

SOIL THERMOMETER

Model : PST-715



Your purchase of this SOIL THERMOMETER marks a step forward for you into the field of precision measurement. Although this meter a complex and delicate instrument, its durable structure will allow many years of use if proper operating techniques are developed. Please read the following instructions carefully and always keep this manual within easy reach.



OPERATION MANUAL

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1. FEATURES

- * Designed to check the temperature level of soil .
- * Measurement range : 0 °C to 100 °C Temperature of soil sample with 0.1 °C resolution.
- * All in one digital soil meter, easy to make operation.
- * Data hold function to freeze the desired value on display.
- * Microprocessor circuit ensures high accuracy and provides special functions and features.
- * Operates from DC 1.5V (UM4/AAA) x 4 PCs batteries.
- * Built-in low battery indicator.
- * Durable, long-lasting components, enclosed in strong, compact ABS-plastic housing.

2. SPECIFICATIONS

2-1 General Specifications

Applications	Designed to check the temperature level of soil .
Measuring Principal	Used ThermocoupleType K to measure the reading of °C " temperature " of soil sample.
Display	LCD size : 28 mm x 19 mm.

Measurement Range	0 °C to 100 °C Temperature on soil.
Resolution	0.1 °C .
Accuracy	$\pm (1.5 \% \text{ F.S.} + 5 \text{ d})$ @ 23 °C ± 5 °C, F.S. : <i>full scale</i> .
Circuit	Custom one-chip of microprocessor LSI circuit.
Probe	Thermocouple Type K
Data Hold	Freeze the display reading.
Sampling Time	Approx. 0.8 second.
Operating Temperature	0 to 40 °C .(Instrument block)
Operating Humidity	Less than 80% R.H.
Power Supply	DC 1.5 V battery (UM4/AAA) x 4 PCs,
Power Current	Approx. DC 5 mA
Weight	267 g/ 0.58 LB. @ <i>Battery is included.</i>
Dimension	<i>Meter body :</i> 172 x 40 x 40 mm (6.8" x 1.6" x 1.6").
	<i>Probe body :</i> 210 mm x Dia. 5 mm 8.2" x Dia. 0.2" .
	<i>Total length (meter + probe) :</i> 374 mm (14.7 ").
Accessories Included	Instruction manual..... 1 PC.
Optional Accessory	Hard carrying case, CA-06

2-2 Electrical Specifications

Resolution	Range	Accuracy
0.1°C	0.0 to 100.0 °C	± (0.4 % + 0.8°C)
0.1°F	32.0 to 212.0°F	± (0.4 % + 1.5°F)
* Above specification tests under the environment RF Field Strength less than 3 V/M & frequency less than 30 MHz only.		

3. FRONT PANEL DESCRIPTION

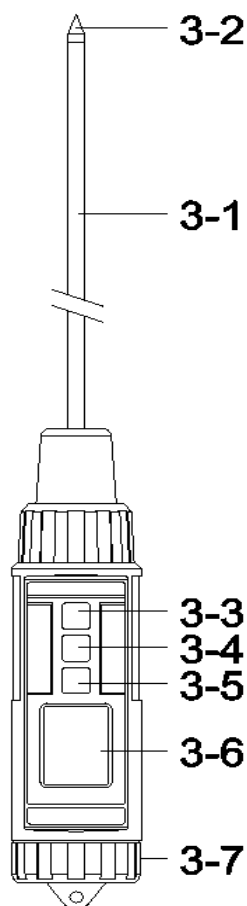


Fig. 1

- 3-1 Soil temperature Probe
- 3-2 Temperature Sensing Head
- 3-3 Power Button
- 3-4 Hold Button
- 3-5 Reverse Button
- 3-6 LCD Display
- 3-7 Battery Compartment/Cover

4. MEASURING PROCEDURE

4-1 Temperature measurement

- 1) Turn on the meter by pressing the " Power Button "
(3-3, Fig. 1) momentarily.

** Press the " Power Button " (3-3, Fig. 1)
momentarily again will turn off the meter.*

- 2) Insert the " Temperature sensing head " (3-2, Fig. 1) into
the measured soil.

