

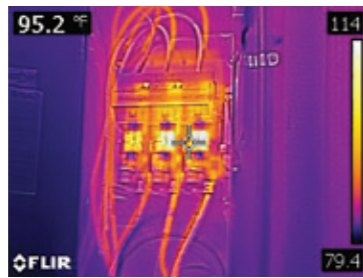
2019

# WHAT DO YOU NEED TO MEASURE?

FLIR delivers *world-class* thermal cameras and test & measurement tools with the accuracy, reliability, and versatility you need to tackle your most challenging jobs.



**“** FLIR cameras are used weekly at our customers’ facilities to verify that energized electrical connections are not overheating. We have also used FLIR cameras in the truck repair shop to identify blockages in cooling systems. Our FLIR camera has also been used to pinpoint roof leaks in our old admin building. Very valuable!  
 — Lisa Phillips, Electrical Engineer, Altorfer Power Systems  
 Source: TechValidate. TVID: 3F4-318-733 **”**



**“** “A panel almost caught on fire due to overload, (but) the FLIR meter caught that before it happened. Thousands and thousands worth of damage may have happened but I and the product found it before it did.”  
 — Jason Fasnacht, Electrician, Market  
 Source: TechValidate. TVID: EB4-532-357 **”**

**“** “FLIR helps me in every way. I can see air leaks, lack of insulation, moisture, water infiltration, and more.”  
 — Elie Khoury Leduc, Building Diagnostician, CGI  
 Source: TechValidate. TVID: D0D-A1D-136 **”**



*The Original*  
**IGM™**  
 INFRARED GUIDED MEASUREMENT

Our exclusive IGM technology is centered around the FLIR Lepton® thermal camera core. The compact, low-cost Lepton gives us the ability to develop new, highly-efficient test and measurement products that integrate powerful thermal imaging – a capability that helps you instantly see excessive heat, so you can pinpoint the location of potential problems, take measurements, and solve problems faster than ever.

**NEW PRODUCTS**



**OUR LATEST INNOVATIONS**

The FLIR ONE® Pro LT is the new thermal camera for smartphones that helps you find hidden problems quickly and reliably. Offering the enhanced resolution of FLIR VividIR™ processing and pro-features such as spot measurement tools and adjustable temperature controls, the FLIR ONE Pro LT is an affordable way to add thermal imaging to your inspection routine.



**FLIR ONE® PRO LT**  
 PRO-GRADE THERMAL CAMERA FOR SMARTPHONES  
 p.4

**MORE NEW PRODUCTS**



**FLIR MR55**  
 Pin Moisture Meter with Bluetooth®  
 p.28



**FLIR MR59**  
 Ball Probe Moisture Meter with Bluetooth®  
 p.27



**FLIR MR12**  
 Ball Probe Moisture Sensor  
 p.27



**FLIR IRW-xPC/xPS**  
 Large Format Infrared Inspection Windows  
 p.14

**CONTENTS**

<b>FLIR THERMAL IMAGING</b>	<b>FLIR T&amp;M</b>	<b>EXTECH</b>	Vibration Meters	37
FLIR ONE® Pro-Series	IR Thermometers	Clamp Meters	Video Boroscopes	37
Cx-Series	IR Windows	Multimeters	Laser Distance Meters	38
Ex-Series	Clamp Meters	Insulation Testers	Stopwatches	38
Exx-Series	Test Accessories	Phase Rotation	Coating Thickness	38
T-Series	Digital Multimeters	Leak Detectors	Water Quality	39
Thermal Camera Matrix	Electrical Testers	IR Thermometers		
Ax8	Videoscopes	Light Meters		
	Moisture Meters	Sound Meters		
	Moisture Accessories	Air Quality Testers		
	Moisture Kits	Environmental Meters		
		Humidity Dataloggers		
		Tachometers		

## FLIR ONE® Pro-Series Thermal Imaging Camera Attachments

The FLIR ONE Pro-Series gives you the power to find invisible problems faster than ever. With robust features such as multiple temperature meters and level/span controls, the FLIR ONE Pro and FLIR ONE Pro LT work as hard as you do. The revolutionary VividIR™ image processing helps you see more details, FLIR MSX® adds sharpness and perspective, and the FLIR OneFit™ adjustable connector extends up to 4 mm to fit many popular protective cases. Whether you're inspecting electrical panels, looking for HVAC problems, or finding water damage, FLIR ONE Pro-Series camera are tools no serious professional should be without.

### Key Features:

- Identify problem areas easier with the added detail and perspective from FLIR MSX
- Record stunningly crisp imagery and fine detail through VividIR advanced image processing
- Work anywhere with confidence thanks to the ruggedized drop-resistant design
- Fits with most popular phone cases using OneFit adjustable connector
- Measure the temperature of any spot in a scene up to 400°C/752°F (FLIR ONE Pro only) and detect temperature differences as small as 0.07°C/0.13°F (FLIR ONE Pro only)
- Share thermal images and videos to the social media platform of your choice through one-touch reporting
- Explore additional features such as FLIR ONE Panorama™, FLIR ONE TimeLapse™, and FLIR ONE CloseUp™ functions

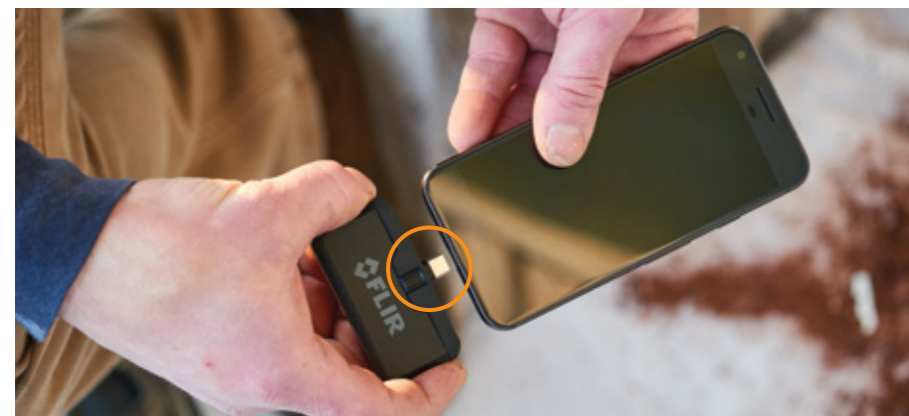
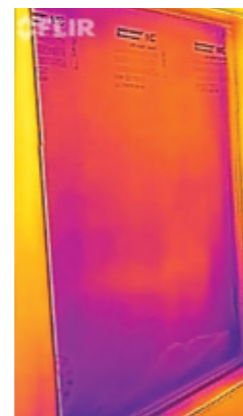
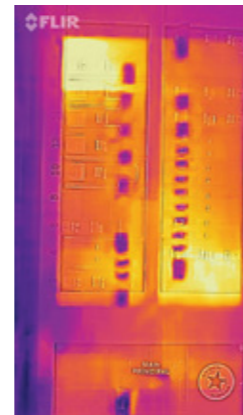
**NEW**



2018 NECA Show Stopper



SPECIFICATIONS	FLIR ONE PRO LT	FLIR ONE PRO
IR resolution	80 × 60 (4,800 pixels)	160 × 120 (19,200 pixels)
Thermal sensitivity	100 mK	70 mK
Object temperature range	-20°C to 120°C (-4°F to 248°F)	-20°C to 400°C (-4°F to 752°F)
HFOV/VFOV	55° ±1° / 43° ±1°	
Accuracy	±3°C (±5.4°F) or ±5%, typical percent of the difference between ambient and scene temperature. Applicable 60 sec after start-up when the unit is within 15°C to 35°C (59°F to 95°F) and the scene is within 5°C to 120°C (41°F to 248°F).	
Focus	Fixed 15 cm - Infinity	
Frame rate	8.7 Hz	
Battery life	1 hour	
Charging	Female micro USB-C (5 V 1 A)	
Interface	Lightning (iOS), USB-C, and micro USB (Android™)	



OneFit adapts your FLIR ONE Pro-Series camera to fit with almost any phone case.

## FLIR C2 and FLIR C3 Full-Featured, Pocket-Sized Thermal Cameras

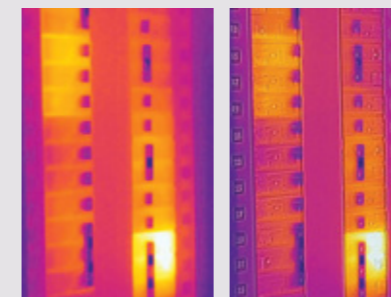
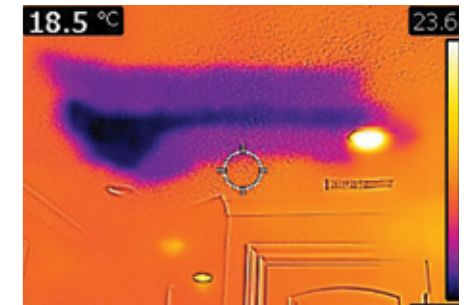
The FLIR C2 and C3 are your go-to tools for building inspections, facilities maintenance, HVAC, or electrical repair. The C2 includes MSX® real-time image enhancement, high sensitivity, a wide field of view, and fully radiometric imagery to clearly show where problems are and verify the completion of repairs. The C3 includes all the features of the C2 plus picture-in-picture, area maximum or minimum temperature measurement, and Wi-Fi connectivity so you can quickly get to the job of finding hidden problems, sharing images, and documenting repairs. No matter which you choose, you'll be ready anytime to find hot fuses, cold air leaks, plumbing issues, and more.

### Key Features:

- Capture thermal measurements from -10°C to 150°C (14°F to 302°F)
- Pocket Portable: keep it at your side, ready for immediate use so you don't miss an opportunity
- Easy viewing thanks to brilliant 3 in. intuitive touchscreen with auto-orientation
- Isolate temperature measurements on any pixel and create convincing reports using fully-radiometric thermal image JPEGs that are easy to adjust and analyze in FLIR Tools®
- Identify problem areas faster using MSX-enhanced thermal images
- Share images with colleagues instantly with Wi-Fi peer-to-peer sharing (C3 only)
- Record picture-in-picture (C3 only)
- Determine hottest or coldest (max./min.) target in the scene with area measurement box (C3 only)



SPECIFICATIONS	FLIR C2	FLIR C3
IR resolution	80 × 60 (4,800 pixels)	
Thermal sensitivity	<0.10°C	
Field of view	41° × 31°	
Object temperature range	-10°C to 150°C (14°F to 302°F)	
Accuracy	±2°C (±3.6°F) or 2%, whichever is greater, at 25°C (77°F) nominal	
Frame rate	9 Hz	
Focus	Focus-free	
Picture-in-picture	–	IR area on visual image
Area	–	Box with max. or min.
Wi-Fi	–	Standard 802.11 b/g/n



Breaker Panel without MSX

Breaker Panel with MSX

## What is MSX?

### Patented MSX Image Enhancement Improves Clarity, Speeds Diagnosis

Multi-Spectral Dynamic Imaging (MSX) adds visible definition to IR images by detecting the edges of objects and including that detail in the thermal image. Text becomes clearly visible so that you can read a label or identifier within the IR image. This exclusive function provides extraordinary thermal detail that instantly highlights and orients problem locations and eliminates the need to refer to a visual image for detail.

## FLIR Ex-Series with Wi-Fi and MSX® Enhancement

Ex-Series cameras are the thermal imaging solution you need to troubleshoot abnormal high temperatures in electrical systems, locate structural issues, find energy waste, and even see nesting pests. The E4, E5, E6, and E8 offer professional-level resolution, sensitivity, and dramatic MSX enhancement so you can spot problems faster.

### Key Features:

- Easy to use with simple button navigation
- Record radiometric JPGs that are easy to share with clients
- Upload thermal photos instantly over Wi-Fi via the FLIR Tools® Mobile app
- Diagnose faults faster with the help of stunning MSX images
- Rely on the temperature measurements accuracy of ±2°C (±3.6°F) or ±2% of reading
- Fully automatic and light weight — only 545 g (1.2 lbs)
- Work longer thanks to the swappable Li-ion battery with 4-hour life
- On-board 640 × 480 digital camera provides visual, MSX, and picture-in-picture images



SPECIFICATIONS	FLIR E4	FLIR E5	FLIR E6	FLIR E8
IR resolution	80 × 60 (4,800 pixels)	120 × 90 (10,800 pixels)	160 × 120 (19,200 pixels)	320 × 240 (76,800 pixels)
Thermal sensitivity	<0.15°C	<0.10°C	<0.06°C	<0.06°C
Digital camera resolution	640 × 480			
Object temperature range	-20°C to 250°C (-4°F to 482°F)			
Measurement modes	3 modes: 1 spot (center); 1 area box (min/max); isotherm (above/below)			
Frame rate	9 Hz			
Field of view	45° × 34°			
Focus	Focus-free			

## FLIR E53 Advanced Thermal Imaging Camera (240 × 180 IR Resolution)

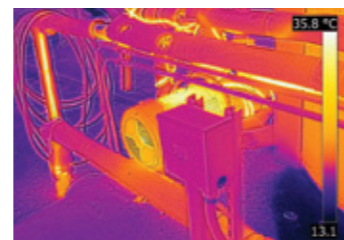
The FLIR E53 offers the resolution and sensitivity you need at the right price — making it the perfect entry into the Exx-Series. This camera provides more than 43,200 points of temperature measurement and detects temperature differences as small as <0.04°C for immediate identification of failing components.

### Key Features:

- Take accurate readings on smaller targets at farther distances with superior spot-size performance
- Diagnose faster with improved detail and perspective from FLIR's patented MSX® image enhancement
- Measure temperatures up to 650°C (1200°F)
- Activate up to three spotmeters and one area box with max/min temperature display
- Streamline your workflow with customizable folders and simplified report generation
- Instantly improve contrast on your target with 1-Touch Level/Span
- Add voice, text, and sketch annotations
- Upload and share images instantly via Wi-Fi connection to mobile devices running the FLIR Tools® app
- Connect via METERLiNK® to Bluetooth-enabled FLIR Test & Measurement tools

SPECIFICATIONS	FLIR E53
IR resolution	240 × 180 (43,200 pixels)
Thermal sensitivity	<0.04°C @ 30°C
Object temperature range	-20°C to 650°C (-4°F to 1200°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading
Image frequency	30 Hz
Field of view (FOV)	24° × 18°
Focus	Manual
Image modes	Infrared, visual, MSX®, picture-in-picture
Measurement presets	No measurement, center spot, hot spot, cold spot, 3 spots, hot spot-spot*
Spotmeter	3 in live mode
Area box	1 in live mode
Compass, GPS	Yes; automatic GPS image tagging
Image file format	Standard radiometric JPEG, measurement data included
Video recording	Real-time radiometric recording (.csq); non-radiometric H.264 recording to memory card
Video streaming	Radiometric streaming over UVC or Wi-Fi; non-radiometric H.264 or MPEG-4 over Wi-Fi
Communication interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort

\*Hot spot to center spot Delta measurement



fliir.com/ex-series • fliir.com/e53

## FLIR Exx-Series Advanced Thermal Imaging Cameras

FLIR redesigned the Exx-Series from the handle up to deliver the best performance, resolution, and sensitivity of any pistol-grip handheld thermal camera. The new E75, E85, and E95 cameras are packed with features you need for a wide range of electrical, mechanical, and building applications.

