



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





FLIR MR Series

Moisture Meter Systems

Capture. Confirm. Report



The World's **Sixth Sense**®

WE'RE LOOKING FOR

TROUBLE

Let FLIR IGM™ (Infrared Guided Measurement) visually guide you to problems with the power of thermal imaging – so you'll know exactly where to measure

What if you could identify the precise location of a moisture problem that's behind a wall? Under the floorboards? In the ceiling? Now, locating moisture can be the easiest part of your day! Introducing FLIR IGM – or Infrared Guided Measurement – our thermal technology designed to save you time and guide you to the precise spot that may require further testing and investigation. With IGM, identifying problems before they're problems allows you to work faster, smarter, save time, and get to the next job.

- Find problems faster, get more done, and boost your credibility
- Scan for moisture issues from a distance with IGM – when targeting an area out of reach, or if safety is a concern
- Use IGM to show customers where problems are hiding, and prove they've been fixed after repairs



Infrared Guided Measurement



MR60

- Pin/Pinless Measurements
- Save up to 10,000 measurements
- Rechargeable battery
- Compatible with FLIR's full line of probe accessories



MR77

- Pin/Pinless Measurements
- Thermo hygrometer
- Advanced calculations
- Bluetooth capability
- METERLiNK wireless technology
- Rechargeable battery
- Compatible with FLIR's full line of probe accessories



MR160



- Pin/Pinless Measurements
- Save up to 10,000 measurements
- Rechargeable battery
- Compatible with FLIR's full line of probe accessories



MR176



- Pin/Pinless Measurements
- Thermo hygrometer
- Advanced calculations
- Rechargeable battery
- Compatible with FLIR's full line of probe accessories

Work Smarter, Not Harder.

Time is money and with IGM tools from FLIR, you can do a quick sweep of the work area, quickly find the problem area, and get to work.

MR176

FINDING HIDDEN MOISTURE HAS NEVER BEEN THIS EASY



FLIR **MR176** IMAGING MOISTURE METER *PLUS* IGM™: A 3-IN-1 MOISTURE METER WITH THERMO HYGROMETER

FLIR MR176 is a premium three-in-one moisture meter featuring IGM (Infrared Guided Measurement) technology. Equipped with an 80 x 60 FLIR Lepton thermal camera sensor that powers IGM, the MR176 visually guides you to the precise spot that needs further testing and investigation, giving you more flexibility and convenience than you have ever experienced before. Built tough with an industry-leading warranty, MR176 also features a pin/pinless moisture meter and thermo hygrometer – providing an ideal feature set for professionals who require environmental data from a wide range of applications.

For more information please visit www.flir.com/MR176

PERFECT FOR:

- Moisture Remediation
- Commercial/Healthcare
- Home Inspection
- HVAC/R
- Residential Roofing
- Pest Management

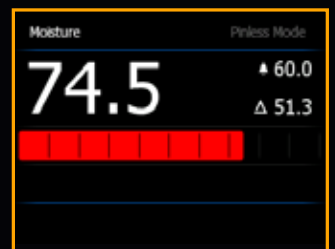
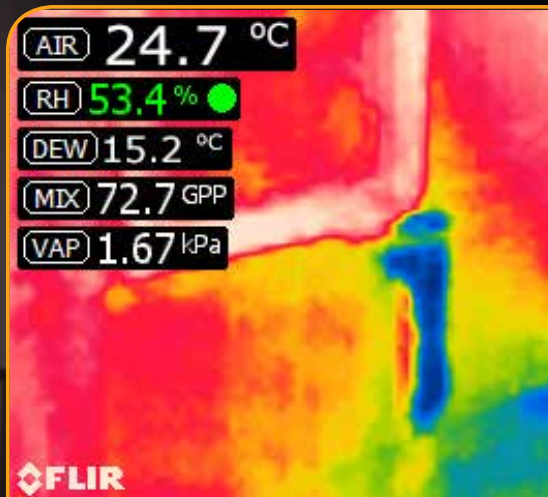


Field-replaceable sensor



KEY BENEFITS & FEATURES:

- Customize display settings: moisture, temperature, relative humidity, dew point, vapor pressure, mixing ratio
- Lock-image setting prevents extreme temperatures from interfering with images while scanning
- Meter indicates when relative humidity readings have stabilized
- Images are saved to on-board memory with measurement values for reference or USB download later



Capture, Confirm, Report

ACCESSORIES

For your jobs that require measurements in hard woods, dense materials, deep wall cavities, or through obstructions, FLIR has a quality line of probe accessories compatible with the MR176.

