

Surveymaster[®] **BLD5375** **Protimeter** **Dual-Function** **Moisture Meter**



Surveymaster BLD5375 Protimeter Dual Function Moisture Meter Instruction Manual

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Surveymaster[®]

Surveymaster BLD5375 Protimeter Dual-Function Moisture Meter



Specification

- **Product:** Protimeter Dual-Function Moisture Meter SurveyMaster
- **Manufacturer:** Amphenol Advanced Sensors
- **Model:** Protimeter Surveymaster
- **Revision:** INS5375 Rev. A Jun 2023

Product Usage Instructions

Safety Considerations

- Ensure to handle the sharp Pin Moisture measurement pins with care and always cover them with the provided cap when not in use.
- Regular calibration is recommended for accurate readings. Operate the device within specified parameters and for its intended purpose.

Pin (WME) Mode Operation

- In Measure mode, use the integral pin electrodes to measure moisture levels by pressing them onto surfaces. Remove the needle cap from the top of the Surveymaster and press to switch it on.
- Note that readings in wood are % moisture content values, while other materials show % Wood Moisture Equivalent (%WME) values.

Using Auxiliary Moisture Probes in Pin (%WME) Mode

- Connect the Heavy Duty Moisture Probe to the socket on the right side of the instrument for measurements at inaccessible points.
- Additional accessories like deep wall probes can be used for specific needs. The Hammer Electrode is ideal for deep measurements in woods.

Pin (%WME) Mode Interpretation

- Measure mode readings are precise and area-specific. % Moisture content values are for wood, while % Wood Moisture Equivalent (WME) values are for non-wood materials.

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 customers whenever it goes out of calibration. Refer to the pin mode calibration check and pinless mode calibration 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 judgments about the material's moisture condition.
- Conductive materials such as salts, carbon, and metal can give false positive readings.



- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired

Pin WME Mode Operation

- In Measure mode, the Surveymaster 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 Probes, Deep Wall Probes, a Hammer Electrode (optional), or an EIFS probe (optional).
- Remove the needle cap from the top of the Surveymaster and press  to switch it on.
- Check which operational mode the instrument is in by looking at the letters in the digital display %WME indicates the Surveymaster is in Measure mode, and REL) indicates the meter is in Search mode.
- If the instrument is in Search mode , press to switch to Measure mode. %WME will appear in the display.
- Push the pins firmly onto 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.

Using Auxiliary Moisture Probes in Pin %WME Mode



- The Surveymaster is supplied with a Heavy Duty 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 that may have been obtained in Search mode.
- Deep Wall Probes may be used to determine the moisture profile through a structure by increasing the depth of the clearance holes incrementally.

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.

Instrument Calibration Check pin mode

- 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 %WME mode 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 of Jack may cause interference in the calibration check value.

Search Mode REL


- When used in Search mode (REL), the Surveymaster is a moisture detector. Search mode readings give, in relative terms, the moisture condition up to 19mm / 3/4" beneath the surface of materials.
- This mode of operation is ideal for making rapid surveys of solid walls and floors and to pinpoint areas of concern that may justify a more extensive investigation.
- The Search mode may also be used as an alternative to the Measure mode when it is impractical or undesirable to push electrode pins into surfaces.
- Consider, for example, taking moisture readings behind ceramic tiles in shower cubicles or in walls covered by quality wallpapers where pinholes would not be acceptable.

- Surface moisture (such as condensation on an otherwise drywall) has little effect on Search mode readings. Conductors (other than water) within the material may cause high Search mode readings.
- Make sure the flat surface on the back of the meter is in full contact with the material to be tested.
- It is recommended that users place the meter onto different areas to measure and not slide the meter across surfaces.
- **Note:** Sliding the meter can cause premature wear to the back of the meter.

REL mode calibration


- It is advised to do user calibration of the device in REL mode before a study is started. Refer to the operations section for details.

Reference Mode

- In both Pin and Search mode, Protimeter's patented feature "Reference Mode" can be used. 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 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 7 for further information.

