

1 Function

SEM Series Digital Tension Meter is a tension instrument especial designed for various tension testing and measuring. It has simple structure, high accuracy, easy to operate and handy to carry out and so on.

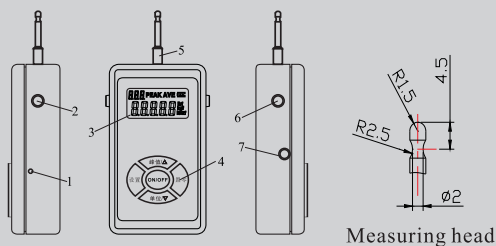
2 Characteristic

1. High accuracy and high resolution.
2. Upper and lower tolerance limit enables the device to judge the measured.
3. Memory 10 testing data, and calculate the average.
4. Converting four units N, kgf(gf), lbf, ozf automatically.
5. LCD screen direction turning function.
6. Peak holding, auto-releasing function and the peak holding time can be set.
7. No automatic power off function, the power off time can be set.
8. RS-232 output, transmitting the 10 groups testing data to printer or computer, for analysis to see max value, min value, average value and so on.
9. Port (RS-232) output connecting computer with matched software. (Software & Cable purchase additionally).

3 Specification

Model	SEM-1	SEM-2	SEM-5	SEM-10	SEM-20
Capacity	1N	2N	5N	10N	20N
Resolution	0.001N	0.001N	0.001N	0.01N	0.01N
Accuracy	±0.5% FS(20%~100%)				
Unit	N, gf, lbf, ozf		N, kgf, lbf, ozf		
Power	AAA 1.5V Ni-hy cells				
Humidity	Relative humidity 15%~80% RH				
Temperature	Relative temperature 10-40°C				
Environment	No hypocentre and corrosion around				

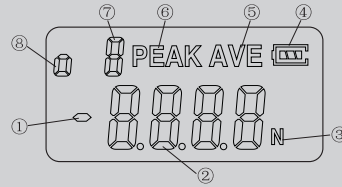
4 Structure



Picture 1

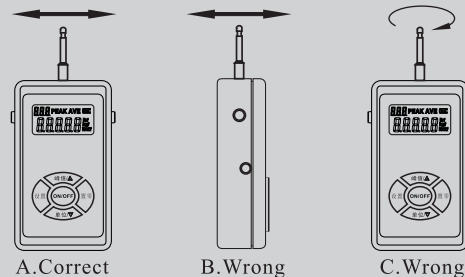
To easy use, had add the memory button and zero button at the side of instrument.

1. Reset hole.
2. Memory key--- it can memory the test value on display, the date will not be saved when the measured value is less than the min collection value
3. LCD Screen



Picture 2

- ①The direction of the force.
 - ②The value of measuring.
 - ③Unit.
 - ④Battery instructions: When the power is low, display "L", it's show the meter needs to change.
 - ⑤Indication of average function.
 - ⑥PEAK: Symbol of the peak hold function.
 - ⑦Testing times.
 - ⑧Symbol of work in the state apparatus. When shows the L, the measure value is less than lower limit exceed the arrange. When show's O, the measure value is between the lower limit and upper limit in the arrange. When show's H, the measure value is more than upper limit exceed arrange.
4. Parts and functions
- ①Power ON/OFF.
 - ②ZERO: Press the zero key, the display will clear zero. More than 3 seconds, it can print memory value by connect printer.
 - ③PEAK/△: Press the peak button, the symbol of peak will be show in the display; More than 3 seconds, will be deleted all of stored data. In the state of setting, Press the peak button all the time, date will go straight increase.
 - ④UNIT/▽: Press the unit button to converting four units N, kgf(gf), lbf, ozf; More than 3 seconds, will be deleted last stored group data in the state of setting, Press the unit button all the time, date will go straight descending.
 - ⑤SET: Press the set button, enter setting state, set the parameter by "Δ▽" button, press "zero" button to save setting value.
5. Testing thimble
- ①The testing position is on convex of testing thimble.
 - ②The testing direction is parallel with instuaments and plumb with thimble(as follows picture)



Picture 3

6. Zero Button--- The same button to the Zero button on panel.
7. Communication Port---RS-232 port, for connecting computer to transfer the data out to watch the testing curve, (Software purchase additionally according to your requirement)

5 Measuring

1. Turn on: To press the button of "ON/OFF" to open the instrument, it enters into the work state after the instrument model have be showed on the screen. To press the "ON/OFF" again to turn off the instrument.
2. To choice the measuring model: the instrument have automatic stored and not stored measuring style, it is in automatic stored while you set the stored times at 1~10, set the times in 0 mean in not stored model; The two measuring model have real value , peaking holding and auto-releasing function, the instrument in real value testing state, then to press the peak button, the screen show "peak" symbol , and set the auto-releasing peak time ,set time is (1-10 seconds is mean auto-releasing peak state, 0 means in peak holding state).
3. Set operation: Press the set button, the instrument enter into set state, it will show the items for set, the beginning show upper limit value Hi.d (Hi.d show on the upper of left .data box show upper limit value), then press the button again, will show Lo.d lower limit, LE.S min. collect value, A.PE peak value automatic refurbish, SA.c save with automatic, off automatic turn off , SEE SAVE check the stored value automatic. Use "PEAK /△" button and "UNIT /▽" button to set the parameter,complete set, press the zero button to exit.
 - ①Hi.d upper limit set: the screen show "H" to express the value higher than upper limit.
 - ②Lo.d lower limit set: Show "L" to express lower than the lower limit, it show "O" to express between them.
 - ③ LE.S minimum acquisition value is set: When the test measurement value is less than the minimum acquisition value will not be stored.
 - ④A.PE peak time set for automatic discharge: Instrument testing is in peak condition, the instrument set time intervals (1-10 seconds, free setting, 0 in order to maintain) lifted the peak.
 - ⑤SA.C automatic set: the screen show "AVE" symbol while the automatic stored with 1~10 times. The instrument automatic stored the maximum testing value. (press the memory button, the instrument will stored the current value.) reach the testing times ,it will calculate the average value.("AVE" symbol flicker) while set the time in 0, the instrument not stored the collect value
 - ⑥OFF time setting Automatic shutdown: 1~60 minute free set, 0 mean turn off with handle, press "ON/OFF" upon 5 seconds, the instrument comeback to the original state.
 - ⑦SEE Storage Value View: Check the "SEE" Stored value, the upper left of the screen show the "SEE", the figure box show the "SAVE", then press the "UNIT/▽" button or "PEAK/△" button to enter in to the interface for stored. The upper left show the times of the test, while the upper right show the "AVE", The figure box will show the average value, while the upper right of screen show the "no" and the figure box show the "SAVE", in this state, the instrument have no stored value.
4. Choice the units: To choice the right unit due to the test request.
5. Use hand to operate the machine, use the instrument to pull out the tested products, make it remove to the requested position, the direction for the tested product need plumb with the handle force all the way.

6 Packing List

Number	Name	Quility
1	Main body	1
2	Manual	1
3	Certification	1

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