

## Wide Measurement Range from -100°C to 1300°C

### TEMPERATURE HiTESTER 3441, 3442



- Model 3442 : Waterproof construction
- -100 to 199.9 °C: 0.1 °C resolution, 200 °C to 1300 °C: 1 °C resolution
- More than 200 hours (1 week) of continuous operation on a single battery
- Max./Min. value recording function and sensor disconnection check function

Model No. (Order Code)	<b>3441</b>	(°C only)
	<b>3441-02</b>	(°C/°F selectable)
	<b>3442</b>	(°C only, Waterproof construction)

Note: These products cannot perform measurement alone. Please purchase a temperature probe separately.

#### ■ Probe specifications (9472, 9473, 9474, 9475: Waterproof construction)

Model	9472	9473	9474	9475	9476
Material type	K type thermocouple (Chromel / Almel)				
Contact type	Non-grounded	Non-grounded	Non-grounded	Non-grounded	Grounded
Tolerance	*2				*3
Response (90%)*1	About 5 sec	About 10 sec	About 5 sec	About 10 sec	About 3 sec
Size of Sheath (mm), (inch)	φ 2.3 × 150 (mm) φ 0.09 × 5.91 (in)	φ 4.8 × 300 (mm) φ 0.19 × 11.81 (in)	φ 2.3 × 100 (mm) φ 0.09 × 3.94 (in)	φ 4.8 × 100 (mm) φ 0.19 × 3.94 (in)	φ 20 (mm) φ 0.79 (in)
Compensation lead	Conventional type (-20 to 90°C, -4 to 194°F), 1m (3.28 ft)				
Grip heat resistance	80 °C (176 °F)				
Measurement temperature	-100 to 300 °C -148 to 572 °F	0 to 800 °C 32 to 1472 °F	-100 to 300 °C -148 to 572 °F	-100 to 500 °C -148 to 932 °F	-40 to 500 °C -40 to 932 °F

\*1 Sheath type: Responsiveness in ice water at 0 °C (32 °F) and in boiling water at 100 °C (212 °F)  
Surface type: Responsiveness on a metal surface at 0 °C (32 °F) and at 100 °C (212 °F)  
\*2 At -40 °C (-40 °F) and more, the greater of ±1.5 °C (±2.7 °F) and ±0.4 % of the measured value  
\*3 ±2.5 °C [(T-Ts) ≤ 100°C], -0.03 × T °C to +2.5 °C [100 °C < (T-Ts)],  
T: measured temperature (-40 °C to 500 °C), Ts: environmental temperature (0 °C to 40 °C)

#### ■ Basic specifications (Accuracy guaranteed for 6 months, Post-adjustment accuracy guaranteed for 6 months)

	3441	3442
Sensor	K type thermocouple, (Chromel / Almel)	
Measurement range	-100 °C to 1300 °C The actual measurement range is restricted by the temperature probe (0.1 °C Resolution / -100 °C to 199.9 °C, 1 °C Resolution / 200 °C to 1300 °C)	
Unit accuracy	±0.1 % rdg. ±0.8 °C (-100 °C to 199.9 °C) ±0.2 % rdg. ± 1 °C (200 °C to 1300 °C) *Accuracy of temperature sensor is added	
Water-resistant construction	N/A	IP 54 (EN 60529: 1991)
Sampling rate	2 times/s	
Contact compensation	Auto compensation	
Functions	Max/Min data recording and display, display data hold, sensor broken down display, auto power save, low battery warning	
Power supply	R6P (AA) manganese battery ×4, or LR6 (AA) alkaline battery ×4, Continuous use : 200 hr or better (with manganese battery), Max. rated consumption : 35 mVA	
Dimensions and mass	74 mm (2.91 in)W × 155 mm (6.10 in)H × 24 mm (0.94 in)D, 160 g (5.6 oz)	
Accessories	R6P (AA) manganese battery ×4, Strap band ×1, Instruction manual ×1	

Options

CARRYING CASE  
9386-01  
Soft plastic type

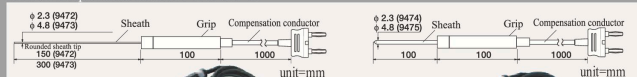


#### ■ Probe specifications

Model	9180, 9183	9181	9182
Material type	K type thermocouple (Chromel / Almel)		
Contact type	Non-grounded	Grounded	Non-grounded
Tolerance	9180 : *4 9183 : *2	+2.5 °C (+4.5 °F) [(T-Ts) ≤ 100 °C (180 °F)] -0.035 × T °C to +2.5 °C [100 °C (180 °F) < (T-Ts)] T: measurement temp. (-50 °C to 400 °C) Ts: environment temp. (0 °C to 50 °C)	*4
Response (90%)*1	About 5 sec	About 3 sec	About 5 sec
Size of Sheath (mm), (inch)	φ 3.2 × 150 (mm) φ 0.13 × 5.91 (in)	φ 13 (mm) φ 0.51 (in)	φ 3.2 × 500 (mm) φ 0.13 × 19.69 (in)
Compensation lead	Conventional type (-20 to 90°C, -4 to 194°F), 1m (3.28 ft)		Heat resisting type (0 to 150 °C, 32 to 302 °F) 2m (6.56 ft)
Grip heat resistance	150 °C (302 °F), Grip size φ 13 × 100 mm (φ 0.51 in × 3.94 in)		90 °C (194 °F), clamp size φ 8 × 30 mm (φ 0.31 × 1.18 in)
Measurement temperature	-50 to 750 °C -58 to 1382 °F	-50 to 400 °C -58 to 752 °F	-50 to 750 °C -58 to 1382 °F