The new Exx-Series offers superior sensitivity, up to 161,472 pixel resolution, true 42° field of view, and a vibrant 4 in. LCD in a user-friendly, handheld platform that can detect even subtle indications of electrical faults, building deficiencies, and moisture intrusion.

### Key Features:

- Save time and money with interchangeable, auto-calibrating lenses you can share between cameras
- Ensure accurate temperature measurements with laser-assisted autofocus
- Put more pixels on your target from a safe distance with up to 464 × 348 (161,472 pixels) IR resolution
- Add depth and detail to images with our best MSX® image enhancement
- Produce brilliant imagery at 4x the thermal pixel resolution with UltraMax® processing
- Instantly improve contrast for target with 1-Touch Level/Span
- See more clearly thanks to a vibrant 4 in. LCD with 160° viewing angle
- Share images and data quickly with streamlined reporting features
- Work faster thanks to rapid-response touchscreen with intuitive new user interface
- Work safely with convenient menu buttons that allow for one-handed operation
- New folder and naming structure that makes finding images easier
- Connect to mobile devices via Wi-Fi or to FLIR clamps, multimeters and moisture meters via METERLiNK®
- On-screen area measurement
- Wide temperature ranges up to 1,500°C / 2,732°F (E95)



AutoCal™ lenses

SPECIFICATIONS	FLIR E75	FLIR E85	FLIR E95
IR resolution	320 × 240 (76,800 pixels)	384 × 288 (110,592 pixels)	464 × 348 (161,472 pixels)
UltraMax®	307,200 pixels	442,368 pixels	645,888 pixels
Object temperature range	-20°C to 650°C / optional 1000°C (-4°F to 1200°F / 1830°F)	-20°C to 1200°C (-4°F to 2192°F)	-20°C to 1500°C (-4°F to 2732°F)
Laser area measurement (m² or ft²)	No	Yes	Yes
Area box	1 in live mode	3 in live mode	3 in live mode
Thermal sensitivity	<0.03°C @ 30°C †		
Accuracy	±2°C (±3.6°F) or ±2% of reading		
Image frequency	30 Hz		
Field of view (FOV)	24° × 18° (18 mm lens), 42° × 32° (10 mm lens), 14° × 10° (29 mm lens)		
Lens identification	Automatic		
Focus	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual		
Image modes	Infrared, visual, MSX®, picture-in-picture		
Measurement presets	Center spot, hot spot, cold spot, User Preset 1, User Preset 2		
Spotmeters	3 in live mode		
Laser distance measurement	Yes, on-screen		
Compass, GPS	Yes; automatic GPS image tagging		
Image file format	Standard radiometric JPEG, measurement data included		
Video recording	Real-time radiometric recording (.csq); non-radiometric H.264 recording to memory card		
Video streaming	Radiometric streaming over UVC or Wi-Fi; non-radiometric H.264 or MPEG-4 over Wi-Fi		
Communication interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort		

† With wide-angle lens



Select FLIR meters communicate with Exx cameras via Bluetooth



Mobile devices communicate with Exx cameras via Wi-Fi

fliir.com/exx-series

## FLIR T-Series Professional Thermal Imaging Cameras

FLIR T-Series thermal imaging cameras offer outstanding range, resolution, and image clarity paired with the ergonomics professional thermographers need for a full day of inspections. These professional-level cameras offer features such as crisp 640 x 480 thermal imagery (T620/T640/T660) or a 180° rotating optical block (T530/T540). All offer superior sensitivity and state-of-the-art connectivity, so you can find hot spots or potential faults, and report them quickly for immediate repairs.

### Key Features:

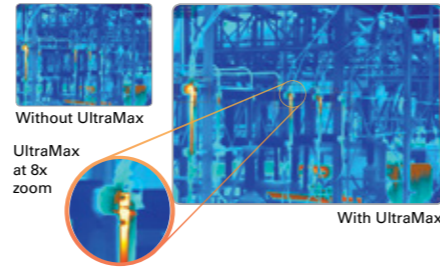
- The best detection, pictures, and temperature measurements with up to 307,200 pixel (640 x 480) IR resolution
- Interchangeable AutoCal™ optics can be shared between T500-Series cameras or new Exx-Series models without the need for secondary pairing or factory recalibration
- Add depth and detail to images with MSX® image enhancement
- Ergonomic design provides all-day comfort, so you can scan from tough angles while keeping the display in view
- Simplify manual level and span adjustments with 1-Touch Level/Span (T530/T540)
- Laser-assisted autofocus improves focus and measurement accuracy, provides data for laser distance measurement, and on-screen area measurement (T530/T540)
- Quickly access to measurement tools, parameters, image modes, and more through vibrant touchscreen and updated interface
- Send images and collect data via Wi-Fi to the FLIR Tools® app
- Add FLIR clamp or multimeter data to images via Bluetooth with METERLiNK® technology



red dot award  
product design



T530/T540



**ULTRAMAX®**  
Unmatched performance at four times the resolution  
A unique image processing technique that allows you to generate reports with images that have four times as many pixels

SPECIFICATIONS	FLIR T530	FLIR T540	FLIR T620	FLIR T640	FLIR T660
IR resolution	320 x 240	464 x 348	640 x 480	640 x 480	640 x 480
Object temperature range	-20°C to 650°C / optional 1200°C (-4°F to 1202°F / 2192°F)	-20°C to 1500°C (-4°F to 2732°F)	-40°C to 650°C (-40°F to 1202°F)	-40°C to 2000°C (-40°F to 3632°F)	-40°C to 2000°C (-40°F to 3632°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	±1°C (±1.8°F) or ±1% of reading for limited temp. range / ±2°C (±3.6°F) or ±2% of reading
Thermal sensitivity	<30 mK @ 30°C (42° lens)	<30 mK @ 30°C (42° lens)	<40 mK at 30° C	<30 mK at 30°C	<20 mK @ 30°C
Focus	Continuous LDM, One-shot LDM, One-shot contrast, Manual	Continuous LDM, One-shot LDM, One-shot contrast, Manual	One-shot automatic, Manual	Continuous, One-shot, Manual	Continuous, One-shot, Manual
Display size	4 in. (10.16 cm) LCD	4 in. (10.16 cm) LCD	4.3 in. (10.92 cm) LCD	4.3 in. (10.92 cm) LCD	4.3 in. (10.92 cm) LCD
Viewfinder	No	No	No	Yes	Yes

## FLIR Optics

FLIR produces a range of optional lenses for each family of T-Series cameras. From the OSX™ Precision HDIR optics for the T1K, to the T500-Series' compact AutoCal™ lenses, these optics were designed to be tough, accurate, and precise.



T500-Series lenses



T600-Series lenses



T1K lenses

flir.com/t-series

## FLIR T1K HD Thermal Imaging Cameras

FLIR T1K (T1010/T1020) infrared cameras are designed for thermography experts who need the highest quality without compromise. With full HD resolution, outstanding thermal sensitivity, and FLIR-exclusive optics designed specifically for HDIR detectors, T1K cameras raise the bar on performance.

### Key Features:

- Records high-quality images at 786,432 pixel (1024 x 768) native IR resolution
- Delivers superior image clarity and detail thanks to MSX®, UltraMax®, and FLIR proprietary adaptive filtering algorithms
- Ergonomic design provides all-day comfort, so you can scan from tough angles while keeping the display in view
- FLIR OSX™ Precision HDIR optical system provides the highest fidelity imagery so you can pin-point the smallest anomalies from farther away
- Now featuring an agile new GUI and live image enhancements such as 1-Touch Level/Span
- Wireless connectivity allows you to upload images and collect data via Wi-Fi to the FLIR Tools® app\*

\* T1020 model

SPECIFICATIONS	FLIR T1010	FLIR T1020
IR resolution	1024 x 768	1024 x 768
Thermal sensitivity	<25 mK @ 30°C	<20 mK @ 30°C
Accuracy	±2°C (±3.6°F) or ±2 % of reading	±1°C (±1.8°F) or ±1% for temperatures 5°C to 150°C (41°F to 302°F) ±2°C (±3.6°F) or ±2 % of reading for temperatures up to 1200°C (2192°F)
Viewfinder	No	Yes
Object temperature range	-40°C to 2000°C (-40°F to 3632°F)	
Focus	One shot or manual	
Display size	4.3 in. (10.92 cm) wide screen LCD	



## The Infrared Training Center

ITC offers classes for practically every application, from free online courses to advanced training that can certify you as a thermography expert.

- **FREE online courses**  
User-friendly, on-demand courses designed to show you how to use your camera and get started on electrical surveys, energy audits, and more
- **Thermography certification training**  
Level I certifies that you know how a thermal imager works and how to use it. Level II cranks your credibility up a notch with more in-depth concepts, and intensive labs
- **Classes covering many topics**  
Popular ITC courses include: Indoor Electrical Surveys Using IR Thermography, Outdoor Electrical Surveys Using IR Thermography, Building Inspection, and Condition Monitoring
- **Brush up your skills**  
Need a quick refresher on the basics of infrared? ITC's FREE live and on-demand webcasts are just for you! Available on your desktop, laptop, tablet, or smartphone: [www.infraredtraining.com/webinars](http://www.infraredtraining.com/webinars)

Come to classes at our training center or at one of our many regional locations. On-site training at your facility is available if you would like to certify a group of 10 or more. For a complete list and schedule of courses and more information, visit [www.infraredtraining.com](http://www.infraredtraining.com)



flir.com/t-series • infraredtraining.com



Specifications	Mobile		Compact		Point & Shoot				Professional				High-Performance					
Model	FLIR ONE Pro LT	FLIR ONE Pro	C2	C3	E4	E5	E6	E8	E53	E75	E85	E95	T530	T540	T620	T640	T1010	T1020
IR resolution	80 × 60 (4,800 pixels)	160 × 120 (19,200 pixels)	80 × 60 (4,800 pixels)		80 × 60 (4,800 pixels)	120 × 90 (10,800 pixels)	160 × 120 (19,200 pixels)	320 × 240 (76,800 pixels)	240 × 180 (43,200 pixels)	320 × 240 (76,800 pixels)	384 × 288 (110,592 pixels)	464 × 348 (161,472 pixels)	320 × 240 (76,800 pixels)	464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels)		1024 × 768 (786,432 pixels)	
UltraMax® resolution	–	–	–	–	–	–	–	–	–	307,200 pixels	442,368 pixels	645,888 pixels	307,200 pixels	645,888 pixels	1.2 MP		3.1 MP	
MSX® image enhancement	Yes		Yes		Yes				Yes				Yes		Yes		Yes	
Color viewfinder	–	–	–	–	–				–				–		Yes		–	Yes
Thermal sensitivity	<0.1°C	<0.7°C	<0.10°C	<0.10°C	<0.15°C	<0.10°C	<0.06°C	<0.06°C	<0.04°C	<0.03°C <sup>†</sup>			<0.03°C <sup>†</sup>		<0.04°C	<0.03°C	<0.025°C	<0.02°C
Temperature range	-20°C to 120°C (-4°F to 248°F)	-20°C to 400°C (-4°F to 752°F)	-10°C to 150°C (14°F to 302°F)		-20°C to 250°C (-4°F to 482°F)				-20°C to 650°C (-4°F to 1,200°F)	-20°C to 650°C (-4°F to 1,200°F)	-20°C to 1,200°C (-4°F to 2,192°F)	-20°C to 1,500°C (-4°F to 2,732°F)	-20°C to 650°C (-4°F to 1,202°F)	-20°C to 1,500°C (-4°F to 2,732°F)	-40°C to 650°C (-40°F to 1,202°F)	-40°C to 2,000°C (-40°F to 3,632°F)	-40°C to 650°C (-40°F to 1,202°F)	-40°C to 2000°C (-40°F to 3,632°F)
										Optional to 1,000°C (1,830°F)			Optional to 1,200°C (2,192°F)		Optional to 2,000°C (3,632°F)			
Accuracy	±3°C (5.4°F) or ±5%		±2°C (±3.6°F) or 2%		±2°C (±3.6°F) or ±2%				±2°C (±3.6°F) or ±2%				±2°C (±3.6°F) or ±2%		±2°C (±3.6°F) or ±2%		±2°C (±3.6°F) or ±2%	±1°C (±1.8°F) or ±1% for temperatures up to 150°C (302°F)
Field of view	50° × 43°		41° × 31°	41° × 31°	45° × 34°				24° × 18°	42° × 32°, 24° × 18°, 14° × 10°			42° × 32°, 24° × 18°, 14° × 10°		15° × 11°, 25° × 19°, 45° × 34°		7° × 5.3°, 12° × 9°, 28° × 21°, 45° × 34°	
Available lenses	–	–	–	–	–				–	14°, 24° and 42° AutoCal™ lenses			14°, 24° and 42° AutoCal™ lenses		7°, 15°, 25°, 45° and 80° 25 μm, 50 μm and 100 μm		7°, 12°, 28° and 45° 51 μm lens	
Spot size ratio	–	–	90:1	90:1	97:1	145:1	192:1	385:1	571:1	763:1	917:1	1111:1	763:1	1111:1	1471:1		2128:1	
Measurement tools	Spotmeter	Spotmeter	Spotmeter	Spotmeter, area box (max/min)	Spotmeter (center spot)	Spotmeter (center spot), area box (max/min)		Spotmeter (center spot), area box (max/min), isotherm (above/below/interval)	3 spotmeters, 1 area box (max/min), center spot, hot spot, cold spot, 3 spots, hot spot-spot*	3 spotmeter, 1 area boxes (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T	3 spotmeters, 3 area boxes (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T		3 spotmeters, 3 area boxes (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T		10 spotmeters, 5+5 area boxes, hot spot, cold spot, User Presets (1 & 2), Delta T	10 spotmeters, 5+5 area boxes, profile (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T	1 spotmeter, 1 area box (max/min/avg.), profile (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T	10 spotmeters, 5+5 area boxes (max/min/avg.), profile (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T
Communication modes	USB-C, microUSB and Lightning	USB-C, microUSB and Lightning	USB	USB, Wi-Fi	USB, Wi-Fi				USB, Wi-Fi, Bluetooth, Display Port				USB, Wi-Fi, Bluetooth, Display Port		USB, Wi-Fi, Bluetooth, mini-HDMI		USB Micro-B, HDMI	USB Micro-B, Wi-Fi, Bluetooth, HDMI
Touchscreen	–	–	3 in (7.62 cm)	3 in (7.62 cm)	–				4 in (10.16 cm)				4 in (10.16 cm)		4.3 in (10.92 cm)			
On-screen text, image sketch	–	–	–	–	–				Yes				Yes		Yes		–	Yes
Voice annotation	–	–	–	–	–				Yes				Yes		Yes		–	Yes
Laser pointer	–	–	–	–	–				Yes				Yes		Yes			
METERLINK®	–	–	–	–	–				Yes				Yes		Yes		–	Yes
Radiometric JPEG	Yes	Yes	Yes	Yes	Yes				Yes				Yes		Yes			
IR video storage	Yes	Yes	–	–	–				Yes				Yes		Yes		–	Yes
Built-in GPS/Compass	–	–	–	–	–				Yes				Yes		Yes		–	Yes
Radiometric recording	–	–	–	–	–				–				Yes					