Operating Surveymaster

Switch On:

- Press the  ON/OFF button.
- The unit turns on, with the LCD displaying all the segments and sweeping the LED bar graph.

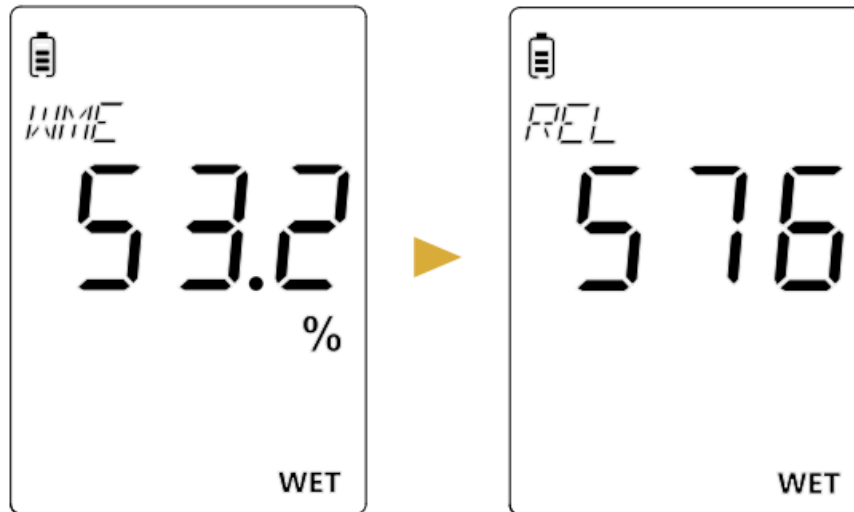


Mode Change:

- Press  the mode button to change to the REL (Search) mode from WME (Pin), and vice versa.

WME (pin)

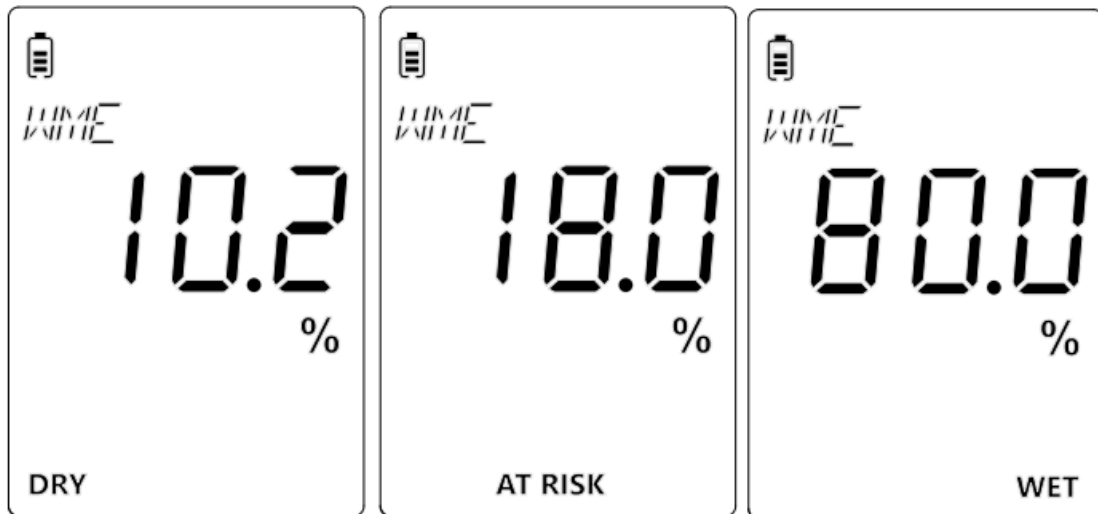
REL (Search)



