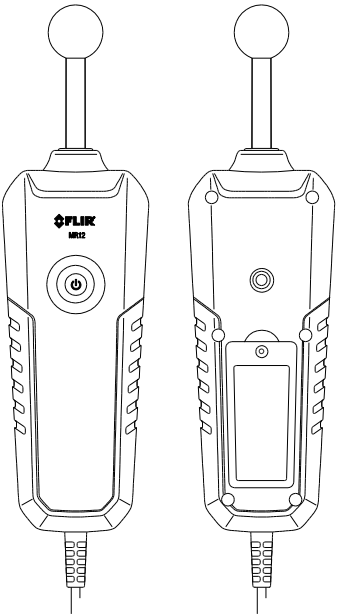
USER MANUAL

FLIR MR12

Ball Probe Moisture Sensor Accessory



Introduction

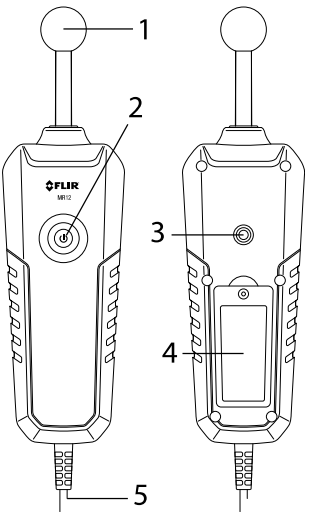
Thank you for selecting the FLIR MR12. Display relative moisture content readings when connected to a compatible moisture meter (FLIR MR60/MR160/MR176). The MR12 connects to the FLIR meter via the supplied RJ-45 cable/plug assembly. The MR12 works on the principle of high frequency and can non-destructively trace dampness in most types of building materials. The MR12 can also detect moisture distribution in walls, ceilings, and floors. The integrated ¼-20 threaded insert on the underside of the probe allows for mounting to the optional MR04 Extension pole.

Safety

- Use this device for purposes outlined in this manual only. Misuse may cause damage to the MR12 and/or external devices, and can cause personal injury.
- Do not handle the MR12 by the probe sensor or above the power button.
- Do not allow children to handle the device, its cabling, or the packing materials.

Description

1. Moisture sensor
2. Power button/Battery status LED
3. Mounting hole
4. Battery compartment
5. RJ-45 connecting cable and plug



Operation

1. **IMPORTANT**: Before use, please update the firmware for the FLIR moisture meter to which you will be connecting the MR12 (per moisture meter's user manual); otherwise, the icon mentioned in step 3 will not be available in the FLIR moisture meter menu.
2. Connect the MR12 to the FLIR moisture meter using the supplied RJ-45 cable and plug.
3. Power the FLIR moisture meter and select its pinless probe icon from the appropriate menu.
4. Before powering the MR12, ensure that the sensor is in open air and at least 8cm from any objects. Do not touch the probe or keep hands near the probe while powering the MR12. In addition, avoid moving the connecting cable while the MR12 is powering up.
5. Short press the MR12 power button to power the probe. The MR12 will perform a two-second 'zero' calibration; the power button will turn off and then back on indicating that the calibration is complete and the MR12 is ready for use. Check the battery if the power button does not illuminate.
6. Note that the MR12 has an Auto Power OFF (APO) feature. After 5 minutes of inactivity, the MR12 automatically switches off to conserve battery energy.
7. Position the MR12 sensor perpendicular to, and firmly against, the surface under test. View the measurement readings on the connected FLIR moisture meter. Do not place hands near the sensor or above the power button while taking measurements.

Measurement Considerations

- When moving from one location to another it is good practice to cycle power to the MR12 in order to perform a 'zero' calibration at each new location.
- The 'Set Relative' FLIR moisture meter function works well for comparative measurements. Refer to the FLIR moisture meter documentation for details.

- When testing in corners, keep the MR12 sensor 3.1 to 4.0” (8 to 10cm) from each edge in the measurement area.
- Keep the ball sensor perpendicular to the measured material and pressed firmly against the surface under test.
- Do not measure on metallic surfaces this will cause reading errors. Avoid measuring near metal pipes, wiring, or conduits.
- Excessive swinging of the connecting cable while powering up or when taking measurements can affect the accuracy of the meter readings. Ensure that the cable is as stationary as possible when using the MR12.

Battery Status LED

Capacity: 50 ~ 100%	LED fully ON	20 ~49%	LED flashes once/second
< 20 %	LED flashes 3x/second	0%	LED flashes and turns off
Note that the MR12 has a 5-minute auto-power off (APO) utility			

Battery Replacement

The 9V battery is located in the rear compartment. If the MR12 does not power on please replace the battery by opening the rear compartment, removing the old battery, and installing the new battery following proper polarity. Please secure the battery compartment before use.

Safety: Please dispose of batteries responsibly and never dispose of batteries in a fire, batteries may explode or leak. When storing the meter for 60 days or more, remove the battery and store separately.

Specifications

- Measurement Range: 0 ~ 100% (relative readings)
- Sensing depth for most common building materials up to 4.0” (100mm), this may vary depending upon material under test.
- Battery: 9V (rear compartment)
- Safety: Drop test: 6.4 ft. (2m); Ingress rating: IP40
- Operating temperature: 32 ~ 122°F (0 ~ 50°C)
- Dimensions:

  Cable length: 6 ft. (1.8m) uncoiled

  Probe handle body (without sensor): 6.85 (H) x 2.63 (W) x 1.45 (D) in. (174 x 67 x 37 mm)

  Sensor: 0.98 x 0.98 x 2.59 in. (25 x 25 x 66 mm)
- Weight: 10.4 oz. (295g)
- Optional accessories: MR04 Extension Pole

Customer Care

For Technical Support: email TMSupport@flir.com or call +1 855-499-3662 (option 3). For User Manual translations please visit **www.flir.com**

FLIR Test and Measurement Limited 3-Year Warranty

This product is protected by FLIR’s 3-Year Limited Warranty. Visit www.flir.com/testwarranty to read the 3-Year Limited Warranty document. Register your product at the website to receive a free 1-year warranty extension.