 17.8 V/ 0.84 A max)

# PROCESS TOOLS ACCESSORIES



#### **700PTPK2 Pneumatic Test Kit**

- Combine with any Fluke 700G Series Gauge, 1,000 psi (69 bar) or less, to make a complete pressure testing kit
   Generate pressure up to 600 psi, 40
- bar with the 700PTP-1 Test Pump
- Connect the 700G Series Gauge directly to the included PTP-1 Hand Pump



#### 700HTPK/2 Hydraulic Test Kit

- Combine with any Fluke-700G Series Gauge, 1,000 psi (69 bar) range or greater, to make a complete pressure testing kit
- Generate pressure up to 10,000 psi, 690 bar with the included 700HTP-2 Test Pump
- Connect the 700G Series Gauge directly to the HTP-2 Hand Pump



#### **700LTP-1 Low Pressure Test Pump**

- Hand operated pressure pump designed to generate either vacuum to -13 psi / -.90 bar or pressures to 100 psi / 6.9 bar
- Has two pressure ports with quick fit connectors
- For use with Fluke 750 Series Pressure Modules and Fluke 717 Pressure Calibrators



#### **700PTP-1 Pneumatic Test Pump**

A handheld pressure pump designed to generate either vacuum to -11.6 psi/-0.8 bar or pressure to 600 psi/40 bar



#### 700HTP-2 Hydraulic Test Pump

- Generate pressures up to 10,000 psi/700bar
- Use the Fluke 700PRV adjustable relief valves to limit pressures from 1360 psi to 5450 psi



#### 71XTrap Liquid and Dirt Trap

- Works with pressure up to 500 psi
- Designed to work with the Fluke 718 and 719PRO



#### 71X, Hose Kit

- Compatible with Fluke 717 and 718 Calibrators 100 PSI and below
- Kit contains three translucent hoses (1 m long) and one 1/8 to 1/4 NPT female-female adapter



#### **700ILF In-line Filter**

- Can be used to isolate the calibrator from incidental contact with fluids
- Useful with the 718 Fluke Calibrator to help keep moisture or oils from contaminating the on-board pump



#### 700HTH-1 Hydraulic Test Hose

 10,000 psi, 690 bar working pressure test hose



#### **700PMP Pressure Pump**

- Provides pressures up to 150 psi/1000 kPa
- Output fitting is 1/8 FNPT



#### **720RTD RTD Probe**

Fluke-720RTD Temperature Probe is for use with Fluke 721 Precision Pressure Calibrators and Fluke 719Pro Electric Pressure Calibrators

 10 inch (254mm) insertion depth with ¼ inch (6.3mm) diameter stainless steel sheath



#### 720URTDA Universal RTD Adapter

Fluke Universal RTD Adapter 720URTDA for Fluke 721 Precision Pressure Calibrators and Fluke 719Pro Electric Pressure Calibrators



#### Fluke 700MTH Premium Transmitter Test Hose Kit

Easy to use premium pressure transmitter test hose kit for connection to 1/4" female metric/BSP

- 5,000 psi rating
- Includes 1/8" NPT connection for permanent mount to a calibrator or test pump



#### Fluke 700M20TH Premium Transmitter Test Hose Kit

Easy to use premium pressure transmitter test hose kit for use with female M20 connections

- Includes:
  - One (1) 5,000 psi rated, premium test hose
  - Premium, no tools required M20 adapter



#### **700-IV Current Shunt**

- Conversion factor: 10 mV = 1 mA
- Accuracy (% of input, one-year): 0.025 %
- Input current: 0 mA to 55 mA
- Input resistance: 250 Ω nominal
- Output resistance: 10 Ω nominal
- Accuracy specification applies from +18 °C and 28 °C to 50 °C
- Maximum input voltage: 30 V DC



#### **700PRV Pressure Relief Valve Kit**

- Consists of a relief valve settable from 725 to 5800 PSI (50 to 200 bar) to be used with the 700HTP-1 Hydraulic Test Pump
- The 1/8" NPT male thread to fits directly into the Fluke 700HTP-1 Pressure Pump



#### **BP7235 NiMH Battery Pack**

- 7.2V 3500 mA-hour rechargeable Ni-MH battery pack
- Provides typical 16-hour battery life when used in 700 or 740 Calibrator
- Dimensions: 150 mm x 56 mm x 22 mm
- · Weight: 310g



#### **BP7240 Li-Ion Battery Pack**

 Battery pack for Fluke 75X Documenting Process Calibrators



#### Fluke 805 FC Vibration Meter



#### **805ES External Sensor Assembly**

- External vibration sensor that is ideal in situations where it is either difficult or impractical to use the onboard vibration sensor tip of the 805 Vibration Meter
- Low-profile 90-degree sensor body allows the sensor to get into tight spots
- Rugged, coiled cable minimises dangling, while stretching to more than 7ft when needed
- Powerful "U" shaped magnet mount creates a firm connection to flat, or curved measurement surfaces

#### Fluke 810 Vibration Tester



#### 810QDC Quick Disconnect Cable

Eight-foot quick-disconnect cable connects the triaxial vibration sensor



#### 810SC-20 Sensor Cable

20-foot cable connects the triaxial vibration sensor to the Fluke 810 Vibration Tester



#### **810S Triaxial Vibration Sensor**

Triaxial vibration sensor captures vibration data in all three primary axes simultaneously for faster, more accurate data collection



#### **810SMM Sensor Magnetic Mounts**

- High-power magnet attaches firmly to motors and machinery
- Parallel magnet tips engage both flat and cylindrical surfaces

#### 810SMP Sensor Mounting Pads for Vibration Sensors (pack of 10)

10-pack of Sensor Mounting Pads provide standardised sensor attachment points on critical equipment.