See the accessories page of this brochure to view our full line.



Pin or Pinless Measurements



Field Replaceable T/RH Sensor



KEY BENEFITS & FEATURES:

- Pinless technology for fast non-intrusive measurements
- External pin probe included for contact moisture measurements
- Easy targeting with laser pointer and display crosshairs
- Document thermal images and moisture readings on one screen
- Review images and generate reports with free FLIR Tools software
- 18-hour rechargeable battery

MR160

THE MOISTURE METER REINVENTED

FLIR MR160 IMAGING MOISTURE METER WITH IGM™

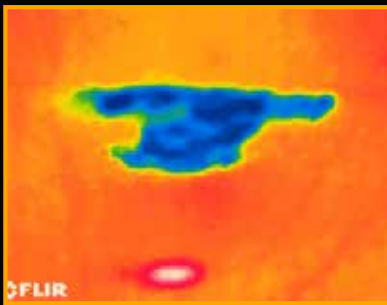
The FLIR MR160 is a pin and pinless meter designed to show general contractors and building professionals exactly where to measure. Equipped with an 80 x 60 FLIR Lepton thermal camera sensor that powers IGM technology, the MR160 lets you see invisible cold temperature patterns associated with moisture evaporation, visually guiding you to the precise spot that needs further testing and investigation. Built tough with an industry-leading warranty, the MR160 can serve as your go-to troubleshooting tool right out of the box—or as the perfect complement to any high resolution thermal camera you already own—helping you find hidden moisture issues and capture reliable data more efficiently.

For more information please visit www.flir.com/MR160



PERFECT FOR:

- Moisture Remediation
- Building/Remodeling
- Commercial/Healthcare
- HVAC/R
- Commercial Roofing
- Residential Roofing
- Home Inspection
- Pest Management
- Flooring Installation



Clockwise from top:
Thermal image guides
you to moisture
Pin probe included
Download images



ACCESSORIES



For your jobs that require measurements in hard woods, dense materials, deep wall cavities, or through obstructions, FLIR has a quality line of probe accessories compatible with the MR160. See the accessories page of this brochure to view our full line.

MR77

MOISTURE DETECTION GOES WIRELESS

FLIR MR77 MOISTURE METER WITH THERMO HYGROMETER

The FLIR MR77 Moisture Meter performs all the critical and advanced measurements restoration and drying professionals demand. Equipped with a pinless moisture sensor and pin probe for non-intrusive or intrusive readings, temperature and relative humidity sensor, and IR thermometer, the MR77 has all the sensors you need in one convenient tool. Built rugged with field-replaceable sensors, the MR77 is engineered to reduce downtime and help you get more done in less time.

For more information please visit www.flir.com/MR77



Clockwise from top: Integrated pinless moisture sensor; Connect METERLiNK cameras and MR77; View measurements on smart devices

ACCESSORIES

FLIR offers a quality line of probe accessories compatible with the MR77. [See the accessories page of this brochure to view our full line.](#)

PERFECT FOR:

- Moisture Remediation
- HVAC

KEY BENEFITS

- Bluetooth capability and METERLiNK technology for advanced documentation
- Manually store readings and recall up to 20 measurement points
- Durable rubber overmolded pocket-sized design
- Industry-leading limited lifetime warranty



MR60

ALL THE FUNCTIONALITY YOU NEED

FLIR MR60 MOISTURE METER PRO

The FLIR MR60 Moisture Meter Pro is an easy-to-use pin and pinless moisture meter with advanced functionality and a full-color display to meet all your professional measurement needs. An integrated pinless sensor and an external pin probe provide the flexibility to take either destructive or non-destructive measurements. Conveniently save screenshots of your measurements as a CSV file with the date, time, and settings.