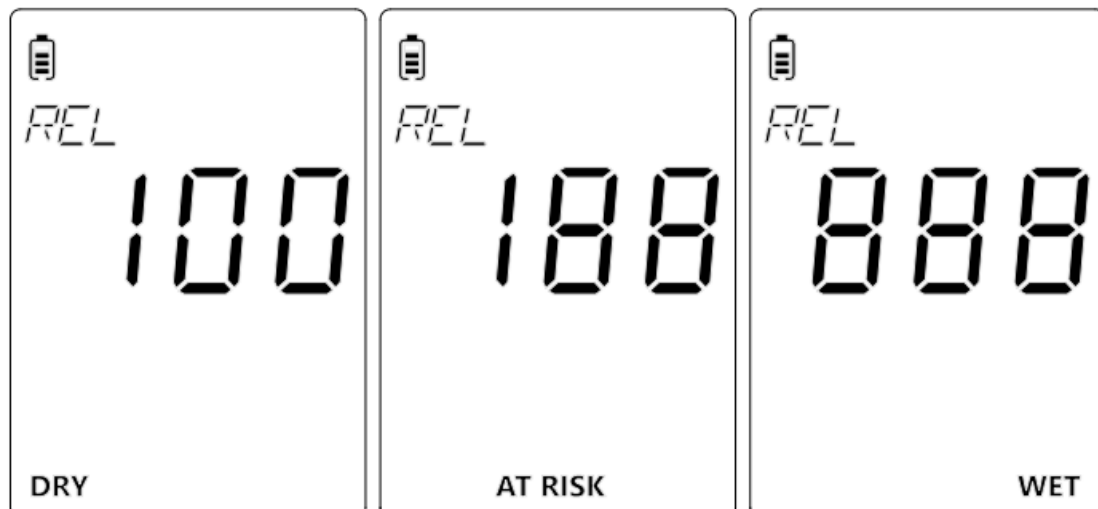
Measurements:

- In both modes, the numeric measurement and 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)

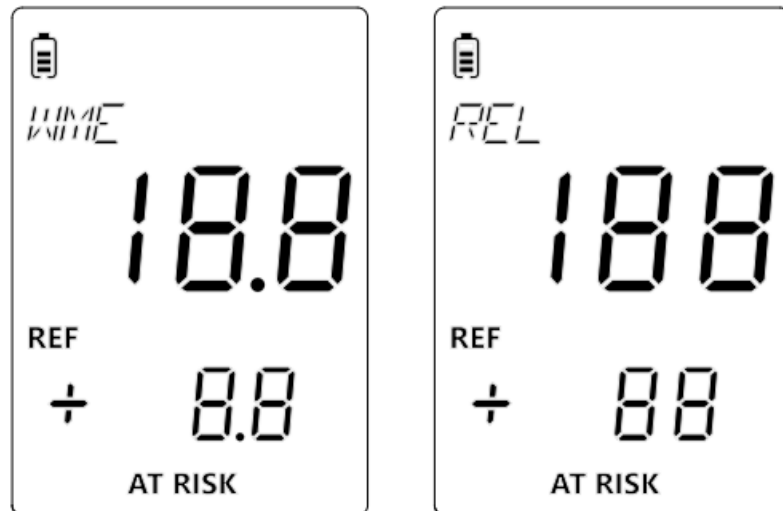



70-169 DRY (Green), 170-199 AT RISK (Yellow), 200-999 WET (Red)




Reference Mode of Measurement:

- **Note:** For application information, see the section “Using the Pin (WME) Mode.”
- In either 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.



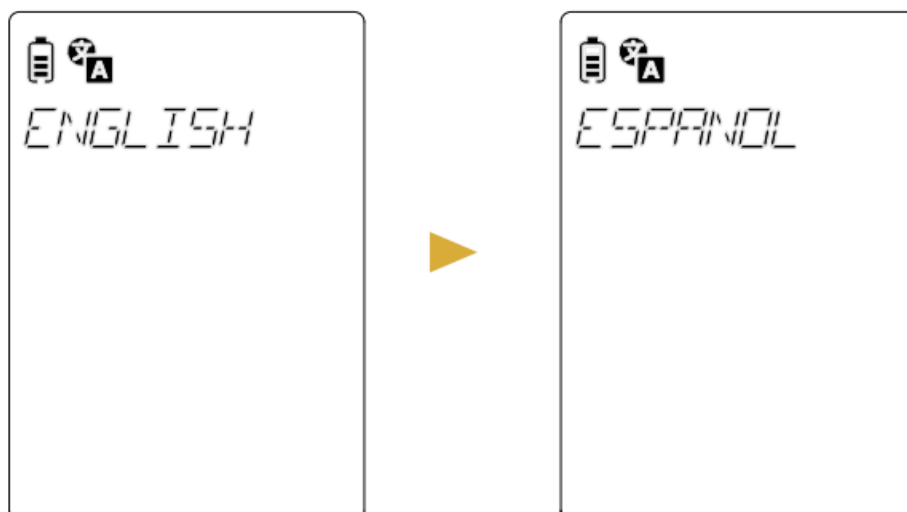
- To return to the normal measurement mode, press  again.