#### **810T Tachometer**

- Noncontact tachometer for use with the Fluke 810 Vibration Tester; to measure the speed of motors; conveyor belts; and other moving and rotational systems
- Measures from 6 to 99;999rpm with accuracy to +/-0.05%
- Takes noncontact measurements using a laser beam that works at a distance of 1 to 100cm for user safety
- Integral 50cm cable connects the tachometer to the vibration tester for power and measurement data recording



#### **810PAAC Power Adapter**

 AC power adapter with international plug set



#### **SBP810 Smart Battery Pack**

Lithium-ion battery pack provides 8-hours of runtime under normal operating conditions

#### Fluke 830 Laser Alignment



#### 830/MAGNET Compact Sensor/Prism Magnetic Mounting Bracket Set

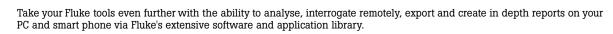
- High-power magnets attach firmly to shaft couplings
- Narrow profile can mount on equipment with little clearance between the coupling and the machine housing
- Ideal for large-diameter couplings or for the simplest, most rapid set-ups



#### 830/SHIMS Precision Alignment Shim Kit

- Stainless steel precut shims are more accurate and designed to speed up the alignment job - when even minutes of downtime count.
- Bur-free for higher accuracy in alignment
- Time-saving permanent thickness / dimension marking
- Reusable, corrosion-resistant highquality stainless steel
- Two machine foot sizes and eight thicknesses that fit almost all machine feet

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| Fluke Product Group        | Fluke Software                                    | Compatible Fluke Tools  | Availability                          |
|----------------------------|---|---|---------------------------------------|
| Thermal Imaging            | Fluke Connect™ Desktop                            | PTi120 Pocket Infrared Camera<br>Ti200/300/300+/400/401PR0/450/450PR0<br>/480/480PR0/450SF6, TIX501/580/620/640   | Free download via<br>www.fluke.com.au |
| Thermal Imaging            | Fluke SmartView® Desktop                          | Fluke VT04/VT04A/VT02 Visual Infrared Thermometers TiS10/20/40/45/50/55/60/65/75**, Ti200/300/400/450/450PR0/480/480PR0, Ti450/SF6, TiX500/520/560/580/620/640 /660/1000 Infrared Cameras   | Free download via<br>www.fluke.com.au |
| Fluke Connect              | Fluke SW3000FC                                    | Fluke Connect Modules,<br>3000FC DMM, 902FC, 376FC/375FC/374FC<br>Must be used with PC3000FC USB dongle   | Free download via<br>www.fluke.com.au |
| ScopeMeters*               | FlukeView® for<br>ScopeMeter®                     | Fluke 190 Series II ScopeMeter®,<br>Fluke 120 Series ScopeMeter®,<br>Fluke 19xB/C Series,<br>Fluke 2x5C Series,   | Sold separately                       |
| ScopeMeters*               | FlukeView2 for<br>ScopeMeters®<br>(Sold as SW90W) | 120B Series ScopeMeters®<br>MDA-510/550 Motor Drive Analyser<br>ScopeMeter®   | Sold separately                       |
| Power Quality Tools        | Fluke Energy Analyse +                            | Fluke 1748/1746/1742,<br>Fluke 1738/1736/1734/1732, 1730<br>Power & Energy Loggers  | Free download via<br>www.fluke.com.au |
| Power Quality Tools        | PowerLog 430-II<br>Application Software           | Fluke 438-II/437-II/435-II/434-II<br>Power Quality Analysers  | Free download via www.fluke.com.au    |
| Power Quality Tools        | PowerLog Classic                                  | Fluke 345, VR1710, 1735 and 435/434/433<br>Power Quality Tools  | Free download via www.fluke.com.au    |
| Battery Testers            | Battery Management<br>Software                    | Fluke BT521/BT5210/BT510<br>Battery Testers   | Free download via www.fluke.com.au    |
| Process Calibration Tools  | DPC/TRACK2  | Fluke 754/753/729<br>Documenting Process Calibrators  | Sold separately                       |
| Process Calibration Tools  | 709H/Track HART<br>Communications Software        | Fluke 709/H<br>Precision Loop Calibrator with HART  | Sold separately                       |
| Process Calibration Tools  | 700G/Track  | Fluke 700G<br>Pressure Gauges (with Interface Cable)  | Sold seperately                       |
| Vibration & Alignment      | Vibration Software                                | 810, 805FC/805 Meters/Testers   | Free download via www.fluke.com.au    |
| Portable Appliance Testers | DMS/Complete Software                             | Fluke 6500-2 Portable Appliance Tester  | Sold separately                       |
| General                    | Fluke ViewForms                                   | FVF-SC2 (with IR Cable): Fluke 1660/1650 Multifunction Installation Testers (1664FC/1663/1662, 1654B/1653B/1653/1652C), Fluke 50-II Series Thermometers (55-II B/53-II B) FVF-SC4 (with IR Cable): Fluke 8846A, 8845A, 8808A, 45 Bench Digital Multimeters FVF-BASIC (with IR Cable): Fluke 289/287 Meters, 789/787B ProcessMeters, 1555/1550B Insulation Resistance Testers, 180 Series Meters | Sold separately                       |





#### Fluke 3000 FC General **Maintenance System**

- · Fluke 3000 FC Series Wireless Multimeter
- Fluke v3000 Voltage Module
- Fluke v3001 Voltage Module
- Fluke a3001 FC Wireless iFlex AC
- TL224, TL222, TL175 Test Leads
- AC285, AC220, AC175 Alligator Clips
- iFlex i2500-10 Flexible Current Probe
- Magnetic Hanging Strap (3)
- Fluke Connect® Wireless PC Adapter
- Modular 3-Compartment Soft Carry Case



#### Fluke 3000 FC Industrial System

- Fluke 3000 FC Series Wireless Multimeter
- Fluke a3001 FC Wireless iFlex AC (3)
- Fluke v3000 Voltage Module
- TL224 Test Leads
- TL175 Test Leads
- AC285 Alligator Clips
- AC175 Alligator Clips
- iFlex i2500-10 Flexible Current Probe (3)
- Magnetic Hanging Strap (4)
- Fluke Connect® Wireless PC Adapter
- Modular 3-Compartment Soft Carry Case



#### Fluke 3000 FC HVAC System

- · Fluke 3000 FC Series Wireless Multimeter
- Fluke a3000 FC Wireless AC
- Fluke t3000 Thermocouple Thermometer
- TL175 Test Leads
- AC175 Alligator Clips
- 80PK-1 K-Type Bead Thermocouple
- Magnetic Hanging Strap
- Fluke Connect® Wireless PC Adapter
- Modular 3-Compartment Soft Carry Case



