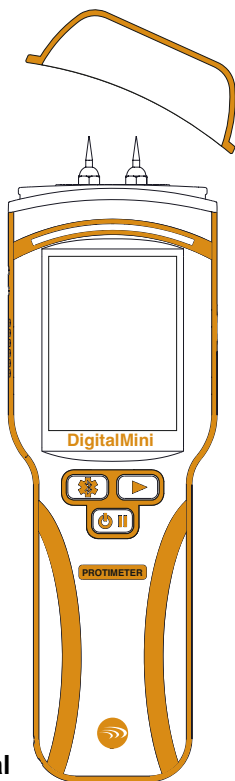




DigitalMini[®]
Protimeter Moisture Meter



Instruction Manual

Amphenol
Advanced Sensors

INS5775 Rev. A
Jun 2023

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St. Marys, Pennsylvania 15857, USA

1 Safety Considerations



Caution note for the WME pins - The Pin Moisture measurement pins are extremely sharp and the instrument should be handled with due care. The pins should be covered with the cap provided with the unit when the function is not in use.




Calibration of unit - The accuracy specifications of the product are generally valid for one year after the date of calibration. The product has an internal periodic calibration check to ensure the accuracy of the device and to warn customer whenever it goes out of calibration. Refer pin mode calibration check for details.



Only operate the measuring instrument properly, for its intended purpose and within the parameters specified in the technical data. Readings from moisture meters are not definitive but are used to help a professional make informed judgment to the material's moisture condition. Conductive material such as salts, carbon and metal can give false positive readings.

2 Pin (WME) Mode Operation

DigitalMini uses electrical conductance principles to measure the moisture level of the material between two electrodes. The instrument has integral pin electrodes that may be firmly pressed onto surfaces, or it may be used with various auxiliary moisture probes, including Heavy Duty Pin Probe, Deep Wall Probes, a Hammer Electrode (optional) or an EIFS probe (optional).

Remove the needle cap from the top of the DigitalMini and press  to switch it on.

%WME will appear in the display. Push the pin firmly on to the surface of the material at the required point of measurement. Read the moisture level value from the display and note the moisture condition of the material from the color coded LED scale.

Note: *Measurements taken in wood are actual % moisture content values, whereas readings taken in material other than wood are % Wood Moisture Equivalent (%WME) values - see Pin Mode Interpretation for more details.*

3 Using Auxiliary Moisture Probes

The DigitalMini is supplied with an auxiliary plug-in moisture Probe and lead for taking measurements at points that cannot be reached easily with the integral electrode pins. To use, connect the Moisture Probe jack plug to the socket on the right side of the instrument and push the Probe pins onto the surface at the chosen point of measurement.

Additional accessories can be purchased including deep wall probes

The Protimeter Hammer Electrode can also be used to make measurements deep into hard and softwoods.



Note: *Deep Wall Probes may be used to investigate high readings.
Deep Wall Probes may be used to determine the moisture profile through a structure by increasing the depth of the clearance holes incrementally.*

4 Pin (%WME) Mode Interpretation

Measure mode readings are precise and specific to the area of contact between the electrode tips. Actual percent moisture content (%mc) values are measured in wood products. Wood Moisture Equivalent (WME) values are measured in materials other than wood.


The WME measurement is the theoretical %mc value that would be attained by a piece of wood in moisture equilibrium with the material under investigation at the point of measurement. As the critical %mc levels of wood are known, WME values may be used directly to establish if the material is in a dry, borderline or damp condition as indicated by the color coded LED scale.

5 Instrument Calibration Check

An internal calibration check is provided in the device for the user to check the Measure mode calibration. Press and hold  key and  key together while in measurement mode to check calibration. The device will let the user know if the unit passes or fails the calibration check.

Note: Ensure that no auxiliary probes are connected to the device Before a calibration check is run. Connecting any probe to the right side Jack may cause interference in the calibration check value.