\*Hot spot to center spot Delta measurement  
<sup>†</sup> With wide-angle lens

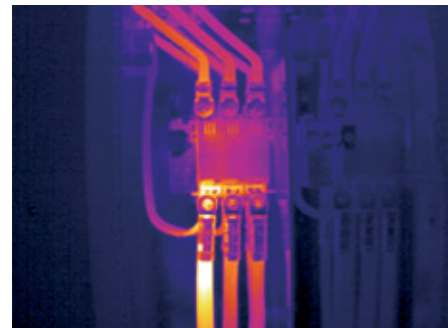
## FLIR AX8 Thermal Imaging Temperature Sensor

FLIR AX8 is a thermal sensor with imaging capabilities. Combining thermal and visual cameras in a small, affordable package, the AX8 provides continuous temperature monitoring and automated alarms for critical electrical and mechanical equipment. Compact and easy to install, AX8 provides continuous monitoring of electrical cabinets, manufacturing areas, data centers, energy distribution, mass transit, refrigeration warehouses, and much more.

### Key Features:

- Streaming live-video output
- Automated alarming at pre-set temperature thresholds
- Ethernet/IP and Modbus TP compliant for easy sharing of alarm and analysis results to a PLC
- Image masking function allows for analysis of just the target
- MSX® image enhancement for improved visual details
- Compact design for easy installation in space-constrained areas
- Ability to stream live video via Ethernet

SPECIFICATIONS	AX8
IR resolution	80 × 60 (4,800 pixels)
Thermal sensitivity/NETD	<0.10°C @ 30°C (86°F)/100 mK
Field of view	48° × 37°
Built-in digital camera	640 × 480
Object temperature range	-10°C to 150°C (14°F to 302°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading
Spotmeter	6
Area	6 boxes with max./min./average
Automatic hot/cold detection	Max/Min temp. value and position shown within box
Alarm functions	Set up to 5 alarms on any selected measurement function
Alarm output	Digital Out, store image, file sending (ftp), email (SMTP), notification
Storage media	Built-in memory for image storage
Ethernet, protocols	Ethernet/IP, Modbus TCP, UDP, SNTP, RTSP, RTP, HTTP, ICMP, IGMP, sftp, SMTP, SMB (CIFS), DHCP, MDNS (Bonjour)
Image modes	Thermal, visual, MSX



AX8 Accessory Starter Kit (Part number 71200-0002): includes an M12 to RJ45 Ethernet cable, front mounting-plate kit, rear mounting-plate kit, Gigabit PoE injector 15 W, M12 to pigtail cable



fliir.com/ax8

## FLIR TG165/TG167 Spot Thermal Cameras

Bridging the gap between single spot IR thermometers and FLIR's legendary infrared cameras, the TG165 and TG167 give you the advantage of thermal imaging to help you discover temperature issues you can't see with typical spot radiometers. Equipped with FLIR's Lepton® thermal imaging sensor, the TG165 and TG167 use the power of Infrared Guided Measurement (IGM™) to show you heat patterns across your target, guiding you to the precise location of potential problems so you can take more reliable temperature readings. They also store images and data for reports. And with a spot ratio of 24:1, you can capture measurements from a safer distance.

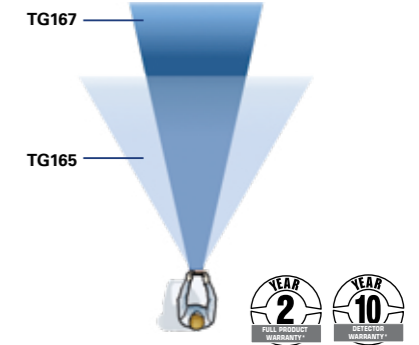
### Key Features:

- True thermal detection – best-in-class image quality
- Tripod mount and lanyard connection
- Simple to operate, with pull-trigger to activate lasers or freeze images
- Rugged and reliable – withstands a 2-meter drop
- Dual laser pointers to frame area of interest
- Micro SD card & mini-USB port for downloading images and charging

SPECIFICATIONS	TG165	TG167
Field of view	38.6° × 50°	19.6° × 25°
Thermal imaging palette	Hot-iron, grayscale	Hot-iron, rainbow, grayscale
IR resolution	80 × 60 (4,800 pixels)	
Distance-to-spot ratio	24:1	
Range	-25°C to 380°C (-13°F to 716°F)	
Basic accuracy	±1.5°C (2.7°F) or 1.5%	
Measurement resolution	0.1°C / 0.1°F	
Temperature sensitivity	<150 mK	
Focus	Fixed	
Laser pointer	Dual diverging lasers, trigger-activated	



### Field of view (FOV) comparison



## FLIR TG54/TG56 Spot IR Thermometers

The TG54 and TG56 spot infrared thermometers provide non-contact surface temperature readings so you can quickly and easily take measurements in places that are out of reach. Providing a distance-to-spot ratio of up to 30:1, the TG54 and TG56 can measure smaller targets from a safer distance. New mode options give you control to view your current reading and last two temperature readings simultaneously. The TG54 and TG56 are built with a color screen that makes it easy to navigate and select settings, plus adds visibility and efficiency to the advanced feature set. The TG54 and TG56 are your go-to, pocket-sized devices for efficient temperature measurement.

### Key Features:

- Non-contact surface temperature measurement
- Laser pointer helps you identify what is hot or cold
- Graphical menu structure allows easy access to settings
- Easy emissivity selection with predetermined levels and custom adjustment
- Rugged, industrial design that can withstand a 3-meter drop
- Bright LED worklight to help you see your target in poor lighting conditions

SPECIFICATIONS	TG54	TG56
Distance-to-spot ratio (D:S)	24:1	30:1
Range	-30°C to 650°C (-22°F to 1202°F)	
Basic accuracy	±1°C (±1.8°F) or 1% of reading	
Emissivity	Adjustable with 4 presets and custom option	
Resolution	0.1°C / 0.1°F	
Response	≤150 ms	
Spectral response	5 to 14 μm	



fliir.com/test

## FLIR IRW-xC/xS Round IR Windows

FLIR IR Windows add a protective barrier between you and energized equipment, so you can perform inspections more efficiently and reduce the threat of arc flash injury. FLIR IRW-Series windows feature a permanent hinged cover that flips open easily, so there's nothing to drop, mix up, or lose. If there are mixed-metal concerns, choose the stainless-steel model to prevent galvanic corrosion.

### Key Benefits:

- Minimize time/cost of complying with NFPA 70E for electrical inspections
- Decrease the risk of arc flash incidents and resultant injuries
- Perform both visual and thermal inspections through the crystal window

- Maintain integrity of cabinet environmental ratings, even after installation
- Install easily using standard knockout punches, no screws
- Avoid contact between dissimilar metals by choosing stainless steel models



SPECIFICATIONS	IRW-2C	IRW-3C	IRW-4C	IRW-2S	IRW-3S	IRW-4S
Optic diameter	50 mm (1.97 in)	75 mm (2.95 in)	95 mm (3.74 in)	50 mm (1.97 in)	75 mm (2.95 in)	95 mm (3.74 in)
NEMA environment type	Type 4/12 (outdoor/indoor)					
Automatically grounded	Yes					
Maximum operating temperature	260°C (500°F)					
Body material	Anodized aluminum			AISI-grade 316 stainless steel		
Greelee punch	76BB	739BB	742BB	76BB	739BB	742BB

## FLIR IRW-xPC/xPS Large Format IR Windows NEW

FLIR IRW-xPC and IRW-xPS large format infrared inspection windows offer the field of view you need to image inaccessible components, improving inspection efficiency and helping to prevent unplanned downtime. The rectangular polymer windows provide the largest viewing area available to monitor completely undisturbed assets inside energized electrical equipment. Durable and stable in harsh environments, these IR windows are suitable for most industrial settings as well as for shipboard use.

### Key Benefits:

- Meet IP2x standard for safe maximum hole size and fail-safe design
- Tested and certified to the highest industry standards
- Use IRW-xPC windows for indoor applications and IRW-xPS windows for outdoor applications

- Maintain fixed and stable transmission to ensure temperature data is accurate and reliable
- Proven compatibility with acids, alkalis, UV, moisture, humidity, vibration, and high frequency noise
- Protect viewing panes from flying debris, dust, or impact with the lockable window covers



SPECIFICATIONS	IRW-6PC	IRW-12PC	IRW-24PC	IRW-6PS	IRW-12PS	IRW-24PS
Overall height	21.8 cm (8.6 in)	20.6 cm (8.1 in)	21.8 cm (8.6 in)	21.8 cm (8.6 in)	20.6 cm (8.1 in)	21.8 cm (8.6 in)
Overall width	16 cm (6.3 in)	30.5 cm (12.0 in)	61 cm (24.0 in)	16 cm (6.3 in)	30.5 cm (12.0 in)	61 cm (24.0 in)
Aperture overall height	15 cm (5.9 in)	12.7 cm (5.0 in)	15 cm (5.9 in)	15 cm (5.9 in)	12.7 cm (5.0 in)	15 cm (5.9 in)
Aperture overall width	9.1 cm (3.6 in)	23.6 cm (9.3 in)	53 cm (20.9 in)	9.1 cm (3.6 in)	23.6 cm (9.3 in)	53 cm (20.9 in)
Optic temperature range	-40°C to 325°C (-40°F to 617°F)					
IP/NEMA environment type	IP65 / NEMA 4x			IP67 / NEMA 6		
Maximum operating temperature	-40°C to 200°C (-40°F to 392°F)			-40°C to 273°C (-40°F to 523°F)		
Body material	Aluminum			Powder-coated stainless steel		
Optic reinforced grill material	Aluminum reinforcing grill (IP22/ IP2x standard)			Stainless steel reinforcing grill (IP22/ IP2x standard)		

fliir.com/ir-windows

## FLIR CM275 Industrial Imaging Clamp Meter with Datalogging, Wireless Connectivity and IGM™

FLIR CM275 clamp meters combine Infrared Guided Measurement (IGM) thermal imaging with electrical measurement in one powerful inspection, troubleshooting, and diagnostic tool. Confirm your findings with the clamp meter's wide range of functions plus temperature readings. The FLIR CM275 also provides wireless connectivity for direct connection to the FLIR Tools® app and FLIR InSite™ professional workflow management app.

### Key Features:

- Safely check for live connections using non-contact temperature measurement
- Use advanced electrical features including Variable Frequency Drive (VFD) mode, True RMS, and Low Impedance (LoZ) mode
- Pinpoint exact hot spot locations with laser or crosshairs
- Store electrical measurements and thermal images internally, for later review
- Rely on the protection of CAT IV-600V, CAT III-1000V safety ratings

THERMAL IMAGING CM275		
IR resolution	160 × 120 (19,200 pixels)	
Object temperature range	-10°C to 150°C (14°F to 302°F)	
Field of view	50° × 38°	
Temperature sensitivity	150 mK	
Focus	Fixed	
MEASUREMENTS RANGE BASIC ACCURACY		
AC / DC Volts	1000 V	±1.0%
VFD AC Volts	1000 V	±1.0%
AC / DC LoZ V	1000 V	±1.0%
AC / DC Amps	600.0 A	±2.0%
VFD AC Amps	600.0 A	±2.0%
AC inrush	600.0 A	±3.0%
Resistance	6.000 kΩ	±1.0%
Capacitance	1000 μF	±1.0%
Diode test	1.5 V	±1.5%



## FLIR CM174 Industrial Thermal Imaging Clamp Meter with IGM™

The FLIR CM174 is equipped with a built-in thermal imaging camera that can quickly lead you to problems you can't see with a standard clamp meter. Using IGM technology, the CM174 visually guides you to the precise location of a potential electrical problem, identifying dangerous and unknown problem areas safely. Confirm your findings with accurate amperage and voltage measurements, and center-point temperature readings.

### Key Features:

- All-in-one tool – carry just one device and always have access to thermal imaging
- Work safely – scan a panel or cabinet for hazards using IGM without direct contact
- Center-point temperature to confirm hot spot
- Laser and crosshair pinpoint the location of the problem found in thermal image
- Narrow jaw and built-in worklights help you access difficult locations with lighting issues
- Advanced electrical features: True RMS, LoZ, VFD Mode, Inrush, and Smart Diode with Disable

THERMAL IMAGING CM174		
IR resolution	80 × 60 (4,800 pixels)	
Object temperature range	-25°C to 150°C (-13°F to 302°F)	
Field of view	50° × 38.6°	
Temperature sensitivity	150 mK	
Focus	Fixed	
MEASUREMENTS RANGE BASIC ACCURACY		
AC / DC Volts	1000 V	±1.0%
VFD AC Volts	1000 V	±1.0%
AC / DC LoZ V	1000 V	±1.0%
AC / DC Amps	600.0 A	±2.0%
VFD AC Amps	600.0 A	±2.0%
AC inrush	600.0 A	±3.0%
Resistance	6.000 kΩ	±1.0%
Capacitance	1000 μF	±1.0%
Diode test	1.5V	±1.5%



fliir.com/test



## FLIR CM82/CM83/CM85 Industrial True RMS Power Clamps

FLIR offers an excellent choice of industrial-grade Power Clamp Meters engineered with advanced power analysis and variable frequency drive filtering functions required by electrical troubleshooters.