Settings:


- Press the  button to enter into settings. Press again to return to the measurement
- The device enters into language settings as a first setup screen.

Setting up language:


- The first screen to appear in Settings is Language. The user will see the last set of languages on the screen as below.

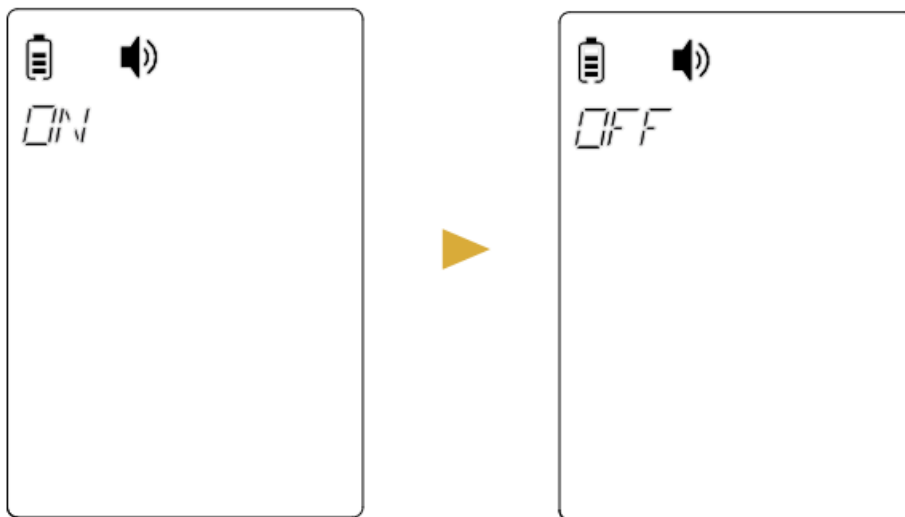




- Press  to browse through the list of languages available.

- When the desired language is seen on the display choose it by will move on to the next setting screen. pressing  key.
- This will set the language you selected and will move on to the next setting screen.


Buzzer ON/OFF Settings:

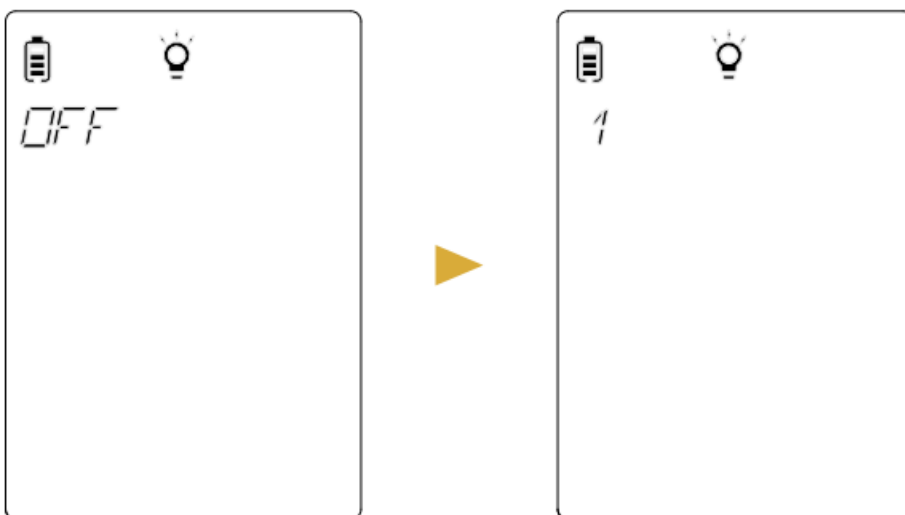
- Pressing  the key from the language settings will move on to the Buzzer setting.





