



QUICK START

Moisture Meter, MSX® IR Camera, Hygrometer

MODEL MR277





QUICK START

Moisture Meter, MSX® IR Camera, Hygrometer

Table of contents

1	Illustrations	1
2	EN-US English	3

1 Illustrations

Note Explanations of the illustrations are provided in each language section.

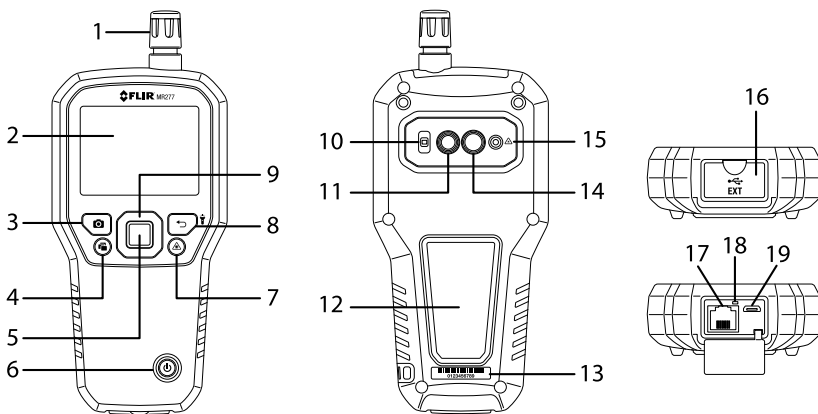


Figure 1.1 Product Description



Figure 1.2 Display Description



Figure 1.3 Registration QR Code

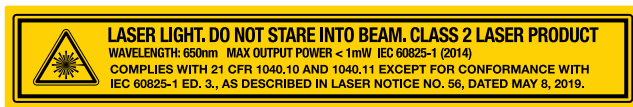


Figure 1.4 Laser Safety Label

2 EN-US English

2.1 QUICK STEPS

1. Long press the Power button  to switch ON or OFF.
2. Press the Select button  to access the menu system.
3. Measure moisture with the internal sensor (back) or an external probe.
Use the 'Moisture' menu to select pin or pinless mode.
4. Use the 'Image Mode' menu to select Thermal or Digital Camera operation.
5. Use the display cross-hairs to target a surface spot for temperature measurements.
6. Press the Laser button  to control the Laser pointer.
7. Press the Image Capture button  to store images and use the Gallery button  to view them.
8. Long press the Worklight button  to switch the light ON or OFF.

2.2 PRODUCT DESCRIPTION

See Figure 1, *Product Description*, page 1.

1. Temperature and Relative Humidity Sensor (MR13)
2. Color Graphical Display
3. Image Capture button
4. Image Gallery button
5. Select button (center). Press to open Menu
6. Power button (long press)
7. Laser Pointer button
8. Return button (short press) and Worklight button (long press)
9. Navigation buttons
10. Worklight lens
11. Digital camera lens
12. Pinless moisture sensor pad
13. Serial Number label
14. Thermal camera lens
15. Laser pointer lens
16. External probe and USB jack compartment
17. External moisture probe RJ jack
18. Battery charging LED
19. USB jack for connecting to PC or AC Charger

2.3 DISPLAY DESCRIPTION

See Figure 2, *Display Description*, page 1.

1. Moisture reading
2. Temperature of targeted center spot (cross-hairs)
3. Air temperature (probe measurement)
4. Relative humidity (probe measurement)
5. Dew point temperature calculation
6. Vapor Pressure calculation
7. Mixing Ratio calculation
8. IR Thermal image
9. Cross-hairs (Center Spot)
10. Low end of temperature range
11. High end of temperature range
12. Temperature scale
13. Laser pointer active
14. Worklight active
15. USB cable connected

16. Bluetooth® active

2.4 PROGRAMMING MENU

Press Select  to open the menu. Use the navigation arrows to scroll, the Select button to choose options, and the Return button  to back up. Refer to the user manual for more information (<https://support.flir.com>).

- **Temperature Scale** : Select Auto or Lock scaling.
- **Image modes** : Alignment Distance (MSX® alignment), Thermal MSX® (thermal plus visible camera), Thermal image mode, Digital Camera, Psychrometrics (ambient readings), and Moisture only.
- **Measurement modes** : No Measurement mode (camera image only), Center Spot (cross-hairs), IGM™ Moisture mode, IGM™ Custom (IGM™ plus ambient readings).
- **Moisture modes** : Material Groups (for Pin measurements), Pin measurements, Pinless measurements, MR12 (optional probe), Set Reference (compare readings to a stored reference).
- **Color** : Select a display palette.
- **Settings menu** : IGM™ Custom (choose readings to display), Language, Temperature units, Date/Time, Connections (Bluetooth®), Alarms, Lamp and Laser (Worklight/Laser control), Auto Power OFF (APO), HELP resources, Meter information, Reset options, and Regulatory data.

