

1 YEAR
WARRANTY



OMEGA® User's Guide



Shop online at
omega.com®

e-mail: info@omega.com
For latest product manuals:
omegamanual.info



MADE IN CHINA

HHMM257 Pinless Moisture Meter



OMEGAnet® Online Service
omega.com

Internet e-mail
info@omega.com

Servicing North America:

U.S.A.: Omega Engineering, Inc., One Omega Drive, P.O. Box 4047
ISO 9001 Certified Stamford, CT 06907-0047 USA
Toll-Free: 1-800-826-6342 Tel: (203) 359-1660
FAX: (203) 359-7700 e-mail: info@omega.com

Canada: 976 Bergar, Laval (Quebec), H7L 5A1 Canada
Toll-Free: 1-800-826-6342 TEL: (514) 856-6928
FAX: (514) 856-6886 e-mail: info@omega.com

For immediate technical or application assistance:

U.S.A. and Canada: Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA®
Customer Service: 1-800-622-2378 / 1-800-622-BEST®
Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN®

Mexico TEL: 001 (203) 359-1660 FAX: 001 (203) 359-7700
Latin America e-mail: espanol@omega.com

Servicing Asia:

China: 1698 Yi Shan Road, Unit 102, Min Hang District
Shanghai, China 201103 P.R.C.
Hotline: 800 819 0559 / 400 619 0559
e-mail: info@cn.omega.com

Servicing Europe:

Benelux: Toll-Free: 0800 099 3344 TEL: +31 20 347 21 21
FAX: +31 20 643 46 43 e-mail: sales@omegaeng.nl

Czech Republic: Frystatska 184, 733 01 Karviná, Czech Republic
TEL: +420-59-6311899 FAX: +420-59-6311114
e-mail: info@omegashop.cz

France: Toll-Free: 0800 466 342 TEL: 01 57 32 48 17
FAX: 01 57 32 48 18 e-mail: esales@omega.fr

Germany/ Austria: Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
Toll-Free: 0800 8266342 TEL: +49 (0) 7056 9398-0
FAX: +49 (0) 7056 9398-29 e-mail: info@omega.de

United Kingdom: OMEGA Engineering Ltd.
ISO 9001 Certified One Omega Drive, River Bend Technology Centre, Northbank
Irlam, Manchester M44 5BD United Kingdom
Toll-Free: 0800-488-488 TEL: +44 (0) 161 777-6611
FAX: +44 (0) 161 777-6622 e-mail: sales@omega.co.uk

It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, human applications.

User's Guide

Ω OMEGA®

Pinless Moisture Meter

Model HHMM257



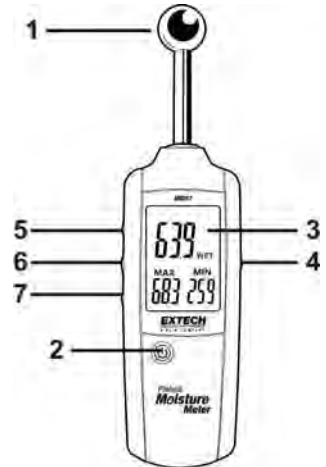
Introduction

Congratulations on your purchase of the Extech MO257 Pinless Moisture Meter. The pinless moisture sensor monitors the moisture in wood and other building materials without causing surface damage. High frequency sensing technology allows the meter to take non-invasive moisture measurements. User programmable alarms alert the user if moisture measurements exceed alarm set-points. This meter is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Meter Description

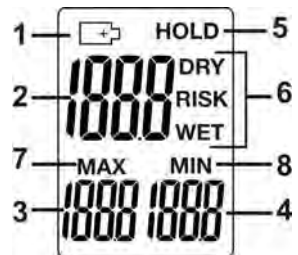
1. Measurement sensor
2. Power ON-OFF button
3. LCD display
4. Measure (MEAS) button
5. UP and BACKLIGHT button
6. SET button
7. DOWN button

Battery compartment located on rear of unit



LCD Display

1. Low Battery icon
2. Main LCD display
3. MAX reading
4. MIN reading
5. HOLD function
6. Measurement alert (DRY, RISK, WET)
7. MAX mode icon
8. MIN mode icon



Battery Replacement

1. Turn off the meter
2. Remove the Philips head screw located on the rear of the unit
3. Lift off the rear battery cover
4. Replace the three (3) 'AAA' 1.5V batteries
5. Secure the rear battery cover




You, as the end user, are legally bound (**EU Battery ordinance**) to return all used batteries, **disposal in the household garbage is prohibited!** You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold!