### Key Features:

- VFD Mode provides superior accuracy for working on VFD-controlled equipment
- Advanced power efficiency and harmonics measurements for system level performance analysis
- Inrush Mode captures fast AC current spikes during appliance start-up
- Phase Rotation testing ensures the motor and power source are aligned
- True RMS DMM functionality features reliable performance and expansive ranges
- Powerful LED lamps not only assist with clamping but are bright enough to serve as a primary work light
- True RMS voltage and current, power factor, bright white LED backlit display, analog bar graph, integrated non-contact voltage detector, min/max/average, auto power off, data hold, peak hold, relative, DCA zero, and battery status

### CM82

- 600 A True RMS AC/DC current measurements

### CM83 and CM85

- True RMS AC/DC current measurements (CM83: 600 A) (CM85: 1000 A)
- Bluetooth connection to FLIR Tools® Mobile for remote viewing and sharing
- Embed clamp meter readings via METERLiNK® in radiometric images captured with compatible FLIR thermal cameras



SPECIFICATIONS	CM82	CM83	CM85	BASIC ACCURACY
AC/DC current	600 A	600 A	1000 A	±2.0%
AC/DC voltage	1000 V	1000 V	1000 V	±1.0% / 0.7%
AC VFD voltage	1000 V	1000 V	1000 V	±1.0%
Harmonics	1st to 25th order	1st to 25th order	1st to 25th order	±5.0%
Total harmonics distortion	0.0 to 99.9%	0.0 to 99.9%	0.0 to 99.9%	±3.0%
Inrush current	600 ACA (Integration time 100 ms)	600 ACA (Integration time 100 ms)	(Integration time 100 ms)	±3.0%
Active power	10 kW to 600 kW (10 V, 5 A min)	10 kW to 600 kW (10 V, 5 A min)	10 kW to 1000 kW (10 V, 5 A min)	±3.0%
Diode test	0.4 to 0.8 V	0.4 to 0.8 V	0.4 to 0.8 V	±0.1 V
Capacitance	3.999 mF	3.999 mF	3.999 mF	±1.9%
Resistance	99.99 kΩ	99.99 kΩ	99.99 kΩ	±1.0%
Continuity threshold	30 Ω	30 Ω	30 Ω	±1.0%
Frequency	20.00 Hz to 9.999 kHz	20.00 Hz to 9.999 kHz	20.00 Hz to 9.999 kHz	±0.5%
Bluetooth range max	—	32 ft (10 m)	32 ft (10 m)	—
Jaw opening	37 mm (1.45 in, 1000 MCM)	37 mm (1.45 in, 1000 MCM)	45 mm (1.77 in)	—
Category rating	CAT IV-600 V, CAT III-1000 V			
Battery type	6 x AAA			

\* When registered within 60 days of purchase.

## FLIR CM78 1000A Clamp Meter with IR Thermometer

The FLIR CM78 is a True RMS industrial clamp meter for the electrician who works on high-powered equipment and temperature systems and needs a safe, capable combination tool. An integrated IR thermometer provides fast non-contact measurements on panels, conduits, and motors.

### Key Features:

- Integrated IR thermometer provides fast non-contact measurements on panels, conduits, and motors
- Powerful worklights not only assist with clamping but are bright enough to serve as a primary worklight
- FLIR Tools Mobile connects the FLIR CM78 to your compatible smartphones and tablets via Bluetooth
- METERLiNK® technology wirelessly integrates electrical readings on your infrared image with METERLiNK-enabled FLIR thermal cameras
- Features: Voltage and current, min/max/average, auto power off, data hold, relative, peak hold, battery status indicator, bright white LED backlight

SPECIFICATIONS	CM78	BASIC ACCURACY
AC/DC current	1000 A	±2.5%
AC/DC voltage	1000 V	±1.5%
Resistance	40 MΩ	±1.5%
Capacitance	4 mF	±3.0%
Frequency	4000 Hz	±1.5%
Temperature (IR)	-20 to 518°F, -20 to 270°C	±2.0%
IR distance to target ratio	8 inches away : 1 inch spot size	
Type K temperature (optional probe)	-4 to 1400°F, -20 to 760°C	±3.0%



## FLIR CM72/CM74 Commercial 600A Clamp Meters

The FLIR CM72 600A AC Clamp Meter and the CM74 600A AC/DC Clamp Meter give you better access to wiring in hard-to-reach places. With advanced electrical features including Auto Range, True RMS, Inrush (CM74 only), and VFD Mode (CM74 only), the clamp meters have all the measurement functions you need to stay competitive and ensure accurate readings.

### Key Features:

- Portable and slim, with a narrow jaw for easy access to crowded panels
- High-powered LED worklights guide you to your target in low light
- Advanced measurement features including True RMS, LoZ, smart diode with Disable, and MIN/MAX/HOLD
- Rubberized, double-molded hand grips and bright, backlit LCD display
- Premium gold-tipped silicone test lead included
- Expandable to 3000 A AC with TA72 and TA74 Flex Clamp accessories (sold separately)

SPECIFICATIONS	CM72	CM74	BASIC ACCURACY
AC/DC voltage	600 V	1000 V	±1.0%
VFD AC voltage	—	1000 V	±1.0%
LoZ Mode AC/DC voltage	600 V	1000 V	±1.0%
DC current	—	600 A	±2.0%
AC current	600 A	600 A	±2.0%
VFD AC current	600 A	600 A	±2.0%
Inrush AC current	—	600 A	±3.0%
Frequency	60 kHz	60 kHz	±0.1%
Resistance	6000 Ω	6000 Ω	±1.0%
Continuity	600 Ω	600 Ω	±1.0%
Capacitance	1000 μF	1000 μF	±1.0%
Diode	1.5 V	1.5 V	±1.5%



## FLIR CM42/CM44/CM46 Professional 400A True RMS Clamp Meters with Accu-Tip™

FLIR CM4X clamp meters are affordable True RMS meters designed for commercial and residential electricians. The CM42 and CM44 feature AC clamp measurement, and the CM46 offers both AC/DC measurement to meet your unique needs. Each meter is equipped with a bright back-lit display for ease of use inside electrical panels. Made with an over-molded, easy-to-grip design, CM4X clamp meters are durable enough to withstand a two-meter drop, and the slim form factor is convenient to carry in your tool bag anywhere you go.

### Key Features:

- Accu-Tip technology delivers more accurate amperage readings on smaller-gauged wires, to a tenth of a digit
- MAX/MIN/AVG recording plus frequency and diode measurement
- Data hold, zero function, and low-pass filter (VFD) for voltage measurement
- Large, bright backlit display for easy-to-see readings
- Operates at -10°C to 50°C (14°F to 122°F) and accepts up to 30 mm max conductor
- Electrical field detection (NCV) determines if voltage is present, strength of the field



SPECIFICATIONS	CM42	CM44	CM46	BASIC ACCURACY
AC / DC voltage	600 V	600 V	600 V	±1.0%
AC + DC voltage (digital low-pass filter/VFD)	—	—	600 V	±1.2%
Clamp-On AC current (50-100 Hz)	400 A	400 A	400 A	±1.8%
(100-400 Hz)	—	—	—	±2.0%
Clamp-On DC current	—	—	400 A	±2.0%
Accu-Tip Clamp-On DC current	—	—	60 A	±2.0%
Frequency	50 to 400 Hz	50 to 400 Hz	50 to 400 Hz	±1.0%
Resistance	60 kΩ	60 kΩ	60 kΩ	±1.0%
Capacitance	—	2500 μF	2500 μF	±2.0%
Diode	2.0 V	2.0 V	2.0 V	±1.5%
Temperature	—	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	±1.0%

## FLIR CM55/CM57 Flexible Clamp Meters

FLIR CM55 and CM57 flexible clamp meters are ergonomic tools designed to simplify your workday. The narrow, flexible coil clamp allows you to measure currents in tight or awkward spots. The clamps are Bluetooth-enabled for direct connection with the FLIR Tools® app on iOS and Android devices, so you can transfer data, then analyze and share it — right from the job-site.

### Key Features:

- Measures current up to 3,000 Amps for multiple conductor measurements
- Convenient 10 in. or 18 in. (25.4 cm or 45.7 cm) flexible clamp
- Inrush current for equipment start-up spikes
- Bluetooth to mobile devices for remote viewing
- Data recording for trend analysis transferable via Bluetooth
- Bright LED worklights for easy inspection and navigation

SPECIFICATIONS	CM55	CM57
Maximum AC current	3000 A AC	3000 A AC
AC response	True RMS	True RMS
AC current ranges & resolution	30.00 A, 300.0 A, 3000 A	30.00 A, 300.0 A, 3000 A
Basic AC current accuracy	±3.0% + 5 digits	±3.0% + 5 digits
Maximum resolution	0.01 A	0.01 A
AC Current bandwidth	45 Hz – 500 Hz (sine wave)	45 Hz – 500 Hz (sine wave)
Inrush current	Min 0.5 A, 100 mS	Min 0.5 A, 100 mS
Data record mode	20,000 points, 1 min. sample rate	20,000 points, 1 min. sample rate
Detailed accuracy	30.00 A ±(3.0% + 5 digits) 300.0 A ±(3.0% + 5 digits) 3000 A ±(3.0% + 5 digits)	30.00 A ±(3.0% + 5 digits) 300.0 A ±(3.0% + 5 digits) 3000 A ±(3.0% + 5 digits)
Positional error (Distance from optimum)	15 mm (0.6 in) 2.0% 25 mm (1.0 in) 2.5% 35 mm (1.4 in) 3.0%	35 mm (1.4 in) 1.0% 50 mm (2.0 in) 1.5% 60 mm (2.4 in) 2.0%



Bluetooth



flir.com/test

## FLIR TA72/TA74 Flexible Clamp Adaptors

Designed to add capabilities and simplify challenges, the FLIR TA72 and TA74 Universal Flex Current Probes let you easily take measurements in tight or awkward spots — a difficult task with a traditional hard jaw clamp meter. The connection is a standard banana plug and the output is a voltage signal, so it's compatible with most DMMs and clamp meters, regardless of brand.

### Key Features:

- Adds 3000 A AC current measurements to existing meters
- Convenient 10 in. or 18 in. (25.4 cm or 45.7 cm) flexible clamp with locking mechanism
- AC voltage probe output for universal compatibility
- Banana plug connections fit most meters
- Switchable AC current range: 30 A, 300 A, 3000 A
- Bright LED worklight for easy inspection

SPECIFICATIONS	TA72/TA74
Maximum AC current	3000 A AC
AC current ranges & resolution	30.00 A, 300.0 A, 3000 A
Basic AC current accuracy (full scale)	±3.0% + 5 digits
Measurement rate	1.5 samples per second, nominal
AC current bandwidth	45 Hz to 500 Hz (sine wave)
Detailed accuracy	30.00 A ±(3.0% + 5 digits) 300.0 A ±(3.0% + 5 digits) 3000 A ±(3.0% + 5 digits)
Positional error (distance from optimum)	35 mm (1.4 in) 1.0% 50 mm (2.0 in) 1.5% 60 mm (2.4 in) 2.0%



## FLIR Test Accessories



TA12 General Purpose Accessory Case



TA80 CAT IV Silicone Test Probes



TA50 Magnetic Hanging Strap for DM9x Series



TA14 Belt Holster for TG165/TG167



TA60 Thermocouple Probe with Adapter



TA03-KIT, AAA Universal Rechargeable Battery



TA04-KIT, Lithium-Polymer Rechargeable Battery for DM28x, CM27x

## FLIR DM285 Industrial Thermal Imaging Multimeter with Datalogging, Wireless Connectivity and IGM™

The FLIR DM285 is an industrial, True RMS digital multimeter with Infrared Guided Measurement (IGM) to guide you directly to hot spots and temperature anomalies. The built-in 160 × 120 thermal imager will help you pinpoint issues faster, so you can get to repairs safely and efficiently. The DM285 features on-board data storage and Bluetooth® connection to the FLIR Tools® Mobile app, for data sharing and reporting.

### Key Features:

- 19,200 pixel thermal camera visually guides you to an electrical problem
- Includes high-quality test probes and a Type-K thermocouple
- Performs 18 measurement functions including LoZ and non-contact voltage (NCV) detection

- Saves electrical parameter data and thermal images with onboard data storage
- Drop-tested and IP rated for greater durability
- Fast and easy battery swaps with the 'no tool' battery compartment



## FLIR DM284 Imaging Multimeter with IGM™

The FLIR DM284 with IGM is a professional, all-in-one True RMS digital multimeter, featuring a built-in thermal imager. Speed up troubleshooting with IGM, for immediate, visual indication of hot spots that need further investigation. IGM lets you work from a safer distance and more efficiently without direct contact. Once you're guided to the right spot, the DM284 can help verify findings with advanced contact measurement features.