\*1 Sheath type: Responsiveness in ice water at 0 °C (32 °F) and in boiling water at 100 °C (212 °F)  
Surface type: Responsiveness on a metal surface at 0 °C (32 °F) and at 100 °C (212 °F)  
\*2 At -40 °C (-40 °F) and more, the greater of ±1.5 °C (±2.7 °F) and ±0.4 % of the measured value  
\*4 At -40 °C (-40 °F) and more, the greater of ±2.5 °C (±4.5 °F) and ±0.75 % of the measured value

Due to short range ordering, type K thermocouples exhibit increased thermal electromotive force when used to measure temperatures from 250°C to 600°C.

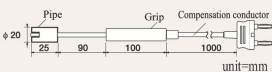


**SHEATH TYPE TEMPERATURE PROBE 9472**  
K type, Size of Sheath: φ 2.3 mm (0.09 in) × 150 mm (5.91 in),  
1 m (3.28 ft) Cord length

**SHEATH TYPE TEMPERATURE PROBE 9474**  
K type, Size of Sheath: φ 2.3 mm (0.09 in) × 100 mm (3.94 in),  
1 m (3.28 ft) Cord length

**SHEATH TYPE TEMPERATURE PROBE 9473**  
K type, Size of Sheath: φ 4.8 mm (0.19 in) × 300 mm (11.81 in),  
1 m (3.28 ft) Cord length

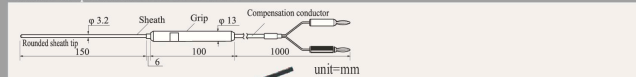
**SHEATH TYPE TEMPERATURE PROBE 9475**  
K type, Size of Sheath: φ 4.8 mm (0.19 in) × 100 mm (3.94 in),  
1 m (3.28 ft) Cord length



**SURFACE TYPE TEMPERATURE PROBE 9476**  
K type, Tip dia. φ 20 mm (0.79 in), 1 m (3.28 ft) Cord length

Note: The 9472 to 9475 are waterproof probes. When used with Model 3442, you can achieve a complete water-resistant temperature measuring system.

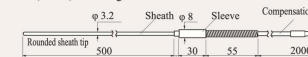
Due to short range ordering, type K thermocouples exhibit increased thermal electromotive force when used to measure temperatures from 250°C to 600°C.



**SHEATH TYPE TEMPERATURE PROBE 9180**  
K type, Size of Sheath: φ 3.2 mm (0.13 in) × 150 mm (5.91 in),  
1 m (3.28 ft) Cord length

**SHEATH TYPE TEMPERATURE PROBE 9183**  
K type, Size of Sheath: φ 3.2 mm (0.13 in) × 150 mm (5.91 in),  
1 m (3.28 ft) Cord length

**SURFACE TEMPERATURE PROBE 9181**  
K type, Tip dia.: φ 13 mm (0.51 in), 1 m (3.28 ft) Cord length

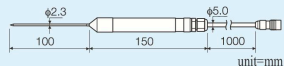


**SHEATH TYPE TEMPERATURE PROBE 9182**  
K type, Size of Sheath: φ 3.2 mm (0.13 in) × 500 mm (19.69 in),  
2 m (6.56 ft) Cord length

### The 9478 is used for the LCR METER IM3533/IM3590

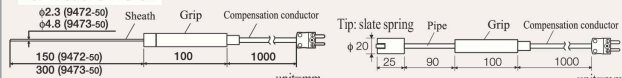
\*These probes are options for the Temperature HiTester 3446-01, 3447-01, both of which are discontinued.

For the LCR meter IM3533/IM3590 \*For Model 3447-01



**SHEATH TYPE TEMPERATURE PROBE 9478**  
Pt100 type, Tip dia. φ 2.3 mm (0.09 in), 1 m (3.28 ft) Cord length

For Model 3446-01



**SHEATH TYPE TEMPERATURE PROBE 9472-50**  
K type, Size of Sheath: φ 2.3 mm (0.09 in) × 150 mm (5.91 in),  
1 m (3.28 ft) Cord length

**SURFACE TYPE TEMPERATURE PROBE 9476-50**  
K type, Tip dia. φ 20 mm (0.79 in), 1 m (3.28 ft) Cord length