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

Brightness settings (Backlight):

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

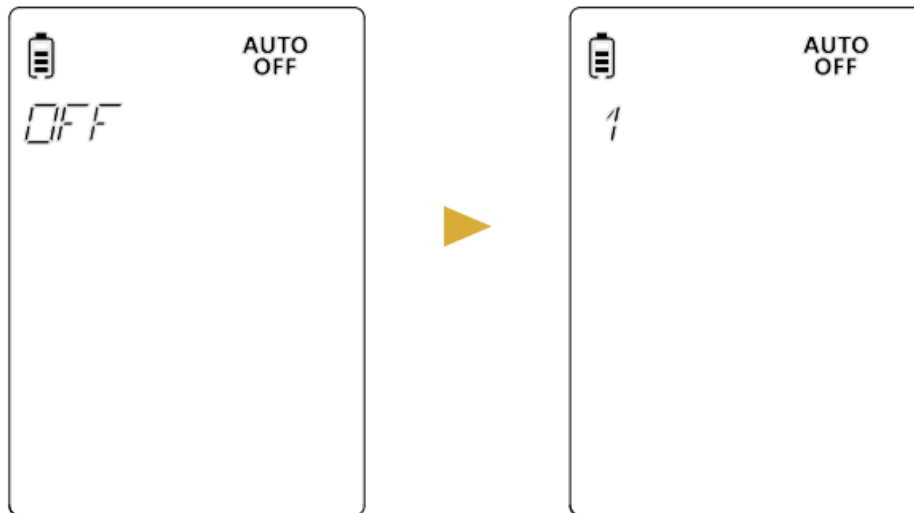





- Press  to change the backlight from off to 10 levels.
- When the desired brightness is set on the display save and move by pressing  a key.
- **Note:** Battery life is effected by the brightness setting. To maximize battery life keep on the minimum setting.

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

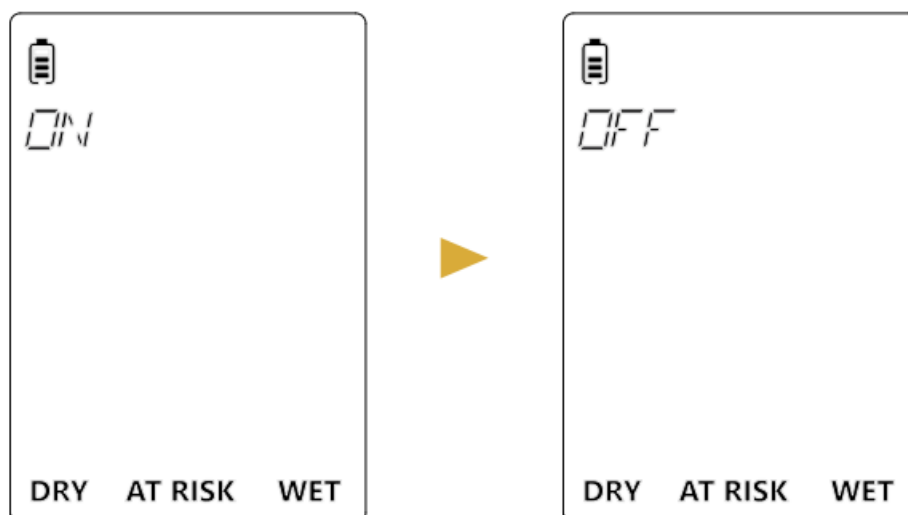
there is no key press detected within the set time.



- 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 “Off”, then the unit will not automatically turn off. A user must manually turn it off by pressing and holding the  button for 5 sec.
- Turn-off time can be changed from Off to 10 minutes by pressing  the key. Pressing  the key will move to the next screen.
- **Note:** Preserve battery life by lowering the auto turn-off time to a minimum time.