8 Reference Mode

Protimeter's "Reference mode" is a patented feature helpful in creating a dry reference. Measure the material until the meter's reading is stable then press  for 2 seconds. This will store the reading until the mode changes of the meter turns off. Now all reading taken after will be displayed as normal, but below you will see a second reading that shows you if the material is measured above or below the original reading. Reference mode can be useful when trying to establish what materials are above or below a point of reference or dry standard. See page 7 for further information.

9 Operating DigitalMini

Switch On:

Press the  ON/OFF button.

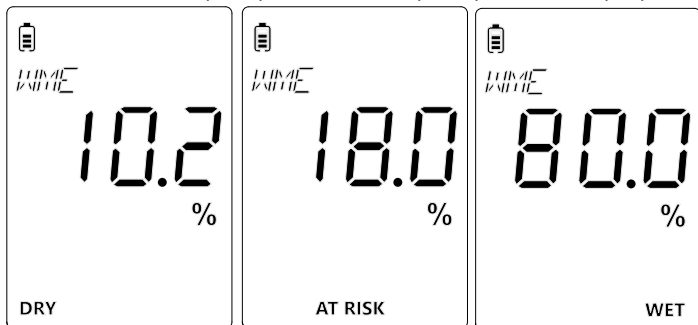
The unit turns on, with the LCD displaying all the segments and sweeping the LED bar graph.



Measurements:


The numeric measurement and the color LED will be shown as well as the “DRY” (green) or “AT RISK” (yellow) or “WET” (red), based on the measurement shown.

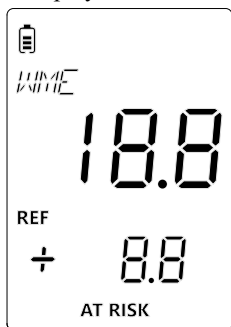
7-16.9 DRY (Green), 17-19.9 AT RISK (Yellow), 20-99.9 WET (Red)




Reference Mode of Measurement:


Note: For application information, see the section “Pin (WME) Mode operation.”

In measurement mode, take the first measurement which needs to be taken as reference. This is useful when establishing a dry standard in the building and comparing other readings against this dry standard. While the first reading is displayed on the screen, press and hold the  button for 2 seconds to enter the Reference Mode. The display will be similar to the one shown.



To return to the normal measurement mode, press  again.

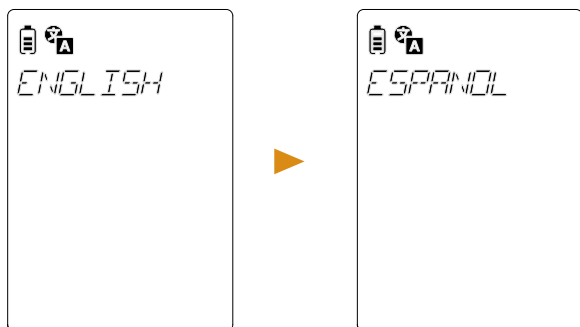
Settings:



Press the  button to enter in to settings. Press again to return to measurement

The device enters in to language settings as a first setup screen.


Setting up language:

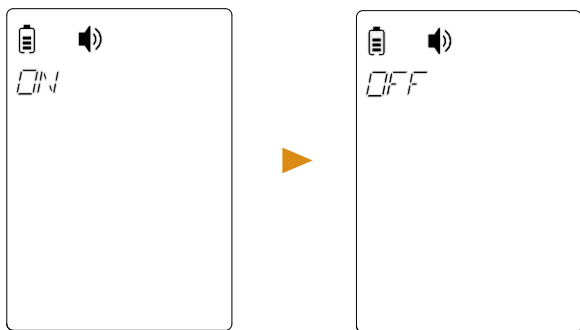
The first screen to appear in Settings is Language. User will see the last set language on the screen as below.



press  to browse through the list of languages available. When the desired language is seen on the display choose it by pressing  key. This will set the language you selected and will move on to the next setting screen.


