MOISTURE METER, MSX® IR CAMERA & HYGROMETER

FLIR MR277™

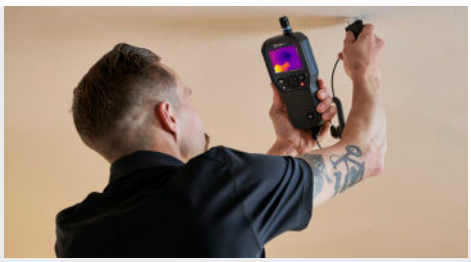
The FLIR MR277 is an accurate, easy-to-use, all-in-one tool for quickly locating moisture and building envelope issues. This professional moisture meter combines the advantages of Infrared Guided Measurement (IGM™) with FLIR Multi-Spectral Dynamic Imaging (MSX®) and advanced environmental sensors to help you locate, identify, and document problems. The integrated pinless moisture sensor provides fast, non-invasive readings which you can then confirm with the external pin probe. Features such as the built-in hygrometer and the field-replaceable temperature/relative-humidity sensor expedite troubleshooting, while METERLiNK® allows you to connect to mobile devices and upload data to the FLIR Tools® app for reporting.

www.flir.com/MR277

LOCATE BUILDING PROBLEMS FASTER

Easily investigate the source of moisture build-up and building envelope issues

- Clearly see areas of concern with a high-performance 160 × 120 thermal imaging sensor
- Quickly find suspected problems with IGM technology
- Easily identify both the context and the issue with MSX, which embosses visual details on full thermal images
- Target the exact source of problems with the integrated laser pointer



DIAGNOSE EFFICIENTLY AND ACCURATELY

Take comprehensive measurements and analyze moisture readings

- Quickly scan for moisture with the integrated non-invasive pinless sensor
- Capture exact measurements with an external pin probe (included) and wide range of optional moisture probes
- Reduce downtime with field-replaceable temperature/humidity sensor
- Calculated parameters based on multi-sensor input: grains per pound or grams per kilogram, vapor pressure, and dew point

DO MORE IN LESS TIME

One tool helps you get the job done

- Create a single file documenting comprehensive thermal and visual imagery with hygrometer readings and laser location
- Download images and data wirelessly or using the included USB cable
- Analyze images and quickly generate reports with free FLIR Tools software
- Easy to use with intuitive interface

SPECIFICATIONS

Thermal imaging	
Thermal image resolution	160 × 120 (19,200 pixels)
Spectral response	8 µm to 14 µm
Field of view (W × H)	55° × 43°
Sensitivity	<70 mK
Object temperature range	0°C to 100°C (32°F to 212°F)
Image update speed frequency	9 Hz
Image modes and displays	
Thermal image palettes	Iron, Rainbow, Arctic, White-hot, Black-hot
MSX®	Adds visual details to full resolution thermal image
Image modes	Thermal, visual, MSX®
Internal memory	8 GB
Image gallery	Yes
Display type	QVGA (320 × 240 pixels) 2.8 in. color TFT graphical display
Moisture measurements	
Pin moisture range	7% to 100%
Pin moisture accuracy	±1.5%, 7 to 30% Reference only: 30 to 100%
Pin moisture groups	11 material groups
Pinless moisture range and accuracy	0 to 100; relative
Pinless measurement depth	Max of 19 mm (0.75 in)
Measurement resolution	0.1
Response time pinless mode	100 ms
Response time pin mode	750 ms
Environmental measurements	
Relative humidity range	0% to 100% RH
Relative humidity basic accuracy	±2.5%
Relative humidity detailed accuracy	±4.7% (0% to 10% RH), ±2.5% (10% to 90% RH), ±4.7% (90% to 100% RH)
Air temperature range	0°C to 50°C (32°F to 122°F)
Air temperature accuracy	±0.6°C (±1.1°F)
Dew point	-30°C to 50°C (-22°F to 122°F)
Dew point basic accuracy	±1.0°C (±1.8°F)
Vapor pressure	0 to 12.0 kPa
Vapor pressure basic accuracy	±0.05 kPa
Mixing ratio range	0 to 80.0 g/kg (0 to 560 GPP)
Mixing ratio basic accuracy	0.25 g/kg (±2 GPP)
General information	
Saved image file format	Radiometric jpeg
Stored image capacity	15,000 Images
Digital camera	2 MP
Digital camera field of view (FOV)	83° (70.5° HFOV × 56° VFOV)
Language options	22
Laser type	Visible class 2, single laser pointer to center of thermal image
Power system	
Continuous run time	16 hours maximum
Typical usage	4 work weeks
Auto power off	Programmable: off, 1, 5, or 20 minutes
Battery	Rechargeable 4.2 V, 5400 mAh LiPo
Certifications	
Certification standards	EN 61326 (EMC), EN 60825-1 Class 2 (laser), IEC61010-1
Agency approvals	CE, FCC Class B, RCM
Environmental and physical data	
Operating temperature	-20°C to 60°C (-4°F to 140°F)
Storage temperature	-20°C to 45°C (-4°F to 113°F)
Operating humidity	5% to 95%
Storage humidity	90% relative humidity (no condensation)
Drop test	2 m (6.6 ft)
Weight:	406 g (14.3 oz)
Size (L × W × H)	16 × 8.5 × 4.4 cm (6.2 × 3.3 × 1.7 in)
Shipping information	
Packaging contents	FLIR MR277, FLIR MR13 Replaceable Temperature and Relative Humidity Sensor, FLIR MR02 Standard Moisture Pin Probe, quick start guide, international USB charger, USB cable, and lanyard

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

CORPORATE HEADQUARTERS
FLIR Systems, Inc.
27700 SW Parkway Ave.
Wilsonville, OR 97070
USA
PH: +1 866.477.3687

NASHUA
FLIR Systems, Inc.
9 Townsend West
Nashua, NH 03063
USA
PH: +1 866.477.3687

LATIN AMERICA
FLIR Systems Brasil
Av. Antonio Bardella, 320
Sorocaba, SP 18085-852
Brasil
PH: +55 15 3238 8070

CANADA
FLIR Systems, Ltd.
3430 South Service Road, Suite 103
Burlington, ON L7N 3J9
Canada
PH: +1 800.613.0507

www.flir.com
NASDAQ: FLIR

19-1502-INS

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