#### Fluke 3000 FC/1AC-II Wireless **Multimeter and Non-Contact Voltage Detector Kit**

- Fluke 3000 FC Series Multimeter
- Fluke 1AC-II VoltAlert™ Tester
- TL224 Test Leads
- TP175 Industrial Test Probes
- AC220 Alligator Clips
- C35 Soft Meter Case
- TPAK Magnetic Hanging Kit



#### Fluke 3000 FC/TPAK Wireless **Multimeter and Magnetic Hanger Combo Kit**

- Fluke 3000 FC Series Wireless Multimeter
- TL75 Test Leads
- C35 Soft Meter Case
- TPAK Magnetic Hanging Kit



#### Fluke 3000FC/EDA2 Combo Kit

- 3000 FC Series Wireless Multimeter
- TL910 Electronic Test Probes
- TL224 Silicone Test Leads
- AC280 Heavy Duty Hook Clips
- C35 Soft Meter Case
- ToolPak™ Magnetic Hanging Kit



#### Fluke a3000 FC Wireless AC **Current Clamp Kit**

- Fluke 3000 FC Series Wireless Multimeter
- · Fluke a3000 FC Wireless AC Current Clamp Module
- TL175 Test Leads
- AC175 Alligator Clips
- Modular 3-Compartment Soft Carry



#### Fluke a3001 FC Wireless iFlex AC **Current Clamp Kit**

- Fluke 3000 FC Series Wireless Multimeter
- Fluke a3001 FC Wireless iFlex AC **Current Module**
- TL175 Test Leads
- · AC175 Alligator Clips
- iFlex i2500-10 Flexible Current Probe
- · Magnetic Hanging Strap
- Modular 3-Compartment Soft Carry Case



#### Fluke Wireless t3000 FC **Temperature Kit**

- Fluke 3000 FC Series Wireless Multimeter
- Fluke t3000 K-Type Thermocouple Thermometer
- TL175 Test Leads
- AC175 Alligator Clips
- 80PK-1 K-Type Bead Thermocouple
- Other K-Type Temperature Probes also available
- Magnetic Hanging Strap
- Modular 3-Compartment Soft Carry Case



#### Fluke Wireless v3000 FC AC Voltage Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3000 AC Voltage Module
- TL175 Test Leads
- TL224 Test Leads
- · AC175 Alligator Clips
- AC285 Alligator Clips
- Magnetic Hanging Strap
- Modular 3-Compartment Carry Case



#### Fluke Wireless v3001 FC DC Voltage Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3001 DC Voltage Module
- TL175 Test Leads
- TL222 Test Leads
- AC175 Alligator Clips
- AC220 Alligator Clips
- Magnetic Hanging Strap Modular 3-Compartment Soft Carry Case



#### Fluke v3003 FC Wireless AC-DC **Voltage Measurement Kit**

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3000 AC Voltage ModuleFluke v3001 DC Voltage Module
- TL175 Test Leads
- TL222 Test Leads
- TL224 Test Leads
- AC175 Alligator Clips
- AC285 Alligator Clips AC220 Alligator Clips
- Magnetic Hanging Straps (2)
- Modular 3-Compartment Soft Carry Case

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www.fluke.com.au **Fluke Kits** 



#### Fluke 279 FC/iFlex TRMS Thermal **Multimeter Combo Kit**

- 279 FC TRMS Thermal Multimeter
- 18" (45.72 cm) iFlex Flexible Current Probe
- TL175 Test Leads
- Rechargeable Lithium-ion Battery and Charger
- Hanging Strap
- Soft Carrying Case



#### Fluke 287/289 FlukeView® Forms **Combo Kit**

- Fluke 287/289 True-RMS Electronics Logging Multimeter
- FlukeView® Forms Software and Cable
- 80BK-A Thermocouple Probe
- TL224 Test Leads with 175
- Modular Probe Tips AC175 Alligator Clips
- TL71 Probe Caps
- C280 Soft Case



#### Fluke 287/289 FlukeView® Forms Combo/ with IR Connector

- Fluke 287/289 True-RMS Industrial Logging Multimeter
- FlukeView® Forms Software with Cable
- 80BK-A Thermocouple Probe
- TL71 Silicone Test Lead Set
- AC175 Alligator Clips
- TPAK Magnetic Hanging Kit
- C280 Soft Case
- Fluke IR 3000FC Connector
- AMP Jack Plugset



#### Fluke 87V/E2 Industrial Electrician Combo Kit

- Fluke 87V True-RMS Industrial Multimeter
- TL224 Silicone Test Leads
- AC220 Alligator Clips
- TP238 Test Probes
- TPAK Magnetic Hanging Kit
- 80BK-A Thermocouple Probe
- C35 Soft Meter Case



#### Fluke 87V Industrial Multimeter Service Kit

- Fluke 87V Industrial Multimeter
- Fluke i400 400A AC Current Clamp
- 80BK-A Temperature Probe
- TL75 Test Lead Set
- AC175 Alligator Clip Set



#### Fluke 87V MAX Electrician Combo Kit

- Fluke 87V MAX True-RMS Digital Multimeter
- TL224 SureGrip™ Insulated Test Leads AC220 SureGrip™ Alligator Clips TL238 SureGrip™ Test Probes

- ToolPak™ Magnetic Meter Hanging Kit
- 80BK-A Temperature Probe
- C35 Soft Carrying Case



#### Fluke 88V/A Automotive Multimeter Combo Kit

- Fluke 88V Automotive Multimeter
- TL224 Silicone Test Leads
- AC285 Alligator Clips
- TP220 Test Probes
- RPM 80 Inductive RPM
- TPAK ToolPak™ Magnetic Meter Hanging Kit
- 80BK-A Thermocouple Probe
- C800 Carrying Case
- Holster
- 9V Battery (installed)
- Two Automotive Back Probe Pins
- Insulation Piercing Probe



#### Fluke 116/323 HVAC Combo Kit

- Fluke 116 HVAC Multimeter
- Fluke 323 Clamp Meter
- TL175 Test Lead Set
- TPAK Magnetic Hanging Kit
- 80PK-1 Bead Probe
- 80AK-A Thermocouple Adapter
- 80PK-1 Flexible Cuff Pipe Clamp Thermocouple
- C115 Deluxe Soft Carrying Case with Shoulder Strap