2.5 RECHARGEABLE BATTERY

For best results, charge immediately after seeing the low battery indication by connecting to a wall charger (5V/1A) via USB cable. To store the MR277 > 3 months, charge to > 70% and store at room temperature (recharge every 6 months).

2.6 MOISTURE MEASUREMENTS

For pinless measurements, press sensor firmly against a test surface. For pin measurements, drive pins into the material under test. Pinless readings are 'relative' scaled (0~100). Pin-based readings are shown in % MC (moisture content) for wood and % WME (wood moisture equivalent) for non-wood materials. Select Pin Mode  or Pinless Mode  in the 'Moisture' menu .

2.7 THERMAL CAMERA

The Thermal Camera is active in the Thermal mode and the Thermal MSX® (Multi-Spectral Dynamic Imaging) mode. Select one in the menu: *Image Mode*. Scan an area of interest. Select a color palette in the menu : *Color*.

2.8 VISIBLE SPECTRUM DIGITAL CAMERA

Select the Digital Camera from the menu system: *Image Mode/Digital Camera* . Scan an area of interest and view the image on the display.

2.9 AMBIENT MEASUREMENTS

The MR277 measures Temperature and Relative Humidity (MR13 sensor) and calculates Dew Point, Vapor Pressure, & Mixing Ratio. The Image modes that display these readings are: Thermal MSX®, Thermal, Digital Camera, and Psychrometrics. Select an Image mode from the menu: *Image mode*.

2.10 SENSOR EXTENDER (MR-EXT)

The MR-EXT accessory extends the sensor-to-meter distance by 3 inches (7.62 cm) to prevent sensor overheating. Connect the extender to the same socket to which the standard sensor connects. The sensor then connects to the other end of the extender.

2.11 ALARM UTILITY

Open the menu: *Settings/Measurement Parameters/IR Temperature & Moisture Alarm*. The IR Temperature alarm has three options: ABOVE, BELOW, and OFF. The Moisture alarm has two: ABOVE and OFF. There are two alert options for the Moisture alarm: BEEP and NO SOUND. When an alarm is set to ABOVE or BELOW, the MR277 will alert when the reading exceeds the high limit (red digits) or low limit (blue digits). The alarm bell is displayed when alarms are enabled. Press Select  to silence an alarm.

2.12 CAPTURE SCREEN IMAGES

Press the Camera button  to capture an image.

2.13 VIEW CAPTURED IMAGES

Press the Gallery button  to see the image thumbnails. Use the navigation arrows to scroll and the Select button to open images.

2.14 TRANSFER IMAGES TO PC

Connect to a PC (USB) and use the MR277 as you would any external storage drive. Note: Device is not 100% compatible with Mac OS, please do not format MR277 internal memory via Mac OS.

2.15 BLUETOOTH AND METERLiNK MOBILE APP

Enable Bluetooth® in the menu (*Settings/Device Settings/Connections*), install METERLiNK® on a mobile device, and search for MR277 in the App. See the user manual for complete information.

2.16 FIELD FIRMWARE UPGRADES

Refer to the on-line user manual for complete instructions.

2.17 LASER SAFETY

Do not point the Laser toward anyone's eye or allow the beam to strike the eye from a reflective surface. Do not use the Laser near explosive gases or in potentially explosive areas. See Figure 4, *Laser Safety Label*, page 2.

2.18 CUSTOMER SUPPORT

Customer Support: <https://support.flir.com>.

2.19 Limited 10-Year Warranty

This product is protected by FLIR's Limited 10-Year Warranty. Visit www.flir.com/testwarranty to read the Limited 10-Year Warranty document.



Website

<http://www.flir.com>

Customer support

<http://support.flir.com>

Copyright

© 2025, FLIR Systems, Inc. All rights reserved worldwide.

Disclaimer

Specifications subject to change without further notice. Models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to exportquestions@flir.com with any questions.

Publ. No.: NAS100015
Release: AG
Commit: 106896
Head: 107218
Language: en-US
Modified: 2025-08-13
Formatted: 2025-08-21