### Key Features:

- See exactly where to measure with the 160 × 20 resolution thermal imaging
- 18-function DMM including VFD mode, True RMS, LoZ, and NCV
- View simultaneous thermal and thermocouple measurements

- Built-in worklights and laser pointer plus thermocouple input
- Simple user interface with multiple thermal image color palettes
- Drop-tested and IP rated for greater durability



### Specifications DM284 and DM285

THERMAL IMAGING		
IR Resolution	160 × 120 (19,200 pixels)	
Temperature sensitivity	≤150 mK	
Emissivity	4 presets with custom adjustment	
Temperature accuracy	3°C or 3.5%	
Object temperature range	-10°C to 150°C (14°F to 302°F)	
FOV (w x h)	46° × 25° (DM284), 50° × 38° (DM285)	
Laser pointer	Yes	
Focus	Fixed	
MEASUREMENTS		
RANGE		ACCURACY
AC / DC Volts	1000 V	±1.0% / 0.09%
AC / DC mVolt	600.0 mV	±1.0% / 0.5%
VFD AC Volts	1000 V	±1.0%
AC / DC LoZ V	1000 V	±1.5%
AC / DC Amps	10.00 A	±1.5%
AC / DC mAmps	400.0 mA	±1.5%
AC / DC μAmps	4,000 μA	±1.0%
Resistance	6,000 MΩ 50.00 MΩ	±0.9% ±3.0%
Continuity	Yes	Yes
Capacitance	10.00 mF	±1.9%
Diode	Yes	Yes
Min/Max/Avg	Yes	Yes
Flex clamp range	3000 A AC (Optional TA72/74)	±3.0% + 5 digits
Frequency range	99.99 kHz	±0.1%
Type-K thermocouple range	-40°C to 400°C / (-40°F to 752°F)	±1.0% + 3°C (DMM) / ±1.0% + 5°C (IGM)



Also available as a kit (DM284-FLEX-KIT / DM285-FLEX-KIT) that includes 3000 A flex clamp, carrying case and rechargeable battery

## FLIR DM92/DM93 True RMS Industrial Multimeters

The FLIR DM92 and DM93 digital multimeters offer variable frequency drive filtering to help you accurately analyze non-traditional sine waves and noisy signals. The DM93 also offers Bluetooth connectivity, so you can upload and share data through the FLIR Tools® mobile app. No matter the electrical challenge, the DM92/DM93 have the features and flexibility to make the job simple.

FEATURES BY METER	DM92	DM93
Connectivity	—	Bluetooth®, max. range 10 m (32 ft)
Data recording	—	20,000 Pts (125 days max)
MEASUREMENTS - BOTH MODELS	RANGE	BASIC ACCURACY
DC voltage	1000 V	±0.05%
AC voltage	1000 V	±0.5%
VFD voltage	1000 V	±0.5%
DC current	10.00 A	±0.2%
AC current	10.00 A	±1.0%
Resistance	40.00 MΩ	±0.2%
Continuity threshold	30.00 Ω	±0.2%
Frequency	100.0 kHz	±5 digits
Capacitance	40.00 mF	±0.9%
Diode	2,000 V	±1.5%
Temperature range	-200°C to 1200°C (-328°F to 2192°F)	±1.0%

### Key Features:

- Powerful LED worklight for performing tests in dim lighting
- Drop-tested, durable construction with an IP54 rating
- Multiple measurements including True RMS voltage and current, LoZ, MIN/MAX/AVG
- Manually stores and recalls up to 99 readings
- Integrated Bluetooth technology connects DM93 to FLIR Tools app
- Connect DM93 to compatible FLIR thermal cameras via METERLiNK®



## FLIR DM90/DM91 TRMS Multimeter with Type-K Temperature

The FLIR DM90 and DM91 offer the comprehensive features professionals need to safely troubleshoot electrical, electronic, and HVAC/R systems. Equipped with LoZ, VFD Mode, and more, the DM90/DM91 multimeters give you trusted results for the most accurate diagnosis of electrical problems. The DM91 is also enhanced with Bluetooth® technology, so you can connect to mobile devices running FLIR Tools® or the FLIR InSite™ workflow management system.

FEATURES BY METER	DM90	DM91
Connectivity	—	Bluetooth®
Data logging and storage	—	1 file of 40k scalar measurements
Measuring rate	3 samples per second	3 samples per second
MEASUREMENTS - BOTH MODELS	RANGE	BASIC ACCURACY
AC / DC Volts	1000 V	±1.0% / 0.09%
AC / DC mVolt	600.0 mV	±1.0% / 0.5%
VFD AC Volts	1000 V	±1.0%
AC / DC LoZ V	1000 V	±2.0%
AC / DC Amps	10.00 A	±1.5% / 1.0%
AC / DC mAmps	400.0 mA	±1.5% / 1.0%
AC / DC μAmps	4,000 μA	±1.0%
Resistance	6,000 MΩ 50.00 MΩ	±0.9% ±3.0%
Capacitance	10.00 mF	±1.9%
Diode	1,500 V	±0.9%
Frequency counter	100.00 kHz	±0.1%
Continuity check	600.0 Ω 20.00 Ω 200.0 Ω	±0.9%
Type-K thermocouple temperature range	-40°C to 400°C -40°F to 752°F	±1.0% + 3°C ±1.0% + 5.4°F

### Key Features:

- Powerful LED worklight for performing tests in dim lighting
- Durable, drop-tested construction
- Multiple measurements including True RMS voltage and current, LoZ, MIN/MAX/AVG
- Stores and recalls up to 40k readings (DM91)
- Integrated Bluetooth technology for connection to FLIR Tools app, FLIR InSite (DM91)
- CAT IV-600V and CAT III-1000V safety rated



### FLIR DM166 Imaging TRMS Multimeter

The FLIR DM166 is a must-have tool for commercial electricians and automation, electronic, and HVAC technicians. Featuring Infrared Guided Measurement (IGM™), the DM166 visually guides you to the precise location of potential problems. It also offers essential measurement features such as True RMS AC/DC voltage and current, non-contact voltage detection, VFD mode, and more.

**Key Features:**

- 4,800 pixel thermal camera visually guides you to an electrical problem
- Includes high-quality test probes and a Type-K thermocouple
- Removes high-frequency interference with reading through VFD mode

- Safely check for live connections using non-contact temperature measurement
- Offers CAT III-600V, CAT IV-300V safety rating
- Drop-tested and IP rated for greater durability

MEASUREMENTS	RANGE	ACCURACY
AC / DC Volts	600 V	±0.7% / 0.5%
AC / DC mVolt	600.0 mV	±1.0% / 0.3%
VFD AC voltage	600 V	±1.0%
AC / DC Amps	10.00 A	±1.0% / 0.7%
AC / DC mAmps	600.0 mA	±1.0% / 0.7%
AC / DC μAmps	6,000 μA	±1.5% / 1.0%
Resistance	6,000 MΩ 60.00 MΩ	±0.9% ±1.5%
Continuity	Yes	
Capacitance	2,000 mF 10.00 mF	±2.0% ±5.0%
Diode	Yes	Yes
Min/Max/Avg	Yes	Yes
Flex clamp range	3000 A AC (optional TA72/74)	±3.0% + 5 digits
Frequency range	99.99 kHz	±0.1%
Type-K thermocouple range	-40°C to 400°C (-40°F to 752°F)	±1.0% + 3°C (DMM) ±1.0% + 5°C (IGM)



THERMAL IMAGING	
IR Resolution	80 x 60 pixels (4,800 pixels)
Temperature Sensitivity	≤150 mK
Emissivity	4 presets with custom adjustment
Temperature Accuracy	3°C or 3%
Object temperature Range	-10°C to 150°C (14°F to 302°F)
Field of View	38° x 50°
Laser Pointer	Yes
Focus	Fixed

### FLIR IM75 Insulation & DMM Combo with METERLiNK®

The FLIR IM75 is an all-in-one multi-function digital multimeter and insulation tester for installation, troubleshooting, and maintenance professionals. It features a handheld insulation tester and multiple resistance ranges for insulation test levels, as well as METERLiNK compatibility and Bluetooth connectivity to transmit and share data.

**Key Features:**

- Advanced insulation modes
- True RMS measurements with 1000 V range
- Multiple resistance insulation test level ranges
- LED display with Compare Mode for fast pass/fail determination

- Communicates with METERLiNK-enabled FLIR thermal imaging cameras, FLIR Tools® mobile app
- Durable double-molded construction (IP54, 2 m drop test)

MEASUREMENTS	MAX RANGE	BASIC ACCURACY
Insulation resistance	4 M to 20 GΩ	±1.5%
Insulation test voltages	50, 100, 250, 500 and 1000 V	±3.0%
AC / DC voltage	1000 V	±0.1% / ±1.5%
VFD AC voltage	1000 V	±1.5%
Earth bond resistance	40.00 Ω to 40.00 KΩ	±1.5%
Capacitance	10.00 mF	±1.2%
Frequency (ACV)	40.00 kHz	±5 digits
Diode test	2,000 V	±1.5%
Continuity	400.0 Ω	±0.5%



### FLIR DM62/DM66 True RMS Digital Multimeters

The FLIR DM62 and DM66 digital multimeters combine rich feature sets, precise measurement, and quality construction into tools of exceptional value. The meters are easy to use and built to last — whether you want the DM62 for DIY projects or need the pro-level measurement features of the DM66. Whichever multimeter you choose, you'll get the job done fast and efficiently.

FEATURES BY METER	DM62	DM66
Capacitance	—	200.0 nF (±1.5%) 10.00 mF (±4.5%)
AC / DC LoZ V	—	600.0 V (±2.0%)
Frequency	—	50.00 kHz (±0.1%)

MEASUREMENTS - BOTH MODELS	RANGE	BASIC ACCURACY
AC / DC Volts	600.0 V	±1.0% / 0.4%
AC / DC mVolt	600.0 mV	±1.0% / 0.4%
VFD AC Volts	600.0 V	±1.0%
AC / DC Amps	10.00 A	±1.5% / 1.0%
AC / DC mAmps	600.0 mA	±1.0% / 0.7%
AC / DC μAmps	6,000 μA	±1.5% / 1.0%
Resistance	6,000 MΩ	±0.9%
Diode	3,000 V	±0.9%

**Key Features:**

- Flashing backlight and audible indicators
- Broad DMM test functions including VFD mode, MIN-MAX-AVG, and relative mode
- High and low voltage measurement capabilities
- Compact and ergonomic design with easy-to-access buttons
- Durable and drop-tested, with CAT IV-300V and CAT III-600V safety ratings



### FLIR DM64 HVAC TRMS Digital Multimeter

The FLIR DM64 is an affordable True RMS digital multimeter with temperature (Type-K thermocouple) and Microamp measurement to test flame sensors. This coupled with a rich feature set for both high- and low-voltage applications makes it the ideal tool for HVAC professionals.

**Key Features:**

- Flashing backlight and audible indicators
- Test functions include VFD mode, LoZ, capacity, resistance, and more
- High- and low-voltage measurement capabilities

- Includes Type-K thermocouple to measure temperatures up to 400°C (752°F)
- Test flame sensors with microamps feature
- Durable, drop-tested design with no-tool battery compartment

MEASUREMENTS	RANGE	BASIC ACCURACY
AC / DC Volts	600.0 V	±1.0% / 0.4%
AC / DC mVolt	600.0 mV	±1.0% / 0.4%
VFD AC Volts	600.0 V	±1.0%
AC / DC LoZ V	600.0 V	±2.0%
AC / DC Amps	10.00 A	±1.5% / 1.0%
AC / DC mAmps	600.0 mA	±1.0% / 0.7%
AC / DC μAmps	6,000 μA	±1.5% / 1.0%
Resistance	6,000 MΩ	±0.9%
Capacitance	2000 μF	±1.5%
Frequency	5,000 kHz	±0.1%
Diode	3,000 V	±0.9%
Type-K thermocouple temperature range	-40°C to 400°C -40°F to 752.0°F	±1.0% + 1°C ±1.0% + 2°F



## FLIR VP52 Non-Contact Voltage (NCV) Detector + Flashlight

The FLIR VP52 is a CAT IV-rated, non-contact voltage detector designed to reliably detect voltages on the latest tamper-proof outlets and electrical systems. Toolbox-tough, with a rubber-reinforced case and buttons, the VP52 has vibration and red LED alarms to help alert users to the presence of voltage, even in noisy areas. Plus, versatile high/low-sensitivity modes help detect voltage in industrial equipment and low-voltage installations.

### Key Features:

- 3 m drop-tested and CAT IV-1000V rated
- Vibration and multi-color flashing LED alarms for voltage indication
- Long run-time with power-saving Low Battery indication and Auto Power-off
- Bright LED flashlight on the back plus light on the tip for detection
- Includes two AAA batteries

SPECIFICATIONS	VP52
Voltage ranges	90 to 1000 V 24 to 1000 V
Category rating	CAT IV-1000 V
Frequency range	45 to 65 Hz
Built-in flashlight	LED (60 Lumens)
Vibrating indication	Yes
On/Off switch	Yes
Warranty	Limited Lifetime*



Dual Voltage Range



## FLIR VT8 Voltage, Continuity, and Current Tester

The FLIR VT8 is a high-quality voltage, continuity, and current tester, ideal for electricians and service technicians who troubleshoot and verify electrical installations or systems within commercial and light industrial facilities. The FLIR VT8's optimized and open-jaw design allows it to fit into tight spaces and reliably measure large-diameter cables. Extensive measurement features make the FLIR VT8 a versatile tool – just one meter can get the job done. Carry the compact tester in your pocket to be ready at any moment for easy troubleshooting.

### Key Features:

- Work more safely with the CAT IV safety ratings
- Safely store test leads when not in use with the built-in test lead holder
- Measure AC/DC voltage and current, continuity, resistance, and capacitance
- Work efficiently in dimly lit areas using the bright LED worklight and backlit display
- Detect live AC voltages with the built-in non-contact voltage (NCV) detector
- Improve accuracy of readings with True RMS measurements
- Take measurements in tight spaces with the optimized jaw design, and measure large-diameter cables with the wide jaw opening
- Operate the meter with one hand thanks to the compact, ergonomic design
- View information easily at any distance on the large multi-function LCD display

SPECIFICATIONS	VT8-600	VT8-1000
AC/DC Voltage Range	600 V	1000 V
AC/DC Current Range	100 A	200 A
AC/DC Current Resolution (100-400 Hz)		0.1 A
AC (50 to 60 Hz) / DC Current Accuracy		±2.5%
AC/DC Voltage Resolution		0.1 V
AC (45 to 66 Hz) / DC Voltage Accuracy		± 1.5%, ±1.0%
Resistance		60.00 MΩ ± (1.5%)
Continuity Check Threshold		10 Ω to 100 Ω
Capacitance		600 μF ±4.0%, 6000 μF ±10.0%
Non-Contact Voltage Detector (NCV)		≥100 Vrms; ≤10 mm distance (LED/buzzer alerts)
Safety Category Rating	CAT IV-300 V CAT III-600 V	CAT IV-600 V CAT III-1000 V
Additional Measurement Functions	DCA zero, relative mode (AC/DC voltage, AC current, and capacitance), data hold	

NEW



flir.com/test

## FLIR VS70 Videoscope

The rugged, waterproof FLIR VS70 videoscope is the perfect solution for bringing hidden problems into view. It features intuitive handset controls for maneuvering the narrow camera probe into tight spaces, and a vivid 5.7 in. color LCD display so you can easily identify problems. Record videos and grab stills so you can document your findings.