#### Fluke 116/62 MAX+ HVAC Technician's Combo Kit

- Fluke 116 HVAC Multimeter
- Fluke 62 MAX+ Infrared Thermometer
- TL175 Test Lead Set
- TPAK Magnetic Hanging Kit
- 80BK-A Thermocouple Probe
- 80AK-A Thermocouple Adapter
- 80PK-11 Flexible Cuff Pipe Clam Thermocouple
- C115 Deluxe Soft Carrying Case with Shoulder Strap



#### Fluke 117/323 **Electricians' Multimeter Combo Kit**

- Fluke 117 True-RMS Multimeter
- Fluke 323 Clamp Meter
- TL175 Test Lead Set
- TPAK Magnetic Hanging Kit
- C115 Deluxe Soft Carrying Case with Shoulder Strap



#### Fluke 179/EDA2 Industrial **Electronics Combo Kit**

- Fluke 179 Multimeter
- 80BK-A Integrated DMM Temperature Probe
- Installed 9V Battery
- AC280 SureGrip™ Hook Clips
- TL910 Electronic Test Probes
- TL224 SureGrip™ Insulated Test Leads TPAK ToolPak™ Magnetic
- Meter Hanger
- Soft Carry Case



#### Fluke 179 Industrial Multimeter Service Kit

- Fluke 179 True-RMS Multimeter
- Fluke 323 True-RMS Camp Meter
- 80BK-A Temperature Probe
- TL75 Test Lead Set
- AC175 Alligator Clip Set



#### **Fluke 289 Industrial Multimeter** Service Kit

- Fluke 289 True-RMS Multimeter
- Fluke i400 400A AC Current Clamp TL71 Flexible Silicone Test Lead Kit
- AC175 Alligator Clip Set

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#### TESTER KITS

#### **Electrical Tester Kits**



#### Fluke T6-1000/PRV240FS Kit

- Fluke T6-1000 Electrical Tester
- Fluke PRV240FS Proving Unit with FieldSense®
- C60 Soft Case



#### Fluke T6-HT6-1AC Kit

- Fluke T6-1000 Electrical Tester
- Fluke 1AC-II VoltAlert<sup>™</sup> Tester
- H-T6 Holster



#### Fluke T6-600/62MAX+/1AC Kit

- Fluke T6-600 Electrical Tester
- · Fluke 62MAX+ Infrared Thermometer
- Fluke 1AC-II VoltAlert<sup>™</sup> Tester
- C60 Soft Case

#### **Insulation Tester Kits**



#### Fluke 1587/i400 Current Clamp FC Kit

- Fluke 1587 FC 2-in-1 Insulation Multimeter
- Fluke i400 Current Clamp
- TP165X Remote Test Probe
- TL224 Test Leads
- AC285 Alligator Clips
- 80BK-A Thermocouple Probe
- Hard Case



#### Fluke 1587 FC Advanced Electrical Troubleshooting Kit

- Fluke 1587 FC 2-in-1 Insulation Multimeter
- Fluke i400 Current Clamp
- Fluke 62 MAX+ Infrared Thermometer
- TP165X Remote Test Probe
- TL224 Test Leads
- AC285 Alligator Clips
- 80BK-A Thermocouple Probe
- Hard Case



#### Fluke 1587/MDT FC Advanced Motor and Drive Troubleshooting Kit

- Fluke 1587 FC 2-in-1 Insulation Digital Multimeter
- Fluke i400 Current Clamp
- Fluke 9040 Phase Rotation Indicator
- TP165X Remote Test Probe
- TL224 Test Leads
- AC285 Alligator Clips
- 80BK-A Thermocouple Probe
- · Hard Case



#### Fluke 1550C 5 kV Insulation Tester Kit

- Fluke 1550C Insulation Resistance Tester
- TL1550B Alligator Clips and Test Lead Set
- TLK1550 Heavy Duty Alligator and Test Lead Set
- FlukeView<sup>®</sup> Forms Basic CD
- · Infrared Adapter to USB Cable
- IP67 Hard Case
- AC Power Cord



#### Fluke 1550C Insulation Tester Kit w/ir3000 FC

- Fluke 1550C 5 kV Insulation Tester
- Fluke ir3000 FC Connector
- Test Cables with Alligator Clips
- IP67 Hard Case



#### Fluke 1555 10kV kV Insulation Tester Kit

- Fluke 1555 Insulation Resistance Tester
- TL1550B Alligator Clips and Test Lead Set
- TLK1550 Heavy Duty Alligator and Test Lead Set
- FlukeView<sup>®</sup> Forms Basic CD
- Infrared Adapter to USB Cable
- AC Power Cord
- IP67 Hard Case



#### Fluke 1555C 10kV kV Insulation Tester Kit w/ir3000 FC

- Fluke 1555C 10kV Insulation Tester
- Fluke ir3000 FC Connector
- Test cables with alligator clips
- IP67 Hard Case



#### Fluke 1621 Basic Earth Ground Tester Kit

- · Fluke 1621 Earth Ground Tester
- Two GEO Cable Reels (1-25 m, 1-50 m)
- ES-162P3 Three Earth Ground Stake Set
- TL224 Test Lead Set
- AC285 Alligator Clips
- Hard Carrying Case



#### Fluke 1623-2 GEO Earth Ground Tester Kit

- Fluke 1623-2 GEO Earth Ground Tester
- GEOX Probe Cable
- EI-1623 Clamp Set
- 3 Cable Reels
- 4 Earth Ground Stakes
- · C1620 Carrying Case



#### Fluke 1625-2 GEO Earth Ground Tester Kit

- Fluke 1623-2 GEO Earth Ground Tester
- GEOX Probe Cable
- EI-1623 Clamp Set
- 3 Cable Reels
- 4 Earth Ground Stakes
- C1620 Carrying Case

www.fluke.com.au Fluke Kits

## INSULATED HAND TOOKKITS



#### Fluke Insulated 7 Unit Screwdriver Kit (IKSC7)

- ISLS3 Insulated Slotted Screwdriver 2.5 mm, 75 mm
- ISLS5 Insulated Slotted Screwdriver 4 mm, 100 mm
- ISLS8 Insulated Slotted Screwdriver 6 mm, 125 mm
- IPHS1 Insulated Phillips Screwdriver #1, 75 mm
- IPHS2 Insulted Phillips Screwdriver #2, 100 mm
- ISQS1 Insulated Squared Screwdriver #1, 100 mm
- ISQS2 Insulated Squared Screwdriver #2, 125 mm



