Manual

PCE-SMM 1
SOIL
MOISTURE METER

PCE Instruments

PCE Americas Inc.
711 Commerce Way
Suite 8
Jupiter
FL-33458
USA
From outside US: +1
Tel: (561) 320-9162
Fax: (561) 320-9176
info@pce-americas.com

PCE Instruments UK Ltd.
Units 12/13
Southpoint Business Park
Ensign way
Hampshire / Southampton
United Kingdom, SO31 4RF
From outside UK: +44
Tel: (0) 2380 98703 0
Fax: (0) 2380 98703 9
info@pce-instruments.com

www.pce-instruments.com/english
www.pce-instruments.com

Your purchase of this SOIL MOISTURE METER marks a step forward for you into the field of precision measurement. Although this SOIL MOISTURE METER is 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.

TABLE OF CONTENTS

1. FEATURES

* Designed to check the moisture level of soil or other similar material.
* Measurement range : 0 % to 50 % moisture content of soil sample with 0.1 % 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

Applications	Designed to check the moisture level of soil or other similar material.
Measuring Principal	Used the 2 pins electrode to measure the conductive ability of the species, then converter to the reading of % " Moisture content " of soil sample.
Display	LCD size : 28 mm x 19 mm.

Measurement Range	0 % to 50 % moisture content on soil.
Resolution	0.1 %.
Accuracy	± (5 % + 5 d) F.S. *@ 23± 5 ℃, F.S. : full scale.*
Circuit	Custom one-chip of microprocessor LSI circuit.
Probe	2 pins moisture electrode.
Data Hold	Freeze the display reading.
Sampling Time	Approx. 0.8 second.
Operating Temperature	0 to 50 ℃.
Operating Humidity	Less than 80% R.H.
Power Supply	DC 1.5 V battery (UM4/AAA) x 4 PCs,
Power Current	Approx. DC 12 mA
Weight	267 g/ 0.58 LB. *@ Battery is included.*
Dimension	*Meter body :* 172 x 40 x 40 mm (6.8" x 1.6" x 1.6").
	Probe body : 220 mm x Dia. 10 mm 8.7" x Dia. 0.4" .
	Total length (meter + probe) : 392 mm (15.4 ").
Accessories Included	Instruction manual..... 1 PC.

3. FRONT PANEL DESCRIPTION

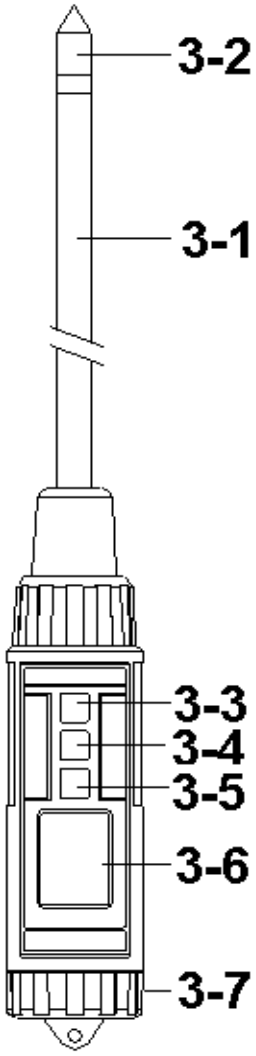

Fig. 1

3-1 Soil moisture Probe
3-2 Moisture Sensing Head
3-3 Power Button
3-4 Hold Button
3-5 REC Button
3-6 LCD Display
3-7 Battery Compartment/Cover

4. MEASURING PROCEDURE

4-1 Soil 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 " Moisture 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..

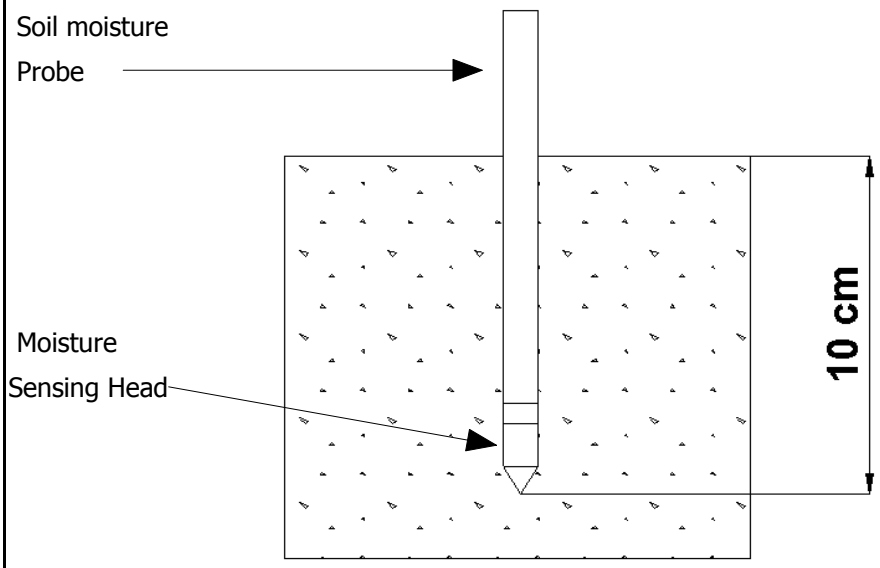

Fig. 2

Consideration :

If the sample soil under testing has a high moisture content 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 Data Record (Max., Min. reading)

1) The data record function records the maximum and minimum readings. Press the " REC Button " (3-5, Fig. 1) momentarily to start the Data Record function, shows " REC " on the display.
2) With the " REC " symbol on the display.
   a) Press the " REC Button " (3-5, Fig. 1) momentarily, the " REC MAX " symbol along with the maximum value will appear on the display.
   b) Press the " REC Button " (3-5, Fig. 1) momentarily again, the " REC MIN " symbol along with the minimum value will appear on the display.

      ** When display shows " REC MAX " or " REC MIN ", press the " Hold Button " (3-4, Fig. 1) momentarily will delete the max. (min.) value, the display will show the " REC. " only and execute the memory function continuously.*

   c) To exit the memory record function, press the " REC " button for 2 seconds at least. The display will revert to the current reading, not show " REC "

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.