### Key Features:

- Intuitive handset controls for selecting angle of view
- Drop-tested and IP rated for splash and water resistance
- Long battery life plus car-charging option for all-day use
- Includes headset for recording voice annotations
- Multiple articulation options including two-way and four-way wireless controls
- Expansion cameras and add-on accessories available

SPECIFICATIONS	VS70
Display resolution	640 x 480 pixels
Display size	135 mm (5.7 in)
Battery life (continuous)	6 to 8 hours (integrated)
Frame rate	30 fps (NTSC & PAL)
Video/image transfer	SD card or USB
Camera diameter range*	3.9 mm to 28 mm
Camera focal length options*	Long view or short view macro
Camera length range*	0.3 m to 30 m (0.98 ft to 98.4 ft)
Certifications	CE, FCC
Warranty	3 years



### Best-Selling Videoscope Kits:

- **VS70-1** General purpose (wired) with 8 mm long-focus camera
- **VS70-3** 2-way articulation (wired) with 6 mm long-focus camera
- **VS70-3W** 2-way articulation (wireless) with 6 mm long-focus camera
- **VS70-KIT** Bundle with wired 2-way articulation 6 mm long-focus camera and 8 mm long focus camera
- **VS70-KIT-W** Bundle with wireless 2-way articulation 6 mm long-focus camera and 8 mm long-focus camera

More complete kits and a-la-carte options available. Contact FLIR to find the right solution for your application.

flir.com/test

## FLIR MR176/MR160 Imaging Moisture Meters with IGM™

Featuring Infrared Guided Measurement (IGM™) powered by a FLIR Lepton® thermal imaging sensor, MR176 and MR160 help you quickly see temperature patterns that point to potential hidden moisture, so you know where to place the meter probe to capture accurate readings.



### Common Features MR176 and MR160

- 80 × 60 (4,800 pixels) Lepton thermal imager guides you to potential moisture areas
- Document readings and images to share via USB cable
- Integrated pinless moisture measurements for fast detection, and external pin probe included with expandable probe options
- Equipped with a laser and crosshair to easily reference the location of the potential moisture issue seen in the thermal image
- Rugged, portable design with intuitive menu system

### MR176 only

- Customize thermal images: select which measurements are integrated (moisture, temperature, relative humidity, dew point, vapor pressure, mixing ratio)
- A lock image setting prevents extreme hot and cold temperatures from interfering with images while scanning for issues
- Field-replaceable temperature/relative humidity sensor
- Progressive Environmental Stability informs you when the relative humidity readings have reached a steady state

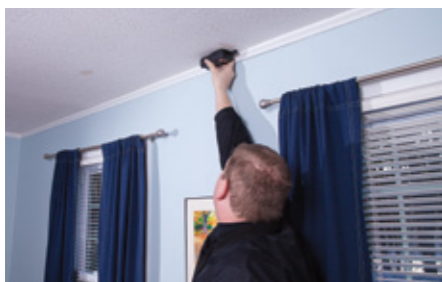


## FLIR MR77 Moisture Meter

Rugged, feature-packed moisture meter incorporating a pinless sensor and a wired pin probe to capture moisture readings up to 1.9 cm (0.75 in) below the surface of various wood types and building materials. The MR77 also incorporates a laser-spot IR thermometer, a field-replaceable temperature/humidity sensor, and High/Low moisture and humidity alarms.

### Key Features:

- Field-replaceable temperature and relative humidity sensor
- 2-meter drop-tested, rubber overmolded, pocket-sized design
- Industry-leading limited lifetime warranty with registration
- Features pinless moisture sensor, temperature and RH sensor, and IR thermometer for fast non-contact measurements
- Remote pin-type probe for contact moisture readings
- Bluetooth METERLiNK® technology wirelessly integrates moisture readings on images from compatible FLIR thermal cameras



flir.com/test

## FLIR MR59 Ball Probe Moisture Meter with Bluetooth®

The FLIR MR59 is a pinless meter with wireless connectivity, which offers the convenience to view live readings from a mobile device via the FLIR Tools® Mobile app. Thanks to the ball-shaped sensor, users can cover a large area in a short time without making a mark; measure into corners and around baseboards easily; and detect problems below the surface.

### Key Features:

- Run the meter over and around objects on the measuring surface with the ball-probe sensor
- Identify potential moisture problems up to 100 mm (4 in) below the surface
- Wirelessly connect the meter to FLIR Tools Mobile to view readings on a mobile device
- Detect moisture in a wide range of common building materials
- Receive stable, repeatable readings
- Clear, easy-to-read display
- Work in dim conditions with the backlit display and bright worklight
- Use with the MR04 extension pole to reduce the need for a ladder, or to optimize ergonomics for 'high' and 'low' measuring targets (accessory not included)

NEW



## FLIR MR12 Ball Probe Moisture Sensor

The FLIR MR12 is a ball-shaped moisture sensor accessory designed to extend the measurement range of the FLIR MR176, MR160, and MR60 moisture meters. Cover a large area in a short time without making a mark, and measure into corners and around baseboards easily. When there's no clear presence of moisture, the MR12's ball probe can help you detect moisture below the surface, and determine the moisture migration path from the source.

### Key Features:

- Supports wide range of common building materials
- Senses moisture up to 100 mm (4.0 in), depending upon material tested
- Compatible with FLIR MR60, MR160, and MR176 moisture meters
- Optional MR04 extension pole helps optimize ergonomics for high and low targets
- Auto Power Off after 5 minutes
- Functions up to 40 hours on one battery (without worklight)
- Handgrip designed to prevent interference with measurement
- Drop-tested to 2 meters

NEW



## FLIR MR60 Moisture Meter Pro

The FLIR MR60 is an advanced pin and pinless moisture meter offering the flexibility of destructive and non-destructive measurements. Select one of the 11 material groups for pin moisture or set a reference point for pinless moisture scanning. Then conveniently save screenshots of your measurements as a CSV file with the date, time, and settings.

### Key Features:

- Save up to 10,000 screenshots to transfer and view on a PC
- Programmable high-moisture alarm with audible and color/visual alerts
- Bright, easy-to-read display
- Includes FLIR Tools® professional reporting software
- Rugged design that can withstand a 3-meter drop



flir.com/test

## FLIR MR55 Pin Moisture Meter with Bluetooth®

The FLIR MR55 is a pin-based meter with wireless connectivity, which offers the convenience to view readings from a mobile device via the FLIR Tools® Mobile app. Thanks to a built-in library of 11 material groups, users can tune the meter to the appropriate test material to improve measurement accuracy. This library is easy to access on the FLIR.com website by scanning a QR code on the back of the meter with a mobile device.

### Key Features:

- Automatically compensates for ambient temperature
- Can be tuned to the appropriate test material via built-in library of 11 material groups
- Easy-to-read LCD display with data hold feature
- Avoid prolonged work delays thanks to easily-replaceable electrode pins

- Work in dim lighting with the backlit display and bright worklight
- Rugged design, drop-tested to 2 meters
- Lanyard cap retention



## FLIR MR40 Moisture Pen + Flashlight

The FLIR MR40 is a rugged, 2-pin single scale moisture meter with an integrated flashlight for wood and common building materials. It provides builders, remodelers, residential roofing and flooring contractors, and pest control professionals a quick and reliable means to check for and quantify moisture content. With a pen-like form factor the MR40 can be carried in your pocket, ready to work when you are.



Pocket-sized with trim design for getting into corners



### Key Features:

- Small enough to carry in your pocket
- Sleek design for getting into corners
- 3-meter drop-tested and IP54 splash-proof rated
- Clear LCD display
- Replaceable pins, 2<sup>nd</sup> set included
- Integrated calibration/pin check in the cap

- Audible indication of measured range (5-12%, 13-60%, +60%)
- Measurement 'Hold' function
- Simple on-off button with 'Auto Power Off'



fliir.com/test

## FLIR MR 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 obstructions such as sub-floors and hardwood flooring. Designed for everyday job site use, we focused on durability of the system (probe, pins, and cord), ease of use, and versatility.



**MR01 Replaceable Temperature/Relative Humidity Sensor**  
Compatible with the MR77 or MR176, the MR01 takes accurate temperature and humidity measurements. A metallic screw secures the probe in place.



**MR06 Wall Cavity Probe**  
Penetrate into wall cavities and the inside face of exterior walls to measure insulation moisture levels.



**MR01-EXT Temperature/Relative Humidity Sensor and Extension Assembly**  
Use to extend the reach of the MR77 or MR176, or for acclimation in dryer/dehumidifier exhaust vents.



**MR07 Hammer Probe**  
Take measurements in subfloor through carpet, hardwood flooring, and hard materials that are difficult to penetrate with a standard pin probe.



**MR11 Handheld Temperature/Humidity Sensor**  
Pre-deploy in dehumidifier exhaust vents for instantaneous readings, or use in locations where access is restricted.



**MR08 Hammer and Wall Probe**  
Comfortably hammer probe into vertical, angled, or inverted surfaces, and get down below carpet pads and subfloor.



**MR04 Extension Pole**  
Probe large and out-of-reach areas easily with this telescoping pole that extends up to 132 cm (52 in.).



**MR09 Baseboard Probe**  
Probe behind baseboards, wall trim, crown molding, and other inaccessible areas without removal.



**MR05 Impact Probe**  
Easily test for moisture in challenging spots — uneven surfaces, corners, hard woods, high-density materials, and in areas without a dry reference.



**MR10 Protective Case**  
Safeguard your FLIR Test and Measurement instruments with this durable EVA protective case.



**MR12 Ball Probe Moisture Sensor Accessory**  
Take non-invasive readings up to 100 mm (4 in.) below most surfaces.

## FLIR MR Kits

Moisture Meter kits provide a complete solution for fast and accurate troubleshooting.



**MR160-KIT2 Building Inspection Kit**  
Featuring a FLIR MR160 IGM™ Moisture Meter, FLIR C2 Compact Thermal Camera, and a FLIR MR06 Wall Cavity Probe



**MR176-KIT5 Professional Imaging Moisture Kit**  
Featuring a FLIR MR176 IGM Moisture Meter with Replaceable Hygrometer, FLIR MR08 Hammer and Wall Cavity Probe, and FLIR MR01 Replaceable Temperature/Relative Humidity Sensor



**MR160-KIT5 Professional Imaging Moisture Kit**  
Featuring a FLIR MR160 IGM Moisture Meter and FLIR MR08 Hammer and Wall Cavity Probe



**MR176-KIT6 Professional Remediation Kit**  
Featuring a FLIR MR176 IGM Moisture Meter with Replaceable Hygrometer, FLIR E6 Infrared Camera with MSX®, and FLIR MR08 Hammer and Wall Cavity Probe

fliir.com/test

### EX650 Series True RMS 600A Clamp Meters

Professional clamps featuring Low Impedance (LoZ) mode and choice of advanced model with Low Pass Filter (LPF) and Inrush functions

- 30 mm (1.18 in) jaw size accommodates conductors up to 350 MCM
- LoZ prevents false readings caused by ghost voltages
- $\mu$ A function for HVAC flame rod current measurements
- Built-in non-contact AC voltage (NCV) detector with LED indicator, 6000-count backlit display
- Min/Max captures highest and lowest readings
- Convenient LED worklight for viewing in dimly lit area
- CAT III-600V category rating
- Advanced functions (EX655): Low Pass Filter, Inrush, and DC Zero
- Includes test leads, three AAA batteries, Type-K temperature probe (EX655 only)

Specifications	EX650	EX655
AC current (max res.)	6 A, 60 A, 600 A (0.001 A)	60 A, 600 A (0.01 A)
DC current (max res.)	—	60 A, 600 A (0.01 A)
Basic accuracy	ACA: $\pm 2.5\%$ of rdg	ACA: $\pm 2.5\%$ of rdg; DCA: $\pm 2.5\%$ of rdg
AC/DC $\mu$ A current (max res.)	600 $\mu$ A (0.1 $\mu$ A)	600 $\mu$ A (0.1 $\mu$ A)
DC voltage (max res.)	1000 V (0.1 mV)	1000 V (0.1 mV)
AC voltage (max res.)	750 V (1 mV)	750 V (1 mV)
Basic accuracy	ACV: $\pm 1.2\%$ of rdg; DCV: $\pm 0.8\%$ of rdg	ACV: $\pm 1.2\%$ of rdg; DCV: $\pm 0.8\%$ of rdg
NCV detection	100 V to 1000 V	100 V to 1000 V
Resistance (max res.)	60 M $\Omega$ (0.1 $\Omega$ )	60 M $\Omega$ (0.1 $\Omega$ )
Capacitance (max res.)	60 mF (0.01 nF)	60 mF (0.01 nF)
Frequency (max res.)	—	10 Hz to 1 MHz (0.01 Hz)
Temperature (max res.)	—	-40°C to 1000°C (1°C) -40°F to 1832°F (1°F)
Continuity beeper	Yes	Yes
Diode test	Yes	Yes

### MA443/MA445 True RMS 400A Clamp Meters + NCV

True RMS meter with built-in non-contact voltage detector and choice of AC or AC/DC current model

- 30 mm (1.2 in) jaw size accommodates conductors up to 500 MCM
- 4000-count backlit LCD display
- Built-in flashlight illuminates work area
- CAT III-600V category rating
- Complete with test leads, three AAA batteries, general purpose Type-K temperature probe, and pouch

Specifications	MA443	MA445
AC current (max res.)	4.000 A, 40.00 A, 400.0 A (1 mA)	40.00 A, 400.0 A (10 mA)
DC current (max res.)	—	40.00 A, 400.0 A (10 mA)
Current accuracy	AC: $\pm 1.8\%$	AC: $\pm 2.5\%$ , DC: $\pm 2.0\%$
DC voltage (max res.)	400.0 mV, 4 V, 40 V, 400 V, 600 V (0.1 mV)	400.0 mV, 4 V, 40 V, 400 V, 600 V (0.1 mV)
AC voltage (max res.)	4 V, 40 V, 400 V, 600 V (0.1 mV)	4 V, 40 V, 400 V, 600 V (0.1 mV)
Basic accuracy	AC: $\pm 1.2\%$ , DC: $\pm 0.8\%$	AC: $\pm 1.2\%$ , DC: $\pm 0.8\%$
Resistance ( $\Omega$ ) (max res.)	400, 4 k, 40 k, 400 k, 4 M, 40 M (0.1 $\Omega$ )	400, 4 k, 40 k, 400 k, 4 M, 40 M (0.1 $\Omega$ )
Capacitance (max res.)	40 nF, 400 nF, 4 $\mu$ F, 40 $\mu$ F, 400 $\mu$ F, 4 mF, 40 mF (0.01 nF)	40 nF, 400 nF, 4 $\mu$ F, 40 $\mu$ F, 400 $\mu$ F, 4 mF, 40 mF (0.01 nF)
Frequency (max res.)	10 Hz to 1 MHz (0.01 Hz)	10 Hz to 1 MHz (0.01 Hz)
Temperature (max res.)	-40°C to 1000°C / -40°F to 1832°F (1°C / °F)	-40°C to 1000°C / -40°F to 1832°F (1°C / °F)