Buzzer ON/OFF Settings:

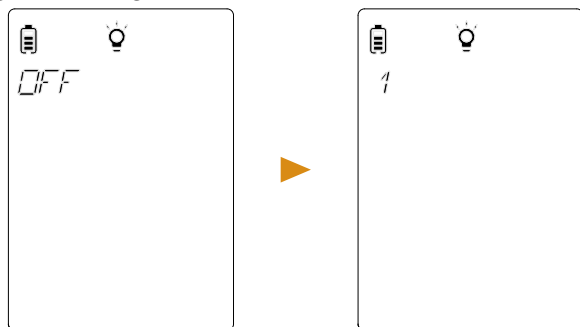
Pressing  key from the language settings will move on to Buzzer setting.





press  to toggle between on and off. Choose and go to the next setting by pressing .

Brightness settings (Back light):

Pressing  key from the buzzer settings will move on to brightness settings.



Press  to change the back light from off to 10 levels.

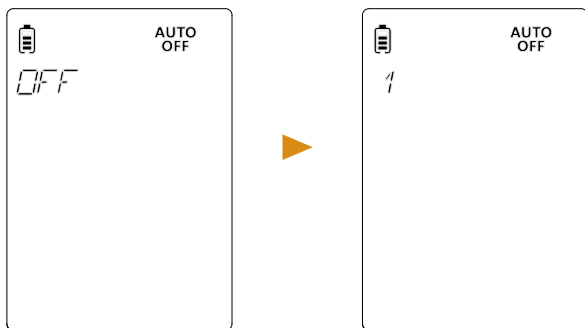
When the desired brightness is set on the display save and move by pressing .


Note: Battery life is effected by the brightness setting. to maximize battery life keep on the minimum setting.

Auto Off Time Settings:

When Auto Off is set, the unit will shut down automatically at a specified time between 1 and 10 minutes, if there is no key press detected within the set time.


For example, if the Auto Off time is set as 1, then the unit will automatically shut down after a minute when no key is pressed.



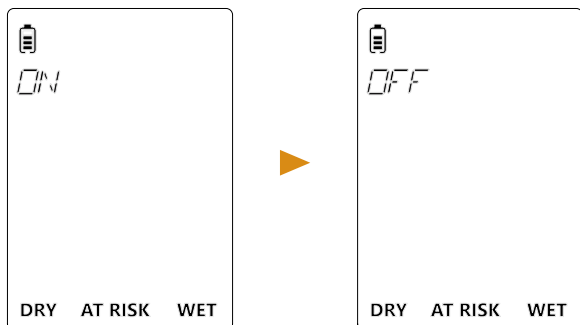
If the auto off time is set to be "Off", then the unit will not automatically turn off. Preserve battery life by lowering this setting to a minimum on time. A user must manually turn it off by pressing and holding the  button for 5 sec.


Turn off time can be changed from Off till 10 minutes by pressing  key. Pressing  key will move to the next screen

DRY, AT RISK and WET Settings:


Pressing  key from auto off setting will move on to DRY, AT RISK and WET setting screen.

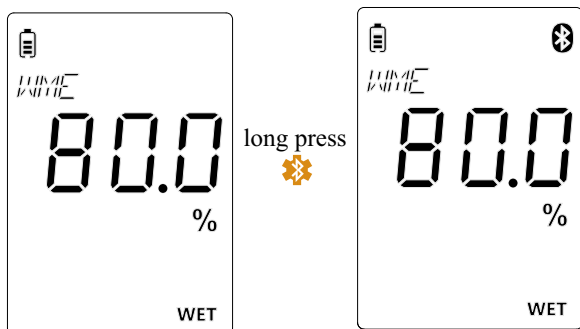
This screen sets whether the indication on the display needs to be switched ON or OFF. When it is ON, the moisture condition will be displayed on the screen. When it is OFF, no indication is displayed on screen.





Pressing  toggles the state from Off to On and vice versa.