#### Fluke Insulated 3 Unit Pliers Kit (IKPL3)

- · INLP8 Insulated Long Nose /w Side Cutter
- INDC8 Insulated Heavy Duty Diagonal Cutter
- INCP8 Insulated Linesman Combination Plier
- RUP8 Roll Up Pouch



#### Fluke Insulated Hand Tools Starter Kit (IKST7)

- ISLS3 Insulated Slotted Screwdriver 2.5 mm, 75 mm
- ISLS5 Insulated Slotted Screwdriver 4 mm, 100 mm
- ISLS8 Insulated Slotted Screwdriver 6 mm, 125 mm
- IPHS1 Insulated Phillips Screwdriver #1, 75 mm
- IPHS2 Insulted Phillips Screwdriver #2, 100 mm
- INLP8 Insulated Long Nose /w Side Cutter
- INDC8 Insulated Heavy Duty Diagonal Cutter
- INCP8 Insulated Linesman Combination Plier
- RUP8 Roll up pouch



#### Fluke Pack30 Professional Tool Backpack + Insulated Hand Tools Kit (IKPK7)

- Fluke Pack30 Professional Backpack
- ISLS3 Insulated Slotted Screwdriver
- ISLS5 Insulated Slotted Screwdriver ISLS8 Insulated Slotted Screwdriver
- IPHS1 Insulated Phillips Screwdriver
- IPHS2 Insulted Phillips Screwdriver
- INLP8 Insulated Long Nose /w Side Cutter
- INDC8 Insulated Heavy Duty Diagonal Cutter
- INCP8 Insulated Linesman Combination Plier
- · RUP8 Roll Up Pouch



#### Fluke T6-1000 Electrical Tester + Insulated Hand Tools Kit (IBT6K)

- Fluke T6-1000 Electrical Tester
- ISLS3 Insulated Slotted Screwdriver
- ISLS5 Insulated Slotted Screwdriver
- ISLS8 Insulated Slotted ScrewdriverIPHS1 Insulated Phillips Screwdriver
- IPHS1 insulated Phillips Screwdrive.
   IPHS2 Insulted Phillips Screwdriver
- INLP8 Insulated Long Nose /w Side Cutter
- INDC8 Insulated Heavy Duty Diagonal Cutter
- INCP8 Insulated Linesman Combination Plier
- RUP8 Roll up pouch



#### Fluke 117 Electrician's Multimeter + Insulated Hand Tools Kit (IB117K)

- Fluke 117 Electrician's Multimeter
- ISLS3 Insulated Slotted Screwdriver
- ISLS5 Insulated Slotted Screwdriver
- ISLS8 Insulated Slotted ScrewdriverIPHS1 Insulated Phillips Screwdriver
- IPHS2 Insulted Phillips Screwdriver
- INLP8 Insulated Long Nose /w Side Cutter
- INDC8 Insulated Heavy Duty Diagonal Cutter
- INCP8 Insulated Linesman Combination Plier
- RUP8 Roll Up Pouch



#### Fluke 87V Industrial Multimeter + Insulated Hand Tools Kit (IB875K)

- Fluke 87V Industrial Multimeter
- ISLS3 Insulated Slotted Screwdriver
- ISLS5 Insulated Slotted Screwdriver
- ISLS8 Insulated Slotted Screwdriver
- · IPHS1 Insulated Phillips Screwdriver
- IPHS2 Insulted Phillips Screwdriver
- INLP8 Insulated Long Nose /w Side Cutter
- INDC8 Insulated Heavy Duty Diagonal Cutter
- INCP8 Insulated Linesman Combination Plier
- RUP8 Roll Up Pouch



#### Fluke 376 FC True-RMS Clamp Meter + Insulated Hand Tools Kit (IB376K)

- Fluke 376 FC AC/DC Clamp Meter
- iFlex® Flexible Current Probe
- TPAK magnetic hanging strap
- TL75 test leads
- ISLS3 Insulated Slotted Screwdriver
- · ISLS5 Insulated Slotted Screwdriver
- ISLS8 Insulated Slotted Screwdriver
- IPHS1 Insulated Phillips Screwdriver
- IPHS2 Insulted Phillips Screwdriver
- INLP8 Insulated Long Nose /w Side Cutter
- INDC8 Insulated Heavy Duty Diagonal Cutter
- INCP8 Insulated Linesman Combination Plier
- RUP8 Roll Up Pouch



#### PLS 3R/G KIT, 3-Point Red/Green Laser Kit

- PLS 3R/G laser level
- PLS Canvas Pouch,
- PLS BP5 Alkaline Battery Pack
- PLS FS Floor Stand
- PLS MLB Magnetic L-Bracket
- PLS R/GRT4 Red/Green Reflective Target



#### PLS 5R/G KIT, 5-Point Red/Green Laser Kit

- PLS 5R/G laser level,
- PLS Canvas Pouch
- PLS BP5 Alkaline Battery Pack
- PLS FS Floor Stand
- PLS MLB Magnetic L-bracket
- PLS Pendulum Target
- PLS R/GRT4 Red/Green Reflective Target



#### PLS 6R/G KIT, Cross Line and Point **Red/Green Laser Kit**

- PLS 6R/G Laser Level
- PLS Canvas Pouch
- PLS BP5 Alkaline Battery pack
- PLS UB9 Universal Ceiling and wall bracket
- PLS FS Floor Stand
- PLS MLB Magnetic L-Bracket
- PLS R/GRT4 Red/Green Reflective Target



#### PLS 6R/G SYS, Cross Line and Point **Red/Green Laser System**

- PLS 6R/G Laser Level
- PLS Canvas Pouch
- PLS BP5 Alkaline Battery Pack
- PLS SLD Red/Green Laser Line Detector
- PLS 60520 SLD Clamp
- PLS UB9 Universal Ceiling and Wall Bracket
- PLS FS Floor Stand
- PLS MLB Magnetic L-bracket,
- PLS R/GRT4 Red/Green Reflective Target



#### PLS 180R/G KIT, Cross Line **Red/Green Laser Kit**

- PLS 180R/G Laser Level
- PLS Canvas Pouch
- PLS BP5 Alkaline Battery Pack
- PLS UB9 Universal Ceiling and Wall Bracket
- PLS MLB Magnetic L-Bracket
- PLS R/GRT4 Red/Green