DRY, AT RISK and WET Settings:

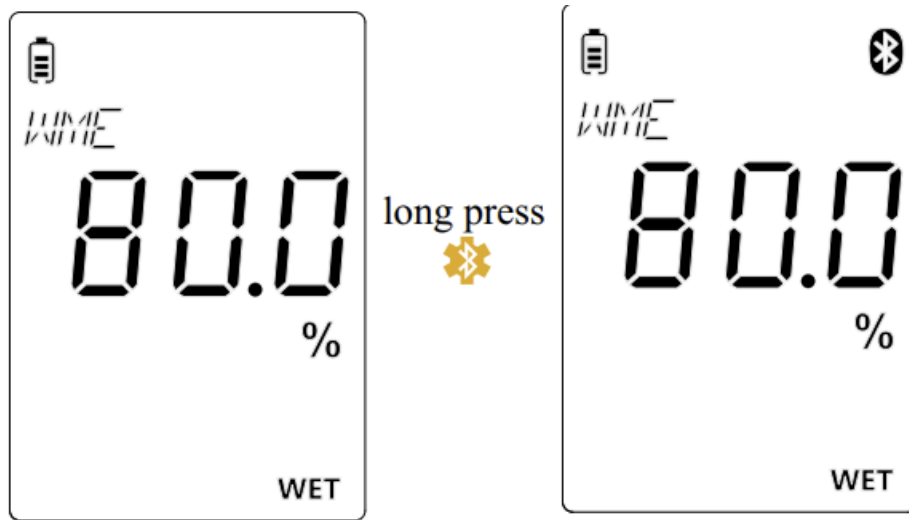
- Pressing  the key from the auto-off setting will move on to the DRY, AT RISK, and WET setting screens.
- This screen sets whether the indication on the display needs to be switched ON or OFF. When it is ON, the moisture condition will be displayed on the screen. When it is OFF, no indication is displayed on the screen.





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

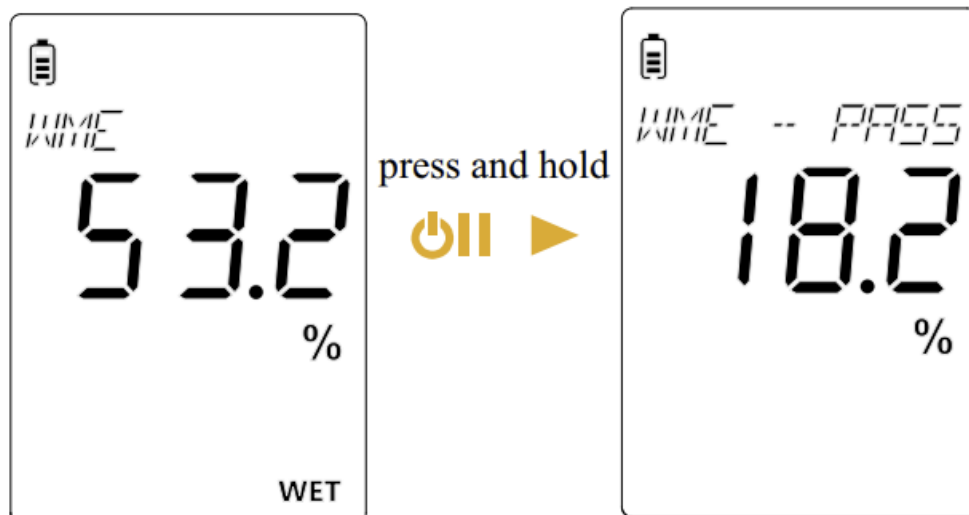
Turning Bluetooth On/Off:


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





Pin mode calibration check:

- When the device is in pin mode measurement (WME mode) press and hold  and  keys.
- The device will check the calibration internally and display the reading along with the pass-fail result.