For more information please visit www.flir.com/MR60

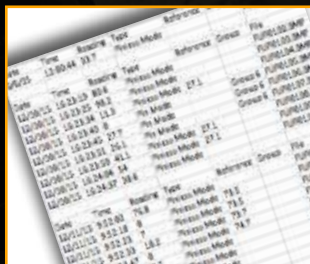


PERFECT FOR:

- Moisture Remediation
- HVAC

KEY BENEFITS

- 11 material group selections for pin-based readings
- Programmable high-moisture alarm with audible and visual alerts in color
- Internal rechargeable battery with USB-based international charger
- Optional probe accessories for application-specific needs



Clockwise from top:
 Pinless mode
 MR02 pin probe included
 USB download
 Save as .CSV file in Excel

ACCESSORIES

The MR60 is compatible with FLIR's full line of external moisture probes so you have the flexibility to expand your meter as needed. See the accessories page of this brochure to view our full line.

COMPLETE YOUR MOISTURE SYSTEM WITH FLIR PROBE ACCESSORIES

FLIR MOISTURE METER **ACCESSORIES**

FLIR offers a quality line of probe accessories to upgrade your FLIR moisture meter to meet advanced measurement challenges. Use our optional external pin probes on hard woods and dense materials, in deep wall cavities, or to get through an obstruction like sub floor through hardwood flooring. Designed for everyday job site use, we focused on durability of the system (probe, pins and cord), ease of use, and versatility.



MR04 **EXTENSION POLE**

Easily probe large and out-of-reach areas with telescoping pole that extends up to 52". Compatible with MR05, MR06, and MR08. Fits in MR08 shoulder case. 1/4-20 thread.



MR07 **HAMMER PROBE**

Stainless steel body with rubber grips for comfortable, long-lasting use. 2-inch insulated pins are one piece (nut and pin). Sandblasted hardened steel pins with abrasion-resistant coating ensures long life.



MR05* **IMPACT PROBE**

Robust probe penetrates hard material. Replaceable pins for varying hard materials. Use with extension pole (MR04).



MR08 **HAMMER/WALL PROBE**

Comfortably hammer probe into vertical, angled, or inverted surfaces. Included 2, 4, and 6-inch probes for varying sensing depths. Get down below carpet pads and subfloor.



MR06* **WALL CAVITY PROBE**

Penetrate into wall cavities for insulation moisture. Easily knock through drywall with impact plate 4- and 6- inch pins included for varying depths.



MR09 **BASEBOARD PROBE**

Probe behind baseboards, wall trim, and crown molding without requiring removal. Get measurements in hard-to-reach areas. Long, thin, flexible probes minimize needed space.

*FLIR recommends using the MR05 or MR06 to test moisture in concrete/building materials. Please review your instruction manual for complete details.

FLIR MOISTURE KITS OFFER THE COMPLETE SOLUTION AND SAVE YOU MONEY!



MR160-KIT5 FLIR MR160 PRO KIT

Combines our MR160 *Imaging Moisture Meter with IGM* and our MR08 Hammer and Wall Cavity Combo Probe.



MR176-KIT6 REMEDATION KIT

Combines our MR176 *Imaging Moisture Meter with IGM* and our MR08 Hammer and Wall Cavity Combo Probe. Includes FLIR E6 Thermal Imager.



MR176-KIT5 MR176 PRO KIT

Includes MR176 *Imaging Moisture Meter Plus with IGM*, MR08 Hammer and Wall Cavity Combo Probe, an extra MR01, and a field-replaceable Temperature & Relative Humidity sensor.



MR160-KIT2 BUILDING INSPECTION KIT

Includes MR160 *Imaging Moisture Meter Plus with IGM*, a C2 Thermal Imager, and an MR08 Hammer & Wall Cavity Probe.