### EX350 Series True RMS Multimeters with LPF and LoZ

Professional meters loaded with advanced features, including LPF, LoZ, Resistance, Capacitance, Frequency, and Continuity

- LPF mode aids in accurate measurement of variable frequency drive signals
- LoZ prevents false readings caused by ghost voltages
- Built-in non-contact AC voltage (NCV) detector with LED indicator
- CAT III-600V rating
- Both models include test leads and two AA batteries
- EX355 includes general purpose Type-K bead wire temperature probe

Specifications	EX350	EX355
Display counts	4000	6000
Basic DCV accuracy	$\pm 0.5\%$	$\pm 0.5\%$
NCV detector	Yes	Yes
DC/AC voltage	0.01 mV to 600 V	0.01 mV to 600 V
DC/AC current	0.1 $\mu$ A to 10.00 A	0.1 $\mu$ A to 10.00 A
Resistance	0.1 $\Omega$ to 40.00 M $\Omega$	0.1 $\Omega$ to 60.00 M $\Omega$
Capacitance	1 pF to 60.00 mF	1 pF to 60.00 mF
Frequency	0.001 Hz to 10 MHz	0.001 Hz to 10 MHz
Temperature (Type-K)	—	-40°C to 1000°C (-40°F to 1832°F)
Duty cycle	0.1 to 99.9 %	0.1 to 99.9 %
Diode test	3.2 V	3.2 V
Continuity	Audible	Audible



EX350  
EX355 with Temperature

### EX360 Series CAT IV TRMS Multimeters + NCV + LoZ

Choose a CAT IV-600V multimeter designed for electrical, HVAC, or industrial applications with LoZ function for accurate voltage readings

- LoZ prevents false readings caused by ghost voltages
- Built-in NCV detector with LED indicator
- 1000V AC/DC volt range and resistance up to 40 M $\Omega$
- Peak Hold and Relative Mode
- Smart Data Hold freezes the displayed reading and automatically updates the reading and alerts user (audibly and visually) if the measurement changes  $\pm 50$  counts
- Large white LED backlit display with 60-segment analog bar graph for viewing trends

Specifications	EX360	EX363	EX365
Basic accuracy (DCV)	0.5 %	0.5 %	0.5 %
NCV detector	Yes	Yes	Yes
DC/AC voltage	0.1 mV to 1000 V	0.1 mV to 1000 V	0.1 mV to 1000 V
DC/AC current	—	—	1 mA to 10 A
DC/AC $\mu$ A current	—	600 $\mu$ A	—
Resistance	0.1 $\Omega$ to 40 M $\Omega$	0.1 $\Omega$ to 40 M $\Omega$	0.1 $\Omega$ to 40 M $\Omega$
Capacitance	1 nF to 10 mF	1 nF to 10 mF	1 nF to 10 mF
Frequency	0.01 Hz to 100 kHz	0.01 Hz to 100 kHz	0.01 Hz to 100 kHz
Temperature (Type-K)	—	-40°C to 394°C (-40°F to 742°F)	—
Diode test/continuity	Yes	Yes	Yes



EX360 Electrical DMM  
EX363 HVAC DMM  
EX365 Industrial DMM



Includes test leads, 9V battery, holster with tilt stand and built-in magnet, and general-purpose bead wire temperature probe (Model EX363)



**MG325 CAT IV Insulation Tester + True RMS Multimeter**

Combines a 200 GΩ/1000 V high-range insulation tester with a full-featured True RMS multimeter in a single, compact instrument. CAT IV safety rating ensures the highest level of protection

- Measure insulation test voltages to 1000 V and insulation resistance to 200 GΩ (autoranging)
- Polarization Index (PI) and Dielectric Absorption Ratio (DAR) measurements
- Programmable timer feature sets the duration of testing
- Large 2000-count dual display with backlight; low battery indicator
- Remote probe with built-in TEST button (included) allows for quick on-spot testing



**380260 Digital Megohmmeter**

Measure insulation resistance up to 2000 MΩ, with a choice of 250, 500, or 1000 VDC test voltages

- Low resistance, continuity, and AC/DC voltage measurement functions
- Lo Ω function for testing connections
- Lock Power On Function for hands-free operation
- Data hold to freeze displayed reading



**GRT300 4-Wire Earth Ground Resistance Tester**

Measure earth ground in four ranges from 2 to 2000 Ω. Two-, three-, and four-wire testing options

- Automatic I (current) and P (potential) spike check
- Test Hold function for easy operation
- Autoranging, automatic zero adjustment, data hold and auto power off
- Large dual-line LCD with overrange and low battery indication
- Includes test leads with alligator clips, 4 auxiliary earth bars, hard carrying case, 8 AA batteries



**382357 Clamp-on Ground Resistance Tester**

Enables non-contact measurements of ground conductors without the need for auxiliary ground spikes

- Simplifies ground resistance measurements on multiple point ground systems
- Electrical noise detection feature prevents inaccurate readings
- Autoranging ground resistance measurements from 0.025 to 1500 Ω, True RMS AC leakage current range of 1 mA and AC True RMS AC current range of 0.3 mA to 30.00A
- Note: AC Leakage current is different from AC current
- Programmable datalogging with 116 data points, user-set Hi/Lo alarm



**PRT200 Non-Contact Phase Sequence Tester**

Featuring a 45 to 65 Hz frequency range and the ability to test up to 1000 VAC with visible/audible indicators

- LEDs indicate phase orientation and whether each phase is live
- Audible alarm when correct phase is detected and when phase is reversed
- Adjustable LED brightness for use in any lighting
- Durable housing with back cover magnet for attachment to an AC distribution panel
- CAT IV-600 V safety rating



**480400/480403 Phase Sequence Testers**

Check phase sequence and status of 3-phase power sources over a 15 to 400 Hz frequency range

- Testing range rated for 40 to 600 V
- 480400 displays graphical phase orientation on the large LCD and does not require battery
- 480403 LEDs display motor rotation and phase status and also indicates rotation direction of the motor
- Double-molded durable housing
- Cat III-600 V safety rating
- Includes cable and 3 large color-coded alligator clips and case (480803 also comes with 9 V battery)



**RD300 Refrigerant Leakage Detector**

Ideal for detecting leakages from air conditioning units and cooling systems that use all standard refrigerants down to 0.25 oz/yr (7 g/yr)

- Detects all standard refrigerants using a heated diode sensor
- LED light at probe tip (with on/off switch for working in dimly lit areas)
- User-selectable high, medium, or low sensitivity levels, ranging from 0.25 oz (7 g) to 0.99 oz (28 g) per year
- Audible and visible alerts, with mute button
- Field-replaceable sensor (RD300-S) and LED light tip (RD300-L)



**RD200 Refrigerant Leak Detector**

Ideal for detecting leaks from air conditioning units and cooling systems, using all standard refrigerants down to 0.2 oz/yr (6 g/yr)

- User-selectable sensitivity level, with high level capable of detecting 0.2 oz (6 g) per year
- Multi-colored LED indicator for leak detection
- Audible and visible alerts, plus low battery indicator
- Convenient field replaceable sensor (RD200-S)



**AN100/AN200 CFM/CMM Thermo-Anemometers**

Simultaneous display of ambient temperature and air flow/air velocity

- Up to 8 easy-to-set area dimensions (m<sup>2</sup> or ft<sup>2</sup>) are stored in the meter's internal memory
- User selectable units for air velocity: ft/min, m/sec, km/h, MPH, and knots
- 20-point average function for air flow
- Extra-large LCD backlit display
- AN200 features built-in non-contact IR thermometer measuring remote surface temperatures up to 260°C (500°F) with an 8:1 distance-to-spot ratio and laser pointer



**HD780 Digital Manifold/Pressure Gauge**

Dual-input heavy-duty Pressure/Type-K temperature meter

- Dual differential inputs for pressure and temperature
- Displays 5 types of pressure units
- For use with R22 and R410A refrigerants
- Standard 1/4 NPT male flare fittings
- Large backlit LCD displays P1, P2, P1-P2, T1, T2, T1-T2, Ambient Temperature, plus Min/Max/Avg
- Dual Type-K inputs with Electronic Offset adjustment to compensate for thermocouple differences



**42545 High Temperature IR Thermometer**

50:1 Wide-range infrared thermometer with laser pointer

- Wide temperature range, from -50°C to 1000°C (-58°F to 1832°F)
- 50-to-1 distance-to-target ratio
- Built-in laser pointer for easy targeting
- Large backlit LCD display
- Adjustable emissivity
- High resolution of 0.1° up to 199.9°
- High and low alarm set points with audible and visual alerts



**IR270 IR Thermometer with Color Alert**

12:1 Fast-response IR thermometer offers programmable hi/low alarms with tri-color display alert

- Accurate temperature measurements from -20°C to 650°C (-4°F to 1202°F)
- Maximum resolution of 0.1°C/°F, basic accuracy of ±(1% of reading 1°C/2°F)
- Built-in laser pointer for easy targeting
- Programmable high/low alarms with beeper and tri-color LCD indicators
- Records and recalls up to 20 readings
- Adjustable emissivity
- MAX/MIN/AVG/DIF functions



### LT300 Light Meter

Digital and analog display of light in Foot-candles (Fc) or Lux

- Measure up to 40,000 Fc (400,000 Lux) helps ensure adequate illumination
- Max resolution to 0.01 Fc/Lux
- Large LCD display with analog bar graph for quick, reliable assessments
- Backlight for easy reading even at low light levels
- Relative mode indicates change in light levels
- Peak mode captures highest readings



### LT40/LT45 LED Light Meters

Monitor and optimize environmental light levels in buildings, schools, and offices

- Model LT40 measures white LED lights
- Model LT45 measures white, red, yellow, green, and blue LED lights
- Measure LED and standard lighting in Lux or Foot-Candle (Fc) units
- 4000-count display
- Min/Max average
- Cosine and color-corrected measurements
- Manually store/recall up to 99 readings (LT45)



### 407732-KIT Type-2 Sound Meter Kit

Kit includes a digital sound level meter with high and low ranges, a 94dB/114dB sound level calibrator to verify meter operation, and a protective case

- High accuracy of ±1.5 dB meeting Type 2 ANSI S1.4-1983, IEC 60651, EN60651
- Offers high and low measuring ranges, from 35 to 100 dB (low) and 65 to 130 dB (high)
- Data Hold and Max Hold functions
- Backlit LCD display makes it easy to view in dimly lit area
- Includes 407722 - 1 kHz sine wave at 94 dB/114 dB is generated to an accuracy of 4% (frequency) and ±0.5 dB



### SL400 Personal Noise Dosimeter/Datalogger with USB Interface

Perform noise accumulation surveys to determine total sound exposure over an 8-hour period for compliance with OSHA, MSHA, DOD, ACGIH, and ISO standards

- Datalogs up to 999,999 readings when used as a sound level meter
- Measures sound level (A and C weighting), min/max, time-averaged sound level (Leq), Z peak, and sound exposure level (SEL)
- Adjustable Criterion Level, Exchange Rate, and Threshold, plus user-defined measurement setup
- Connects via USB to Windows®-compliant software for control and analysis



### C0240 Indoor Air Quality, Carbon Dioxide (CO<sub>2</sub>)

Measure CO<sub>2</sub>, air temperature, humidity, and other environmental conditions in enclosed areas

- Dual display of CO<sub>2</sub> concentrations and Relative Humidity, Temperature, Dew Point, or Wet Bulb
- Maintenance-free non-dispersive infrared (NDIR) CO<sub>2</sub> sensor
- Alarm sounds when CO<sub>2</sub> concentrations exceed user set-point
- Automatic baseline calibration, data hold, auto power off, and low battery indicator
- Includes software and cable for real-time datalogging to a PC



### VPC300 Video Particle Counter with Built-in Camera

Measure particle sizes, air temperature, relative humidity, and more while also capturing videos and photos

- Measure up to 6 channels of particle sizes (down to 0.3 µm), and display Air Temperature, Humidity, Dew Point, or Wet Bulb
- Selectable sample time and count data, as well as programmable delay
- Controls include max/min, DIF, AVG record, date/time setup, auto power off
- Records 3 GP 320 × 240 videos and JPEG images to internal memory
- Stores up to 5000 records and 20 minutes of video



### Extech 510-Series Environmental Meters

Whether you're solving HVAC problems, checking outdoor UV conditions, or measuring energy from electromagnetic/electrical fields of electrical appliances and power lines, Extech helps expand your problem-solving capabilities, giving you quick and accurate results. Monitor heat indices and track temperature changes during hot, humid days to prevent heat stroke during outdoor activities, sporting events, or in an indoor workplace. Monitor noise levels and perform workplace audits and measure indoor and outdoor light levels. Extech's compact multifunction environmental meters combine all-in-one versatility with accurate diagnostics.

#### EN510 10-in-1 Environmental Meter

Measurement modes include: Air Velocity, Air Flow, Air Temperature, Type-K Temperature, Heat Index, Humidity, Wet Bulb, Dew Point, Windchill, and Light Level

Includes low friction ball bearing mini vane wheel, a precision photo diode with cosine and color correction filter, and a capacitive humidity sensor for high accuracy. General purpose bead wire probe is included for measuring temperatures up to 250°C (482°F), while the meter can measure temperatures up to 1300°C (2372°F) if used with Type-K probes.



#### AN510 CMM/CFM Anemometer + Type-K

4-in-1 Anemometer measures air velocity, air flow, air temperature, and Type-K temperature

Convenient 4-in-1 Anemometer is designed in rugged compact housing with built-in low friction ball bearing mini vane wheel for high accuracy in measuring Air Velocity/Flow. General purpose bead wire probe is included for measuring temperatures up to 250°C (482°F), while the meter can measure temperatures up to 1300°C (2372°F) if used with Type-K probes.