#### PLS 180R/G SYS, Cross Line **Red/Green Laser System**

- PLS 180R/G Laser Level
- PLS Canvas Pouch
- PLS BP5 Alkaline Battery Pack
- PLS SLD Red/Green Laser Line Detector
- PLS 60520 SLD Clamp
- PLS UB9 Universal Ceiling and Wall Bracket
- PLS MLB Magnetic L-Bracket
- PLS R/GRT4 Red/Green Reflective Target



#### PLS H2 KIT, Horizontal Red/Green **Rotary Laser Kit**

- PLS H2 Rotary Laser Level
- PLS BP10 Alkaline Battery Tray
- PLS RBP10 NiMH Rechargeable Battery Tray with BC20 Universal Charging Cord
- PLS XLD Rotary Laser Detector
- PLS XLD Clamp
- PLS R/GRT4 Red/Green Reflective Target
- PLS TPOD500 Elevator Tripod
- PLS GR16 Grade Rod



#### PLS H2 SYS, Horizontal Red/Green **Rotary Laser System**

- PLS H2 Rotary Laser Level
- PLS BP10 Alkaline Battery Tray
- PLS RBP10 NiMH Rechargeable Battery Tray with BC20 Universal Charging Cord
- PLS XLD Rotary Laser Detector
- PLS XLD Clamp
- PLS R/GRT4 Red/Green Reflective Target



#### PLS HV2R/G KIT, Manual Slope **Red/Green Rotary Laser Kit**

- PLS HV2R/G Rotary Laser Level
- PLS BP10 Alkaline Battery Tray
- PLS RBP10 NiMH Rechargeable Battery Tray with BC20 Universal Charging Cord
- PLS RC2 Remote Control
- PLS XLD Rotary Laser Detector
- PLS XLD Clamp
- PLS WCB10 Rotary Wall and Ceiling Mount
- PLS R/GRT4 Red/Green Reflective Target
- PLS TPOD500 Elevator Tripod
- PLS GR16 Grade Rod



#### PLS HV2R/G SYS, Manual Slope Red/Green Rotary Laser System

- PLS HV2R/G Rotary Laser Level
- PLS BP10 Alkaline Battery Tray
- PLS RBP10 NiMH Rechargeable Battery Tray with BC20 Universal Charging Cord
- PLS RC2 Remote Control PLS XLD Rotary Laser Detector
- PLS XLD Clamp
- PLS WCB10 Rotary Wall and Ceiling Mount
- PLS R/GRT4 Red/Green Reflective Target



#### Fluke 62 MAX+/323/1AC IR Thermometer, Clamp Meter and **Voltage Detector Kit**

- Fluke 62 MAX+ IR Thermometer
- Fluke 323 True-RMS Clamp Meter
- Fluke 1AC-II VoltAlert
- TL175 TwistGuard™ Test Leads
- C115 Softcase



#### Fluke 417D/62MAX+ Laser Distance **Meter/Infrared Thermometer Combo Kit**

- Fluke 417D Laser Distance Meter
- Fluke 62 MAX+ Infrared Thermometer



#### **Fluke VT04 Visual Infrared Thermometer Maintenance Combo Kit**

- Fluke VTO4 Visual Infrared Thermometer
- Fluke 1507 Insulation Resistance Tester



#### Fluke VT04 Visual Infrared Thermometer **Electrical Combo Kit**

- Fluke VTO4 Visual Infrared Thermometer
- Fluke 376 AC/DC True-RMS Clamp Meter with 18-inch iFlex™
- Fluke 117 Electricians' Multimeter



#### Fluke 922 Airflow Meter/ Micromanometer Kit

- Fluke 922 Airflow Meter
- 12 inch Pitot Tube
- Two Rubber Hoses
- TPAK Magnetic Strip
- TPAK Strap, 9 inches
- TPAK Latch Tab
- User Manual
- · Hard Carrying Case



#### Fluke 975V AirMeter™ **Calibration Kit with Velocity Probe**

- Fluke 975 AirMeter™
- · Calibration Cap
- 475VP Air Velocity Probe
  FlukeView® Forms Software
- Power Adapter
- · International Power Plugs
- · Hard Carrying Case



#### Fluke 700PTPK Pneumatic Test Pump Kit

- 700PTP-1 Pneumatic Hand Pump
- · Hose Kit (1) and Adapters
- Hard Case



#### Fluke 700HTPK Hydraulic Test Pump

- 700HTP-2 Hydraulic Hand Pump
- · Hose Kit (1) and Adapters
- · Hard Case



#### Fluke 700PTPK2 Premium Pneumatic **Test Pump Kit**

- 700PTP-1 Pneumatic Hand Pump
- Premium, 'no tools required Gauge' Connector
- Premium Transmitter Test Hose Kit (1) and Adapters
- Hard Case



#### Fluke 700HTPK2 **Premium Hydraulic Test Pump Kit**

- 700HTP-2 Hydraulic Hand Pump
- · Premium, 'no tools required' **Gauge Connector**
- Premium Transmitter Test Hose Kit (1) and Adapters
- · Hard Case



#### Fluke Connect® 789 ProcessMeter™ and Temperature Kit

- Fluke 789 ProcessMeter™
- Fluke t3000 FC Wireless K-Type Temperature Module
- Fluke ir3000 FC Connector
- TL71 Premium Test Lead Set
- AC72 Alligator Clips
- 4 AA Alkaline Batteries (installed)
- User Manual
- Quick Reference Guide



# PROFESSIONAL DATA COMMUNICATION TOOLS AND TESTERS

#### FEATURED COPPER CABLE TEST SOLUTIONS



#### **Pro3000™ Analog Tone and Probe**

- Tone and trace on non-active networks
- Identify exact pair with SmartTone technology and five distinct tones
- Loud speaker on probe easy to hear through drywall, wood, and other material
- Clear Innovative filter technology blocks interference ("buzz") that makes tracing difficult ("F" modles only)
- Clips allow easy access to individual pairs and RJ11 easily connects to telephone jacks—no need for adapters