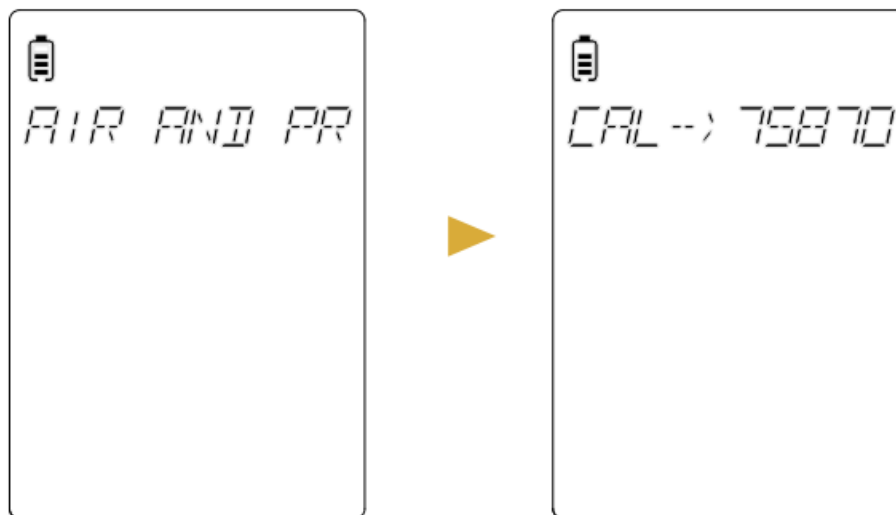
- Press  the key to exit the calibration check.


REL mode calibration:

- When the device is in REL mode (search mode) press and hold  and  keys.




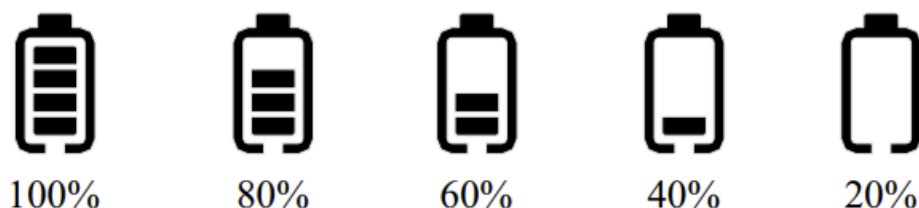
- A scrolling text appears mentioning “Hold in air and press right” Hold the unit in the air, away from any other object, and then press  the key to calibrate the device for REL mode.
- Unit calibrates the REL mode considering the environmental offset and displays the value read for the situation.




- Press  the key to exit the calibration.

Battery Status:

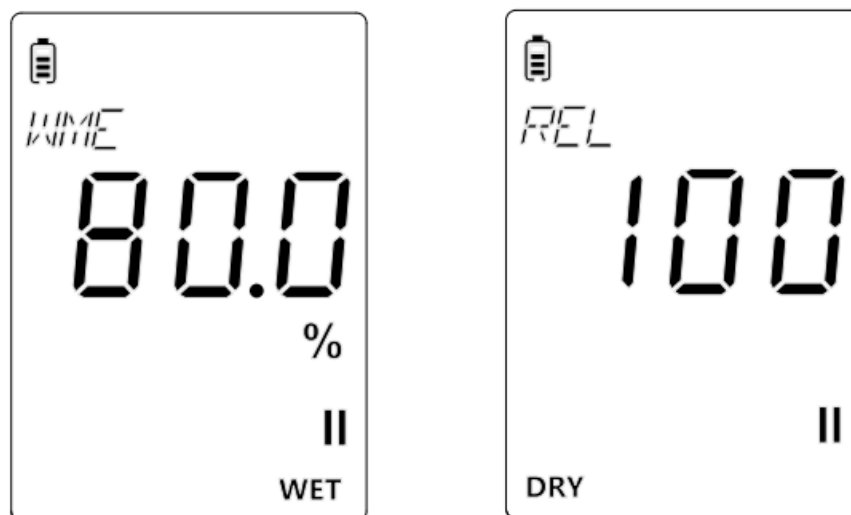
- Battery status is indicated in 5 levels  the symbol can be seen at the left top corner of the screen. Whenever the battery is low the symbol will blink (without any block inside).
- When the battery is low it's better to replace them soon. The unit will continue to perform in battery condition within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