**It is recommended that probe head should be
inserted into the soil at least 10 cm when make
the measurement..**

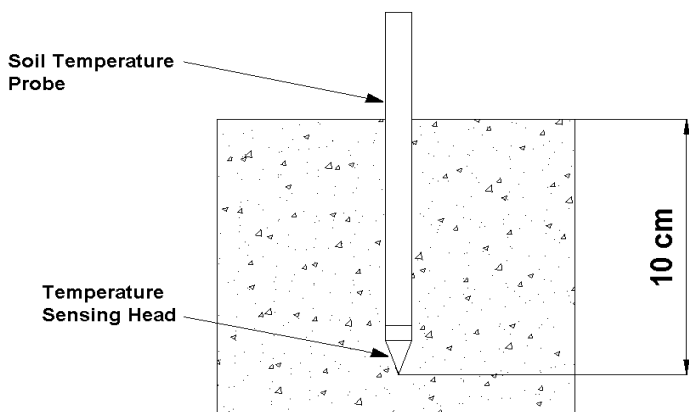


Fig. 2

Consideration :

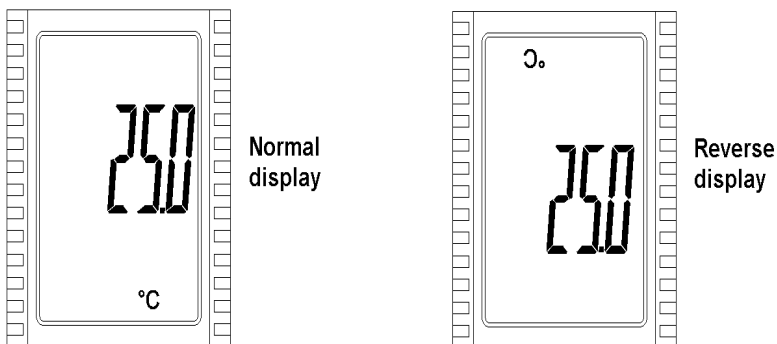
***If the sample soil under testing has a high
Temperature it may take a few minutes to
obtain a stable reading.***

4-2 Data Hold

- * During the measurement, press the " Hold Button " (3-4, Fig. 1) momentarily to hold the measured value. The LCD will show a " HOLD " symbol.
- * Press the " Hold Button " once again to release the data hold function.

4-3 Display Reverse

- 1) During the measurement, press the " Display Reverse Button " (3-5, Fig. 1) once , will reverse the display direction for the user convenience.
- * press the " Display Reverse Button " once again will return to the normal display.



4-3 Change the °C, °F unit

- 1) Refer to Fig. 3 , open the " Battery Cover " (3-7, Fig. 1) use the finger (middle finger) to fold the battery cover and let the snap contact the batteries completely.
- 2) Turn on the meter by pressing the " Power Button " (3-3, Fig. 1) momentarily.
Press the " °C, °F Button " (Fig. 3) momentarily will switch the Temp. unit " °C to °F " or " °F to °C "

- 3) After the Temp. unit is selected, then reverse the finger the battery snap and install the " Battery cover "(3-7 Fig. 1) again
Now the Temp. unit is selected and with default,
If power on the meter again, the selected Temp. unit will present.

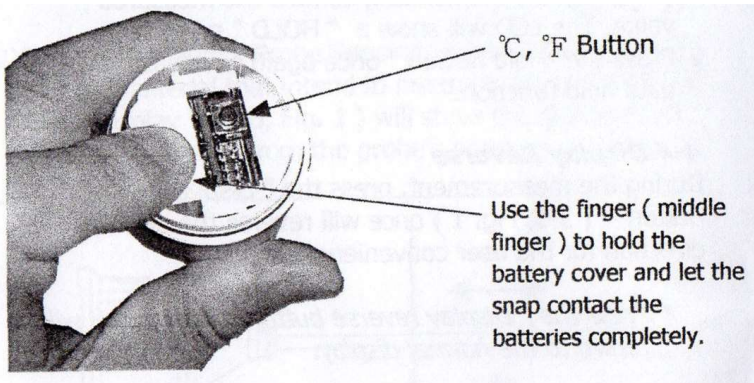



Fig. 3

5. BATTERY REPLACEMENT

- * Replace the batteries when the left corner of the LCD displays the low battery icon " , using 4 fresh 1.5 V (UM4, AAA) batteries.
- * To change the batteries, open (rotate clockwise direction) the " Battery Cover " (3-7, Fig. 1).
- * Make sure the " Battery cover " (3-7, Fig 1) is secured after changing the batteries.