Search for: PR03000F50-KIT Tone and Probe Kit



#### TS°100 Cable Fault Finder

- Measure cable length on
- Numeric distance display
- Identify pairs with SmartTone™ generation technology
- Identify and locate distance to opens and shorts
- Works on any two or more conductor cable up to 3,000 feet (915 metres)



#### **Search for:**

26500000 TS100 with BNC to Alligator Clips



### IntelliTone™ Pro 200 LAN Tone and Probe

- Digital toning eliminates noise and false signals
- SmartTone™ analog toning isolates individual wire pairs
- Locates cables safely and effectively on active networks
- Visible end-to-end continuity test
- Built in wire mapper
- Works on twisted pair, audio, and video cabling





#### MicroScanner<sup>2</sup> Cable Verifier Series

- Displays cable length, wiremap, cable ID, and distance to fault
- Detects Ethernet, POTS and PoE
- Locates virtually any cable or wire pair with IntelliTone™ digital and analog toning
- Tests RJ11, RJ45, coax, with no adapters
- "Large" backlit LCD makes results crystal clear in any work environment



Search for:

MS2-100, MS2-KIT, MSP0E



#### MicroMapper™

- Simple verification of wiremaps and identification of faults with LEDs
- Tests twisted pair cables for open circuits, shorts, crossed pairs, reversed pairs and split pairs
- Remote identifier enables one-person testing
- Built-in tone generator for tracing installed cables hidden in walls, floors and ceilings. Works with Pro3000™ Tone and Probe (sold separately)





#### **CableIQ<sup>™</sup> Qualification Tester**

- Works on live networks to provide Ethernet switch detection and link configuration
- Measure cabling performance (10/100/1000 Mbps)
- Diagnose opens, shorts, split pairs, insertion loss, crosstalk, noise issues
- Graphically maps wiring configuration and shows distance to faults
- Tests twisted-pair, coax, and audio
- Locate and trace cables with IntelliTone 200 Digital Probe (included with CIQ-KIT)



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#### FEATURED COPPER CABLE TEST SOLUTIONS















|  | Pro 3000 | Intellitone<br>Pro | Micro-<br>Mapper | TS100    | MS2-100   | MS-POE    | CIQ-100   |
|--|----------|--------------------|------------------|----------|-----------|-----------|-----------|
| Port Location ID                           |          |                    |                  |          |           |           |           |
| Digital toning                             |          | 1                  |                  |          | ✓         | <b>✓</b>  | /         |
| Analog toning                              | ✓        | /                  | ✓                | /        | ✓         | <b>✓</b>  | 1         |
| Switch presence                            |          | 1                  |                  |          | <b>✓</b>  | 1         | 1         |
| VDV service detection                      |          |                    |                  |          | <b>✓</b>  | 1         | 1         |
| Cable Verification                         |          |                    |                  |          |           |           |           |
| Cable wiremap                              |          | ✓                  | ✓                |          | Graphical | Graphical | Graphical |
| Cable length                               |          |                    |                  | 1        | ✓         | <b>√</b>  | 1         |
| Qualified cabling speed (10/100/1000/VoIP) |          |                    |                  |          |           |           | 1         |
| Identify NBASE-T<br>Capability             |          |                    |                  |          |           | 1         |           |
| Identify PoE Capability                    |          |                    |                  |          |           | <b>✓</b>  |           |
| Cable Troubleshooting                      |          |                    |                  |          |           |           |           |
| Identify open/short                        | ✓        | 1                  | ✓                | <b>✓</b> | ✓         | ✓         | 1         |
| Distance to open/short                     |          |                    |                  | 1        | <b>√</b>  | 1         | 1         |
| Locate crosstalk fault                     |          |                    |                  |          |           |           | 1         |
| Identify and locate impedance fault        |          |                    |                  |          |           |           | 1         |



MS-POE-KIT

#### MicroScanner™ PoE

- PoE Switch Verification Determine if a switch port can provide enough power by reporting PoE class (0-8).
- Powered Pairs Graphically identifies powered pairs. Including Dual Signature where the switch port delivers power on 2 or 4 pairs (802.3bt or PoE ++).
- Active Switch Detection Determine if a cable is connected to a switch port and port speed up to 10G.
- Cable Testing Identify any shorted, open or crossed wires at both ends, length ofeach pair, and send tones to find cables.
- Validate and troubleshoot your Industrial Ethernet copper cabling
- PoE Injector verification Display injector voltage level



www.flukenetworks.com Fluke Networks

#### **TERMINATION TOOLS AND ADAPTERS**

Ergonomic design, high-quality materials and Fluke Networks quality for separating, stripping and cutting wire. Perfect tools for your every job.













|     | Modular Crimper | Need-L-Lock <sup>™</sup><br>Crimping Pliers | D-Snips™ | Cable Strippers | Probe Pic | Can Wrenches |
|-----|-----------------|---|----------|-----------------|-----------|--------------|
| SKU | 11212530        | 11294000                                    | 44300000 | 44210015        | 44600000  | 44007000     |



#### **Pro-Tool**<sup>™</sup> Kits

- Ergonomically designed Dur-a-Grip™ pouch for convenient tool storage on belt
- D914<sup>™</sup> and D814<sup>™</sup> industry standard punchdown tools make for solid terminations
- Easy to use cable stripper quickly rings and slits many types of cable
- Probe Pic checks for loose or damaged connections
- Cut and strip wire with Electricians' D-Snips™
- Three kit combinations available





#### **D914<sup>™</sup> Series Impact Tools**

- Hook, spudger and blade storage tools are built into the handle
- Select low impact for 24/26 gauge wire or high impact for 22-gauge wire
- Optional Phillips-head or flat screwdriver blade
- Supports a variety of torque tool bits and sockets
- Easy blade insertion, locks in place
- D914S features soft touch rubber handle and ergonomic design



#### Search for:

10061501 D914S impact tool with EverSharp 110, EverSharp 66 blade and free blade

#### **Punchdown Blades**

| Model    | Description                |
|----------|----------------------------|
| 10176500 | EverSharp 110 blade        |
| 10178600 | EverSharp 110/66 cut blade |
| 10056500 | EverSharp 66 blade         |
| 10565000 | Krone blade                |
| 10565110 | Krone/110 cut blade        |
| 10176000 | 110 blade                  |
| 10436001 | Centerpunch blade          |
| 10465001 | 3M System D blade          |
| 10645001 | Wood screw starter punch   |
| 10665000 | BIX blade                  |
| 10056000 | 66 blade                   |
| 10057000 | 630 blade                  |
| 10979002 | Blade storage case         |