Part Number	Description	UPC
MR176-KIT6	MR176 Remediation Kit	793950371732
MR160-KIT2	MR160 Building Inspection Kit	793950371626
MR176-KIT5	MR176 Pro Kit	793950371718
MR160-KIT5	MR160 Pro Kit	793950371619

PRODUCT COMPARISON

CHOOSE THE FLIR MOISTURE METER THAT'S RIGHT FOR YOU

	MR60	MR77	MR160	MR176
THERMAL IMAGING				
IR Resolution (IGM)	—	—	4800 pixels (80 × 60)	4800 pixels (80 × 60)
Pin Moisture Range	7-30% ±1.5% MC 30-100% reference only (Wood)	7-30% ± 1.5% MC 30-100% reference only	0-100% WME (± 5%)	7%-30% ±1.5% MC 30-100% reference only
Pinless Moisture Range	0-100 relative	0 to 99.9 relative	0-100 relative	0-100 relative
Relative Humidity	N/A	0 to 99% ±2.5%RH	N/A	0 to 100% ±2.5%RH
Field of view	—	—	51° × 38°	51° × 38°
Thermal image palettes	—	—	Iron*, Rainbow*, Ice, Gray*	Iron*, Rainbow*, Ice, Gray*
DISPLAY				
LCD with LED Backlight	—	Yes	—	—
Color QVGA Display	2.3" 64K TFT graphic	—	2.3" 64K TFT graphic	2.3" 64K TFT graphic
MOISTURE DETECTION				
Moisture Measurement	Pin and pinless	Pin and pinless	Pin and pinless	Pin and pinless
Pinless Moisture Depth	1.9 cm (0.75") maximum	1.9 cm (0.75") maximum	1.9 cm (0.75") maximum	1.9 cm (0.75") maximum
Pin Moisture Material Types	9 Wood Groups, 2 Construction Materials	9 Wood Groups	9 Wood Groups, 2 Construction Materials**	9 Wood Groups, 2 Construction Materials**
Compatible Accessories	MR02***, MR04, MR05, MR06, MR07, MR08, MR09	MR02***, MR04, MR05, MR06, MR07, MR08, MR09	MR02***, MR04, MR05, MR06, MR07, MR08, MR09	MR02***, MR04, MR05, MR06, MR07, MR08, MR09
GENERAL				
Laser Pointer	—	Yes, with IR Temp	Yes	Yes
Saved image file format	.BMP with values overlaid	—	.BMP with values overlaid	.BMP with values overlaid
.CSV Stored Data Format	Yes	—	Yes**	Yes**
Stored image capacity	9999 images	—	9999 images	9999 images
IR Temperature	—	-4 to 392°F, -20 to 200°C	—	—
Bluetooth	—	Yes	—	—
Temp RH Sensor Calculations	—	Vapor Pressure, Relative Humidity, Temperature, GPP, Dew Point	—	Vapor Pressure, Relative Humidity, Temperature, GPP, Dew Point
Battery	3.7 V, 2000 mAh Li ion rechargeable	1 x 9V	3.7 V, 2000 mAh Li ion rechargeable	3.7 V, 2000 mAh Li ion rechargeable
Drop Test	3m (9.8ft)	2m (6.5ft)	3m (9.8ft)	3m (9.8ft)

* If not installed, download latest firmware update

** Available via firmware update Q3, 2016

*** MR02 pin probe included with delivery package

PORTLAND

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

SWEDEN

EMEA Headquarters
FLIR Systems AB
Antennvägen 6
187 66 Täby
Tel. : +46 (0)8 753 25 00
E-mail : flir@flir.com

EUROPE

FLIR Commercial Systems
Luxemburgstraat 2
2321 Meer
Belgium
Tel.: +32 (0) 3665 5100

FLIR Germany

Frankfurt
Tel. +49 (0)69 95 00 900

FLIR France

Croissy-Beaubourg
Tel. +33 (0)1 60 37 55 02

FLIR Italy

Milan
Tel. +39 (0)2 99 45 10 01

FLIR UK

West Malling
Tel. +44 (0)1732 220 011

FLIR Spain

Madrid
Tel. +34 91 573 48 27

FLIR Russia

Moscow
Tel. + 7 495 669 70 72

FLIR Middle East

Dubai
Tel. +971 4 299 6898

FLIR Turkey

Istanbul
Tel. +90 (212) 317 90 55

FLIR Africa

Johannesburg
Tel. +27 11 300 5622

www.flir.com
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For more information:

flir@flir.com