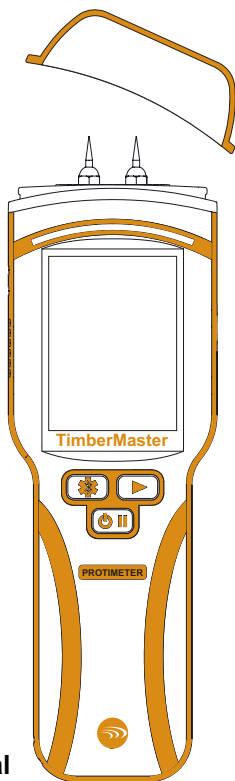




TimberMaster[®]
Protimeter Moisture Meter



Instruction Manual

Amphenol
Advanced Sensors

INS5675 Rev. A
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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 valid for one year from 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.




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 judgement to the material's moisture condition. Conductive material such as salts, carbon and metal can give false positive readings.

2 Pin (WME) Mode Operation

The Protimeter TimberMaster is a conductivity moisture meter designed for use in wood. Moisture measurements can be taken using the integral pin electrodes.

When testing wood that is significantly above or below 20°C (68°F) it is recommended to determine the temperature for reference with the wood species table.

TimberMaster is switched on by pressing  and holding it for a few seconds.

To switch OFF, press and hold  for 3 seconds.

Unit turns off automatically after few minutes (can be set) when no key press is detected.

3 Using the Protimeter TimberMaster

The TimberMaster is calibrated for wood at 20°C (68°F). In general, the effect of temperature on the moisture measurement calibration can be approximately compensated as follows:

For every 5°C above 20°C, subtract 0.5%mc from the value displayed.

For every 5°C below 20°C, add 0.5%mc from the value displayed.

Examples

Wood temp: 20°C, Moisture value: 15.5%. Temp correction: 0 moisture content: 15.5%



Wood temp: 25°C, Moisture value: 15.5%. Temp correction: -0.5 moisture content: 15%

Wood temp: 15°C, Moisture value: 15.5%. Temp correction: +0.5 moisture content: 16%



Wood temp: 30°C, Moisture value: 15.5%. Temp correction: -1 moisture content: 14.5%

Wood temp: 10°C, Moisture value: 15.5%. Temp correction: +1 moisture content: 16.5%



3.1 Reading with Integral Electrode Pins

Remove the cap to expose the needle electrodes and switch the instrument ON by pressing . Select the appropriate wood calibration scale by pressing . Push the pins in to the surface of the wood and observe the reading.

3.2 Reading with Moisture Probe or Hammer Electrode

Connect the moisture probe or (optional) hammer electrode to the 3.5mm socket at the right hand side of the TimberMaster, and switch ON by pressing . Select the appropriate wood calibration scale pressing . Drive the moisture probe pins or hammer electrode needles in to the wood and observe the reading.

4 Calibration Check


An internal calibration check is provided in the device for the user to check the device calibration. Press and hold  and  key together while in the measurement to do a calibration check. 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.

5 Care and Maintenance

When the TimberMaster is not in use, keep it in its pouch together with its accessories. Store the kit in a stable, dust-free environment out of direct sunlight. Remove the battery from the instrument if it is to be stored for periods of more than four weeks, or when the low battery power symbol appears on the display. Check the condition of accessories used with the TimberMaster instrument on a regular basis and replace them if they become worn or damaged.

6 Reference Mode

Measure the material until the meter's reading is stable then press  for 2 seconds. This will store the reading until the mode changes or the meter turns off. Now all readings 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 6 for further information.

7 Operating TimberMaster

7.1 Switch On:

Press the  ON/OFF button.

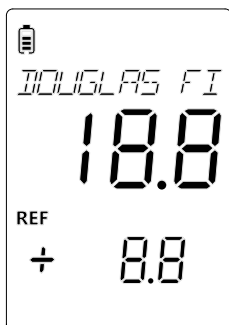
The unit turns on, with the LCD displaying all the segments and sweeping the LED bar graph.



7.2 Reference Mode of Measurement:

In Measure Mode, take the first measurement which needs to be taken as reference. This is useful when other 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 below.



To return to the normal measurement mode, press the button again.

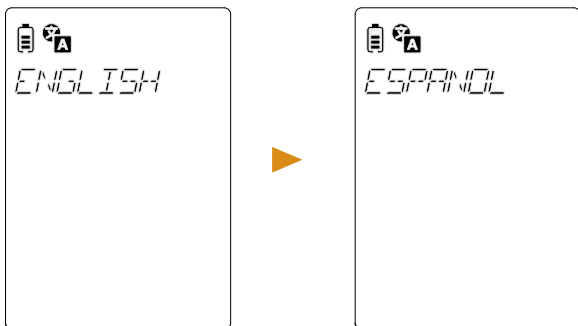
7.3 Settings:


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.


7.3.1 Setting up language:

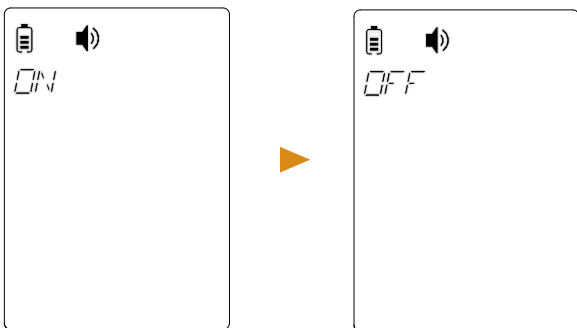
The first screen to appear in Settings is Language. User will see the last set language on the screen as below.