Holding / Freezing the Reading:

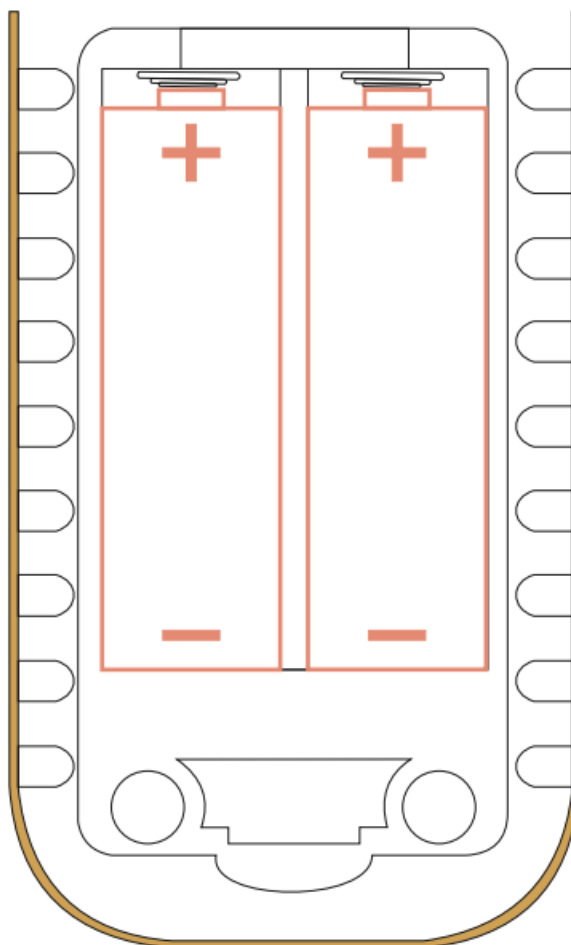
- While measuring, if the reading needs to be frozen for any observation, press  during measurement. A

symbol **||** will be displayed on the screen.



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 them. Care must be taken to ensure that the polarity is correct as below. Place the battery inside the compartment.



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 5cm
- **Gross Weight**..... ~270g
- **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)

Non-Invasive moisture measurement:

- Measurement depth – up to 3/4" (19mm) deep, 60 to 999, no effect on reading by surface moisture

Regulatory Compliance

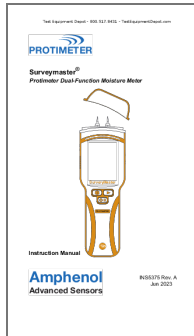
- CE, RoHS, ETL, UKCA, FCC
- **U.S.A.**
 - **Amphenol Thermometrics, Inc.**
 - **967 Windfall Road**
 - **St. Marys, Pennsylvania 15857, USA**
- **U.K.**
 - **Amphenol Thermometrics (U.K.) Ltd.**
 - **Crown Industrial Estate**
 - **Priorswood Road**
 - **Taunton, TA2 8QY, UK**
- Test Equipment Depot – 8005178431 – [TestEquipmentDepot.com](https://www.testequipmentdepot.com)

FAQ

- **Q: How often should I calibrate the Protimeter Dual-Function Moisture Meter?**
 - **A:** The product accuracy is generally valid for one year after calibration. It has an internal periodic calibration check to ensure accuracy and alerts when calibration is needed. Refer to the manual for detailed calibration procedures.
- **Q: Can I use the Surveymaster on conductive materials like metal?**


- **A:** Conductive materials like metal can give false positive readings. It is recommended to use the meter as intended and be cautious of potential inaccuracies on such materials.

Documents / Resources



[PROTIMETER Surveymaster BLD5375 Protimeter Dual Function Moisture Meter](#) [pdf] Instruction Manual
BLD5375, Surveymaster BLD5375 Protimeter Dual Function Moisture Meter, Surveymaster BLD5375, Protimeter Dual Function Moisture Meter, Dual Function Moisture Meter, Function Moisture Meter, Moisture Meter, Meter

References

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