Disposal: Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle

Operation

Pinless Moisture Measurements

1. Press the power  button to turn the meter on.
2. As described below, you must calibrate the meter before first use.
3. To calibrate, press the MEAS button immediately after powering on the meter. The display will audibly beep and visually flash the CAL display icon. Keep the measurement sensor at least 3 to 4" (8 to 10 cm) from any object during calibration.
4. When the calibration is complete the beeping and flashing stop. The calibration reading must not exceed 0.5. If so, re-calibrate ensuring that hands or other objects are kept clear of the measurement sensor.
5. The meter should be calibrated whenever it is moved from one measurement area to another.
6. To take a measurement, hold the meter and position the sensor so that it is very near or directly touching the surface under test. The meter can sense moisture to a depth of 0.79 to 1.57" (20 to 40mm).
7. **IMPORTANT NOTE:** The position of the hand can greatly affect a reading. Do not move or reposition the hand that holds the meter while taking measurements or when calibrating the unit.
8. The LCD indicates a relative moisture reading in numeric digits from 0.0 to 100.0 and with programmable alarm alerts (DRY, RISK, and WET).
9. Press the MEAS button to HOLD (freeze) a reading on the LCD (the HOLD icon will appear on the LCD). The meter will hold the reading for 30 seconds before automatically shutting the meter down.
10. The MAX and MIN display areas indicate the highest and lowest readings encountered since the measurement session was started.
11. If the battery symbol appears or if the meter does not switch ON, replace the batteries.

Alarm Settings

Two high alarm points can be set for Moisture measurements: A **RISK** Alarm (0 to 50 setting range with a default setting of 30 units) and a **WET** Alarm (50 to 100 setting range with a default setting of 60 units).

Moisture Alarm Setup Procedure:

1. Press the MEAS button to place the meter in HOLD mode to change the Alarm settings.
2. Press the SET button. The RISK display icon will appear flashing on the LCD indicating that a RISK alarm can now be programmed.
3. Use the up/down buttons to select the desired RISK Alarm value.
4. Press the SET button when the desired setting is displayed.
5. The WET icon will appear flashing on the LCD indicating that the WET Alarm is ready to be programmed.
6. Use the up/down buttons to select the desired Wet Alarm setting.
7. Press SET to complete the programming.
8. Now, if the moisture measurement is higher than the RISK setting, the meter will beep once every two seconds and if the moisture measurement is higher than the WET setting the meter will beep four times per second.
9. Press the MEAS button to exit HOLD mode.

Auto Power Off

To conserve battery energy, the meter will enter a sleep mode after approx. 30 minutes of inactivity. Press the power button to wake the meter.

Backlit LCD

Press the up/backlight button to switch the backlighting ON or OFF.

Specifications

Function	Range	Accuracy
Moisture Range	0.0 to 100.0	Relative only
Measurement Depth	20 to 40mm (0.79 to 1.57")	

Display type	Backlit LCD
Display digits	Three (3) numeric displays; each displaying from 0.0 to 100.0
Display icons	HOLD, DRY, RISK, WET, MIN, MAX and low battery icon
Operating Temperature	4 to 43°C (40 to 110°F)
Operating Humidity	90%, 0-30°C (32-86°F), 75%, 30-40°C (86-104°F), 45%, 40-50°C (104-122°F)
Power Supply	Three (3) 1.5V 'AAA' batteries
Auto Power Off (APO)	After 30 minutes of inactivity
Dimensions	235 x 63 x 28mm (9.2 x 2.5 x 1.1")
Weight	218g (7.7oz)

Moisture Comparison Table (typical)

Material	Display units	Moisture status
Gypsum	< 30	DRY
	30 - 60	RISK
	> 60	WET
Cement	< 25	DRY
	25 - 50	RISK
	> 50	WET
Wood	< 50	DRY
	50 - 80	RISK
	> 80	WET

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

© Copyright 2012 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.

Where Do I Find Everything I Need for Process Measurement and Control? **OMEGA...Of Course!** *Shop online at omega.comSM*

TEMPERATURE

- ☑ Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- ☑ Wire: Thermocouple, RTD & Thermistor
- ☑ Calibrators & Ice Point References
- ☑ Recorders, Controllers & Process Monitors
- ☑ Infrared Pyrometers

PRESSURE, STRAIN AND FORCE

- ☑ Transducers & Strain Gages
- ☑ Load Cells & Pressure Gages
- ☑ Displacement Transducers
- ☑ Instrumentation & Accessories

FLOW/LEVEL

- ☑ Rotameters, Gas Mass Flowmeters & Flow Computers
- ☑ Air Velocity Indicators
- ☑ Turbine / Paddlewheel Systems
- ☑ Totalizers & Batch Controllers

pH/CONDUCTIVITY

- ☑ pH Electrodes, Testers & Accessories
- ☑ Benchtop / Laboratory Meters
- ☑ Controllers, Calibrators, Simulators & Pumps
- ☑ Industrial pH & Conductivity Equipment

DATA ACQUISITION

- ☑ Data Acquisition & Engineering Software
- ☑ Communications-Based Acquisition Systems
- ☑ Plug-in Cards for Apple, IBM & Compatibles
- ☑ Data Logging Systems
- ☑ Recorders, Printers & Plotters

HEATERS

- ☑ Heating Cable
- ☑ Cartridge & Strip Heaters
- ☑ Immersion & Band Heaters
- ☑ Flexible Heaters
- ☑ Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- ☑ Metering & Control Instrumentation
- ☑ Refractometers
- ☑ Pumps & Tubing
- ☑ Air, Soil & Water Monitors
- ☑ Industrial Water & Wastewater Treatment
- ☑ pH, Conductivity & Dissolved Oxygen Instruments