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.


7.3.2 Buzzer ON/OFF Settings:

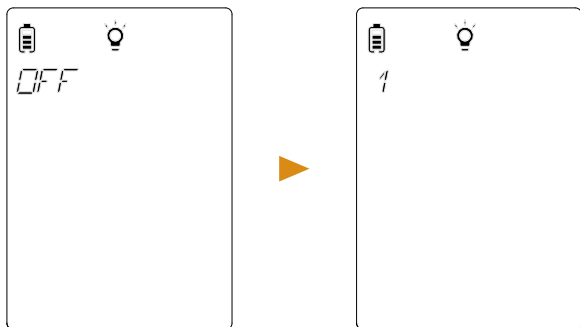
Pressing  key from the language settings will move on to Buzzer setting.




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

7.3.3 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.

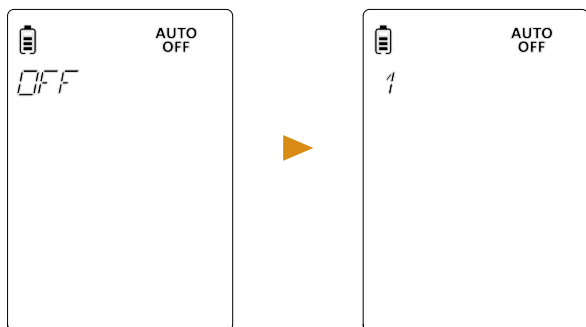
When the desired brightness is set on the display save and move on by pressing  key.


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

7.3.4 Auto Off Time Settings:

When Auto Off is set, the unit will shut down automatically at a specified time between 1 and 10 ~~minutes~~ ^{hours}, 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



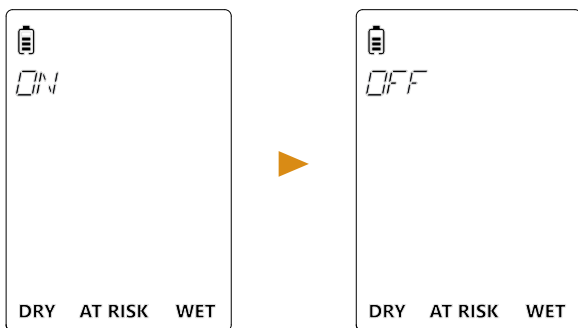
If the auto off time is set to be "Off", then the unit will not automatically turn off. Preserve battery life by lowering this setting to a minimum on time. A user must manually turn it off by pressing and holding the  button for 5 sec.

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

7.3.5 DRY, AT RISK and WET Settings:


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

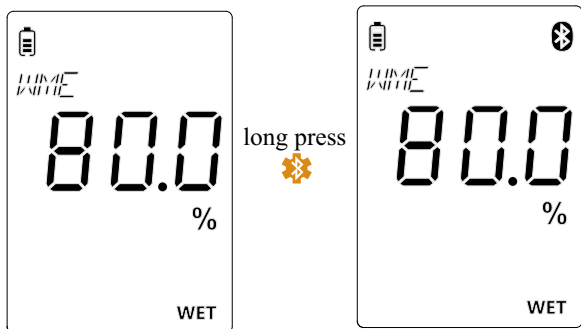
This screen sets whether the indication on the display needs to be switched ON or OFF. When it is ON, the moisture condition will be displayed on the screen. When it is OFF, no indication is displayed on screen.



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

7.3.6 Turning Bluetooth On/Off:

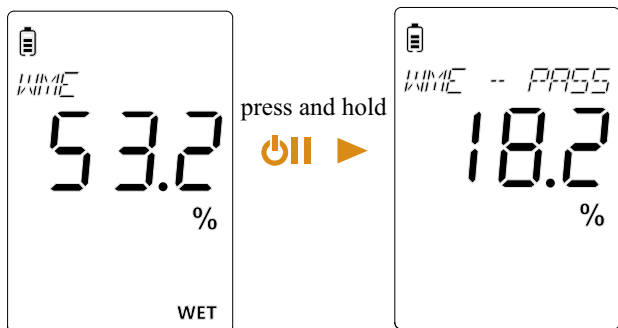
To turn the bluetooth on or off at any point of time from the measurement screen, press and hold  key




7.3.7 calibration check:

When the device is in pin mode measurement (WME 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.

8 Battery Status:

Battery status is indicated in 5 levels. The battery 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 it's 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%





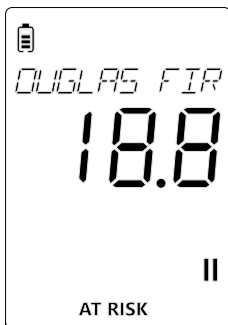
40%



20%

9 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.

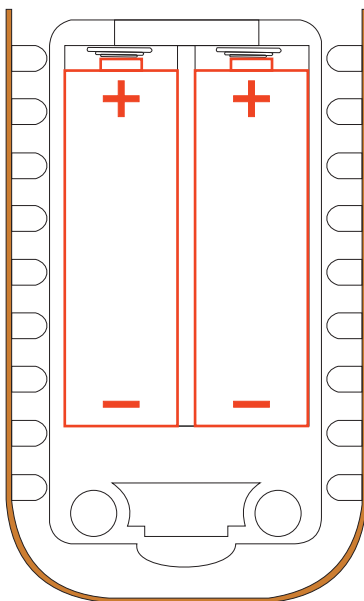


10 Battery Replacement

A 2700mAh battery will last continuously for more than 20 hours for a Surveymaster 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..... ~240g

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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