Turning Bluetooth On/Off:

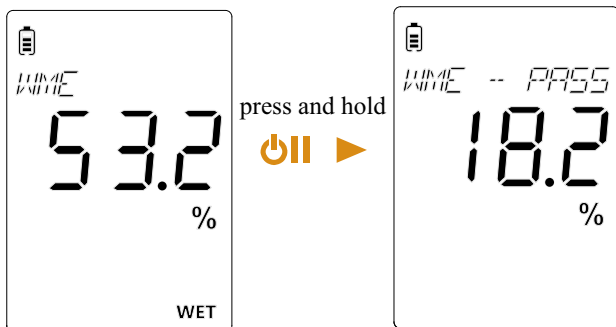
To turn the bluetooth on or off at any point of time from the measurement screen, press and hold  key




Calibration check:


When the device is in measurement mode press and hold  and  keys.

Device will check the calibration internally and display the reading along with the pass fail result.



press  key to exit the calibration check.

Battery Status:

Battery status is indicated in 5 levels.  symbol can be seen at the left top corner of the screen. Whenever the battery is low the symbol will blink (without any block inside). When the battery is low its better to replace them soon. The unit will continue to perform in battery condition within the specified accuracy, and turns off when the battery reaches the limit.



100%



80%



60%





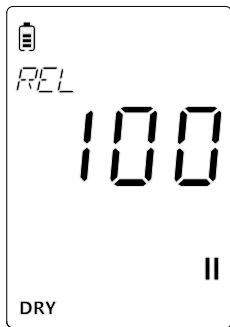
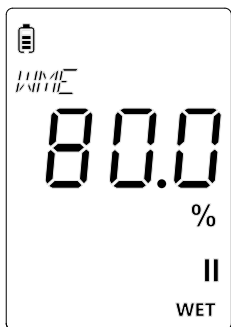
40%



20%

Holding / Freezing the Reading:

While measuring, if the reading needs to be frozen for any observation, press  during measurement. A symbol  will be displayed on the screen.

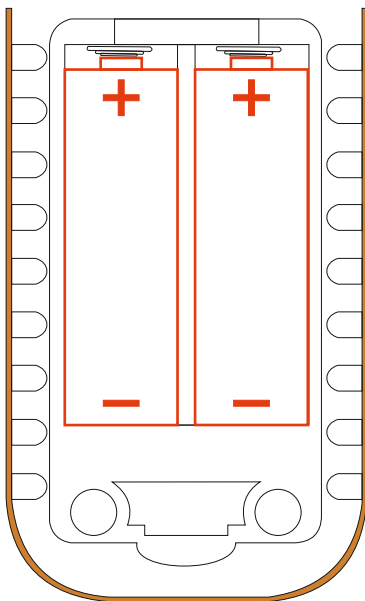


9 Battery Replacement

A 2700mAh battery will last continuously for more than 20 hours for a DigitalMini in operation. A Battery Low indication on the screen indicates that the battery needs to be changed in a short time.

Remove the battery lid to open the battery compartment.

Remove the batteries, and replace. Care must be taken to ensure that the polarity is correct as below. Place the battery inside the compartment.



10 Specification

Display(LCD)..... 35 X 50 mm
With backlight(10 brightness level)

Battery..... 3V(2 x AA)2700mAh

Temperature

Operating..... 0°C to 50°C

Storage..... -40°C to 85°C

Operating Humidity..... 0 to 90% RH

Operating Altitude..... 2000m

Safety..... Pollution degree 4

Size..... 19.5cm x 6.5cm x 3.5cm

Gross Weight..... ~250g

Measurement Specification.....

Moisture measurement:

For integrated and remote pin probes:

Strong and reliable integrated pins, with a cap to protect

Pin measurement range (% MC in wood/%WME) -

6 to 100% (readings over 30% are relative)

Regulatory Compliance

CE, RoHS, ETL, UKCA, FCC

U.S.A.

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