#### EMF510 EMF/ELF Meter

High-sensitivity EMF/ELF meter with built-in single-axis sensor

The Extech EMF510 measures energy from electromagnetic fields (EMF) and electrical signals and is sensitive to extremely low frequency levels (ELF). The built-in single-axis sensor is ideal for monitoring power lines, electrical appliances, fans and blowers, and electrical circuits in two ranges with milli-Gauss and micro-Tesla units.



#### RHT510 Hygro-Thermometer Psychrometer

Measures Relative Humidity and Temperature, and calculates Dew Point and Wet Bulb

Conveniently check the humidity and temperature in residential and professional settings to ensure comfort and safety. General purpose bead wire Type-K probe is included for measuring temperatures up to 250°C (482°F), while the meter can measure temperatures up to 1300°C (2372°F) if used with Type-K probes.



#### SL510 Sound Level Meter



High-accuracy sound level meter with A and C weighting, fast/slow response modes

Compact design with ±1 dB high accuracy and a large backlit display provides quick and reliable sound level testing. It meets Class 2 standards (IEC 61672-2013 and ANSI/ASA S1.4/Part 1). Measure A & C weighting from 35 to 130 dB with fast and slow response time selectivity.

#### LT510 Light Meter



Compact Foot-candle/Lux light meter with backlit LCD

Measures light intensity up to 20,000 Lux (1860 Fc range) with resolution to 1 Lux (0.1 Fc). Ideal for indoor lighting tests and for checking security and safety illumination in parking garages, nighttime ATM areas, stairwells, landings, and hallways.

#### UV510 UV Light Meter



UV light meter for measuring UVA light radiation from natural and artificial sources

Built-in UV sensor with cosine correction measures irradiance from UVA light sources up to 20.00 mW/cm<sup>2</sup>. The sensor wavelength range is 320 to 390 nm. It offers a backlit dual display for easy outdoor viewing, two selectable ranges, and zero function.

### RHT30/RHT35 USB Humidity/Temperature Dataloggers

Easy-to-use dataloggers store thousands of humidity and temperature readings with date/time stamp

- Built-in NTC thermistor and capacitive humidity sensor
- Barometric pressure MEMS sensor (RHT35 only)
- User-programmable settings including sample rate and high/low alarm range
- Connect via USB to a PC after datalogging to download data and generate reports and trending graphs in PDF or spreadsheet format



### TH30 USB Dual Temperature Datalogger

Record air temperature and external probe temperature with date/time stamp

- Compact device with built-in NTC thermistor and external temperature probe (included)
- Red and green status indicators on 5-digit LCD display
- Continuous datalogging records up to 48,000 readings (24,000 for each parameter)
- Generate PDF or Excel® reports with data and trending graphs



### RH390/RH490 Precision Psychrometers

Measure temperature and humidity simultaneously with high ±2% accuracy

- Fast response time (<30 seconds)
- Dual backlit display
- Simultaneous display of: Humidity/Temperature, Humidity/Dew Point or Humidity/Wet Bulb
- Captures water vapor levels in grams/kilogram and grains per pound (RH490 only)
- Data hold and min/max functions



### EA20/EA25 EasyView® Hydro-Thermometers

Offer simultaneous display of any two parameters: Relative Humidity, Temperature, Dew Point, or Wet Bulb

- Large LCD displays measurement results and bargraph
- Features include data hold, Relative, Min/Max, and programmable power off timer
- Programmable start/stop datalogging time and sample rate of 1 to 86,000 seconds datalogs up to 15K readings (EA25 only)
- Stores up to 99 manual readings for display recall
- Includes probe with 1 m (39 in) cable



### RH200W Multi-Channel Wireless Hygro-Thermometer

Measure indoor temperature and humidity from up to 30 m (98 ft) away through connection to wireless transmitters

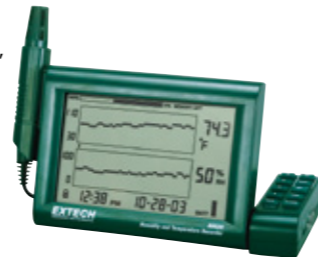
- Base station LCD with Auto-Night Light displays local and up to 8 remote temperatures and humidity readings
- Displays comfort levels from "too cold" to "too hot/humid," plus trend arrows to indicate temperature/humidity changes
- Records max/min readings for the duration of measurement session
- Ideal for multi-room monitoring in restaurants, greenhouses, storage buildings, and more
- Includes a base station and one transmitter. Additional remote Transmitters (RH200W-T) sold separately.



### RH520A Humidity + Temperature Chart Recorder with Replaceable Probe

Chart recorder provides simultaneous digital and graphical display of humidity and temperature; calculates dew point

- Measures humidity (10% to 95% RH) and temperatures from -28°C to 60°C (-20°F to 140°F)
- Basic accuracy of 3% RH (1°C/1.8°F)
- Software calculates and graphs Dew Point, Wet Bulb, and GPP (grains per pound)
- Records up to 49,000 data points which can be transferred to a PC via RS-232 serial port and RS-232 to USB adaptor for data analysis
- Large dual graphical LCD displays with adjustable vertical and horizontal TAC resolution



### RPM10 Photo/Contact Tachometer with Built-In Infrared Thermometer

Combination tachometer provides contact and non-contact RPM measurements plus surface temperature

- Built-in IR thermometer with laser measures temperature remotely for motors and rotating parts
- Provides wide RPM (photo and contact) and linear surface speed (contact) measurements
- Laser allows non-contact photo tachometer to measure from greater distances, up to 2 m (6.5 ft)
- Rugged, double-molded housing



### RPM33 Combination Contact/Laser Photo Tachometer

All-in-one tool quickly measures RPM, surface speed, and length

- Large 5-digit backlit LCD display
- Microprocessor based with quartz crystal oscillator to maintain high accuracy
- Store/recall 10 data sets in memory with 4 parameters (measurement, max, min and average)
- Provides wide RPM (photo and contact) and Linear Surface Speed/Length (contact) measurements
- Laser guided for greater distance non-contact measurements up to 0.5 m (1.6 ft)



### SDL800 Vibration Meter + Datalogger

Records vibration using a remote sensor and save in Excel® format to SD card

- Remote vibration sensor with magnetic adapter on 1.2 m (47.2 in) cable
- Wide frequency range of 10 Hz to 1 kHz
- Basic accuracy of ±(5% + 2 digits); meets ISO2954
- RMS, Peak Value or Max Hold measurement modes
- Adjustable data sampling rate
- Stores 99 readings manually and continuous datalogging via SD memory card



### VB450 Vibration Meter

Measure vibration levels in industrial machinery to check for misalignment, poor balancing, and more

- Remote vibration sensor with magnetic adapter on 0.2 m (7.9 in) coiled cable
- Wide frequency range, from 10 Hz to 1500 Hz
- Measures velocity (RMS), acceleration (Peak), and displacement (Peak-to-Peak)
- Automatic data hold, auto power off, and low battery indicator



### BR250-4 Video Borescope/Wireless Inspection Camera

Detachable wireless 89 mm (3.5 in) color display can be viewed from a remote location up to 9.75 m (32 ft)

- Captured video and still images on SD memory card with date/time stamp can be played back on the wireless monitor or your PC
- Mini waterproof (IP67) 4.5 mm camera head for high resolution viewing
- Four bright LED lamps with dimmer to illuminate viewed object



### BR80 Video Borescope Inspection Camera

17 mm camera diameter and 61 mm (2.4 in) color TFT LCD monitor with lightweight, handheld design to easily find, diagnose, and solve problems

- 1 m (39 in) flexible, gooseneck cable retains configured shape
- Mini waterproof (IP67) camera head and cable
- Four bright LED lamps with dimmer to illuminate viewed object
- Glare-free close-up field of view
- 180° image rotation feature



**DT40M/DT60M/DT100M Laser Distance Meters**

Laser measurements up to 100 m (330 ft)

- Three models to choose from:
  - Model DT40M — 0.05 to 40 m (2 in to 131 ft)
  - Model DT60M — 0.05 to 60 m (2 in to 196 ft)
  - Model DT100M — 0.05 to 100 m (2 in to 330 ft)
- Automatically calculates Area and Volume
- Indirect measurement using Pythagorean theorem
- Continuous mode with min/max function
- Displays Sum (+) / Difference (-) of multiple readings
- Memory automatically stores 20 data points
- Built-in bubble level



DT100M

**365515-BK Stopwatch/Clock with Backlit Display**  
Digital LCD stopwatch offers calendar, elapsed timer, split-time, and two competitor timer

- 1/100th second resolution for 30 minutes. 1 second resolution up to 24 hours
- 12 or 24 hour clock format
- Timing capacity: 23 hrs, 59 mins, and 59.99 secs
- Basic accuracy: ±3 seconds/day
- Backlight turns off after 4 seconds
- Water resistant housing and includes a snap-away neck strap



**HW30 HeatWatch™ Humidity/Temperature Stopwatch**

Digital UP/DOWN timer displays temperature, humidity, and heat index

- Programmable heat index alarm
- Calendar mode displays day, date and time
- Stopwatch/chronograph mode with 1/100 second resolution
- Fastest/slowest/average Lap recall
- 99-lap counter with 30-lap/split memory
- 10-hour countdown timer with audible beeper warning for the last 5 seconds



**CG206 Coating Thickness Tester**

Automatic recognition of ferrous and non-ferrous substrates

- Smart automatic substrate recognition
- Magnetic induction for ferrous substrates
- Eddy current measurement for non-ferrous substrates
- Easy-to-use menu system
- Two working modes: Direct and Group
- Memory stores 1500 readings (30 Group readings)
- Substrate Zeroing and one- or two-point calibration function
- 8-level adjustable backlight
- USB interface includes software



**CG204 Coating Thickness Tester**

Take non-invasive coating thickness measurements of ferrous and non-ferrous substrates

- Automatic recognition of ferrous materials through magnetic induction, or non-ferrous materials through eddy current measurement
- Easy-to-use menu system
- Single and Continuous measurement modes plus Direct and Group working modes
- Memory stores 400 readings (80 Direct, 320 Group)
- User-programmable high/low alarms
- Min/max/average, one or two point calibration
- Low battery indicator



**PH90 Waterproof pH Meter**

Rugged meter with a replaceable Flat Surface Electrode for measuring the pH of liquids, semi-solids, and solids

- Simultaneous display of pH and temperature
- 2 or 3 point calibration automatically recognizes buffer solutions (order pH buffers separately)
- Features include automatic temperature compensation, data hold, min/max, auto power off
- Waterproof design (IP57) floats in water and protects the meter in wet environment
- PTS (percent of slope) tells user when to replace the electrode



**CL200 ExStik® Chlorine Meter**

Take non-subjective, direct readings of Total Chlorine from 10 ppm down to 0.01 ppm

- Direct reading of Total Chlorine provides fast and easy measurements (less than 2 minutes)
- Unaffected by sample color or turbidity
- Memory stores, tags and recalls up to 15 readings
- US EPA-approved as an acceptable method for wastewater compliance monitoring of Total Chlorine
- Unique replaceable flat surface chlorine electrode eliminates clogged junctions or glass breakage



**EC410 Waterproof ExStik® II Conductivity/TDS/Salinity Kit**

Accurately measures conductivity, total dissolved solids (TDS), or salinity plus temperature

- Three ranges of measurements, from tap water to wastewater and any aqueous solution
- Large 2000-count digital display offers analog bargraph to indicate sample trends
- Features Data hold, auto power off, low battery indication
- Units of measure include µS/cm, mS/cm, ppm, ppt, mg/L, and g/L
- Includes EC400 meter with sensor, 3 calibration standards, weighted base, 3 plastic cups, batteries and carrying case
- IP57 rating



**EC510 Waterproof ExStik® II Kit**

Combination flat-surface pH electrode with autoranging high-accuracy conductivity cell

- Measures 5 parameters including conductivity, TDS, salinity, pH, and temperature using one electrode
- 9 units of measure: pH, µS/cm, mS/cm, ppm, ppt, mg/L, g/L, °C, °F
- Analog bargraph indicates trends
- Memory stores up to 25 labeled readings
- Fixed salinity ratio (0.5) and adjustable conductivity-to-TDS ratio from 0.4 to 1.0
- RENEW feature alerts user when electrode needs replacement
- IP57 rating



**D0600 Waterproof ExStik® II Dissolved Oxygen Meter**

Detect and measure oxygen concentration or saturation while also compensating for altitude

- Memory stores up to 25 data sets with dissolved oxygen (DO) and temperature reading
- Oxygen level displayed as % Saturation or Concentration (mg/L [ppm])
- Adjustable altitude compensation (0 to 20,000 ft in 1,000 ft increments)
- Adjustable salinity compensation, from 0 to 50 ppt
- Analog bar graph indicates trends
- Easy to replace screw-on membrane cap with optional extension cables
- IP57 rating



**D0700 Waterproof Portable Dissolved Oxygen Kit**

9-in-1 meter measures dissolved oxygen concentration and saturation, as well as pH, temperature, and more

- Automatic salinity compensation and manual barometric pressure compensation for DO measurements
- One button pH calibration (4, 7, and 10 pH) with choice of 3-point calibration for better accuracy
- Measures DO concentration/saturation, pH, mV, conductivity, TDS, salinity, resistivity and temperature
- Large backlit dual LCD display, auto power off, and rugged, waterproof housing
- IP57 rating



**SWEDEN**

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

**Benelux**

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

**FLIR Germany**

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

**FLIR Italy**

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

**FLIR Spain**

Madrid  
Tel. +34 91 573 48 27

**FLIR France**

Torcy  
Tel. +33 (0)1 60 37 01 00

**FLIR UK**

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

**FLIR Russia**

Moscow  
Tel. + 7 495 669 70 72

**FLIR Middle East**

Dubai  
Tel. +971 4 299 6898

**FLIR Africa**

Johannesburg  
Tel. +27 11 300 5622

**FLIR India**

New Delhi  
Tel. +91-11-45603555

**FLIR Turkey**

Istanbul  
Tel. +90 (212) 317 90 55

www.flir.com  
NASDAQ: FLIR



The World's **Sixth Sense**<sup>®</sup>

**PORTLAND**

Corporate Headquarters  
FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
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

www.flir.com  
NASDAQ: FLIR

Specifications are subject to change without notice. Equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. ©2019 FLIR Systems, Inc. All rights reserved. (Revised 01/19) 18-2102\_EMEA