#### JackRapid™ Punchdown Tool

- Terminate jacks eight times faster than
  - traditional impact tools. The patented design seats and terminates all wires simultaneously. Built-in blade cuts off the excess wire eliminating the need for a secondary trim step
- High-quality, consistent terminations
- Ergonomic design reduces hand fatigue
- Convenient, built-in stripper
- Multiple versions support several jack manufacturers

#### JackRapid™

| Model        | Description  |
|--------------|--|
| JR-PAN-2     | For Panduit NK6X88M, NK688M, NKP5E88M                              |
| JR-ADC-2     | For ADC C6a CopperTen® UTP RJ45 jack and C6 TrueNet® KM8 UTP RJ45  |
| JR-ORT-2     | For Ortronics® TJ5E00, TJ600, TJ610                                |
| JR-SYS-2     | For Systimax® MGS400, MGS600, MFP420, MFP520 and Commscope® UNJ10G |
| JR-LEV-2     | For Leviton <sup>®</sup> 61110, 5G110, 6110G                       |
| JR-SYS-UNI-1 | For Systimax MPS100E, C5, M1BH and Commscope UNJ600/500/300        |
| JR-LEV-1     | For Leviton 41106, 41108, 5G108                                    |



#### **TELEPHONE TEST SET COMPARISON**















|  | TS°54 TDR | TS°52 PRO | TS°22A | TS <sup>°</sup> 22 | TS°25D   | TS°30    | TS <sup>°</sup> 19 |
|--|-----------|-----------|--------|--------------------|----------|----------|--------------------|
| TDR to detect shorts, opens, and distance to open                        | ✓         |           |        |                    |          |          |                    |
| Built-in toner   | ✓         |           |        |                    |          |          |                    |
| Display—back lit LCD and glow-<br>in-the-the dark keypad                 | ✓         | 1         |        |                    | LCD only |          |                    |
| Extended range high-imped-<br>ance DataSafe operation in<br>monitor mode | 1         | 1         |        |                    | 1        |          |                    |
| Data lockout protection<br>Data lockout override                         | ✓         | <b>✓</b>  |        |                    | ✓        |          |                    |
| DSL/POTS filtering technology  | ✓         | <b>✓</b>  |        |                    | ✓        |          |                    |
| Low/high voltage indication  | ✓         | /         |        |                    | ✓        |          |                    |
| Low current (mA) indication  | ✓         | /         |        |                    | ✓        |          |                    |
| Over voltage protection Over current protection                          | ✓         | 1         | ✓      | ✓                  | ✓        | ✓        |                    |
| Two-way speakerphone for true hands-free conversations                   | ✓         | 1         | ✓      |                    |          |          |                    |
| One-way amplified speaker for hands-free monitoring                      | <b>√</b>  | ✓         | ✓      | <b>√</b>           | <b>√</b> |          |                    |
| Waterproof—exceeds American<br>Military Spec. MIL-STD-810E               | ✓         | 1         |        |                    |          |          |                    |
| DropSafe—passes 20 foot (6 metre) drop test onto concrete                | ✓         | 1         | 1      | ✓                  |          | 1        |                    |
| Polarity indication in talk mode   | ✓         | <b>✓</b>  | ✓      | ✓                  | ✓        | <b>✓</b> | ✓                  |
| Stores nine 18-digit numbers in repertory dialer (speed dialing)         | ✓         | 1         | 1      | 1                  | ✓        |          |                    |

#### 4 and 8 Wire Modular Adapters

- Easily complete testing and obtain circuit access on working lines without disrupting service
- Clear circuit markings on the sides and bottom of the unit
- Test line status with the 4-wire modular adapter



| Model    | Description                |
|----------|----------------------------|
| 10113000 | 4 wire                     |
| 10210100 | 4-wire in-line             |
| 10210101 | 4-wire in-line with K-Plug |
| 10220100 | 6-wire in-line             |
| 10220101 | 6-wire in-line with K-Plug |
| 10230100 | 8-wire in-line             |
| 10230101 | 8-wire in-line with K-Plug |

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If you would like to know which distributors or resellers stock Fluke branded products that come with our warranty, then please refer to the Where to Buy section of our website at **fluke.com/au/wtb** 

#### Protect your Fluke investment.

Fluke Australia sells its products only through its network of Authorised Distributors and Wholesalers in Australia, New Zealand and the Pacific Island regions which can be found at fluke.com/au/wtb

Fluke stand behind their products. We strive to provide quality products, exceptional customer service, and a warranty that protects your investment in the event your product should encounter any issues. To ensure you receive the quality service you deserve, we select Fluke Authorised Distributor's and Service Centre's whom we believe share our vision of quality and service and are providing you 100% Fluke genuine product for use in the local market.

#### Benefits of purchasing via a Fluke Australia Authorised Reseller\*

- Be reassured vou've purchased a 100% Fluke genuine product
- · Your Fluke investment is covered by Fluke Australia's warranty.
- Get more back: Take advantage of Fluke Australia's exclusive deals and promotional offers
- Get the Fluke Service you expect
- Training and support on your Fluke product

#### Find your local Fluke Australia authorised reseller at: fluke.com/au/wtb

\*If you are currently purchasing via a local electrical wholesaler in Australia, New Zealand or the Pacific Island regions who are not on our Where to Buy Page, please contact them direct and ensure they are purchasing from a Fluke Authorised Distributor.



#### **Going Green**

Fluke is proud to launch its "Going Green" initiative, a movement aimed at minimising environmental impact.

As part of this initiative, we are reducing our carbon footprint. Among other efforts, this includes eliminating paper manuals, inserts and software CDs in product shipments. We are "Going Green" on more products every day. Join us in helping the environment by choosing paperless options. It is easier than ever to access documents and download them online.

The choice is yours!



#### Authorised distributor

#### **Order Placement:**

For customer service, call 1300-735-292 To fax an order, use 1800-067-639 To email an order, ordersau@thermofisher.com

#### Contact Us:

For customer service, call 1300-735-292 For service and calibration, call 1300-736-767 To order online: thermofisher.com.au

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