FLIR®

WHAT DO YOU NEED TO MEASURE?

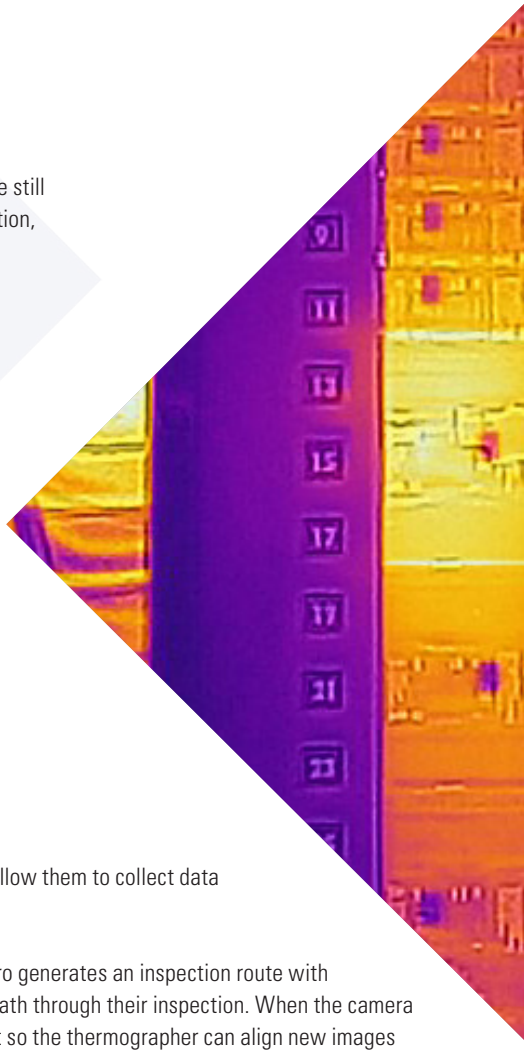
People trust FLIR's world-class solutions to provide the accuracy, reliability, and versatility needed to tackle their most challenging jobs.

OFFERING YOU **SOLUTIONS**

FOR INSPECTING, TROUBLESHOOTING, MONI

WHY CHOOSE FLIR?

There are many more choices for thermal, acoustic, and measurement products than when FLIR began, but we're still the top choice for inspection professionals—offering a wide range of products known industry-wide for innovation, usability, and reliability. Here are some key differentiators to keep in mind when considering FLIR.



Imaging capabilities

FLIR continues to push the boundaries of image clarity with proprietary solutions such as:

- **Multi-Spectral Dynamic Imaging (MSX®):** Improves image detail and makes asset identification easier by adding visual detail to a full thermal image.
- **UltraMax® :** Improves temperature measurement accuracy and provides finer image details by combining 16 images into one, super-resolution shot with 4x the pixels.
- **FlexView® lenses:** Save time and avoid the need for lens changes with dual field-of-view lenses that can switch between wide and narrow views with the press of a button.
- **AutoCal™ lenses:** Ensure precise measurements from multiple lenses without the need for manual recalibration, thanks to the auto-calibration camera wizard.

Inspection efficiencies

With sometimes hundreds of assets to check per day, inspectors need tools that allow them to collect data efficiently. FLIR solutions include:

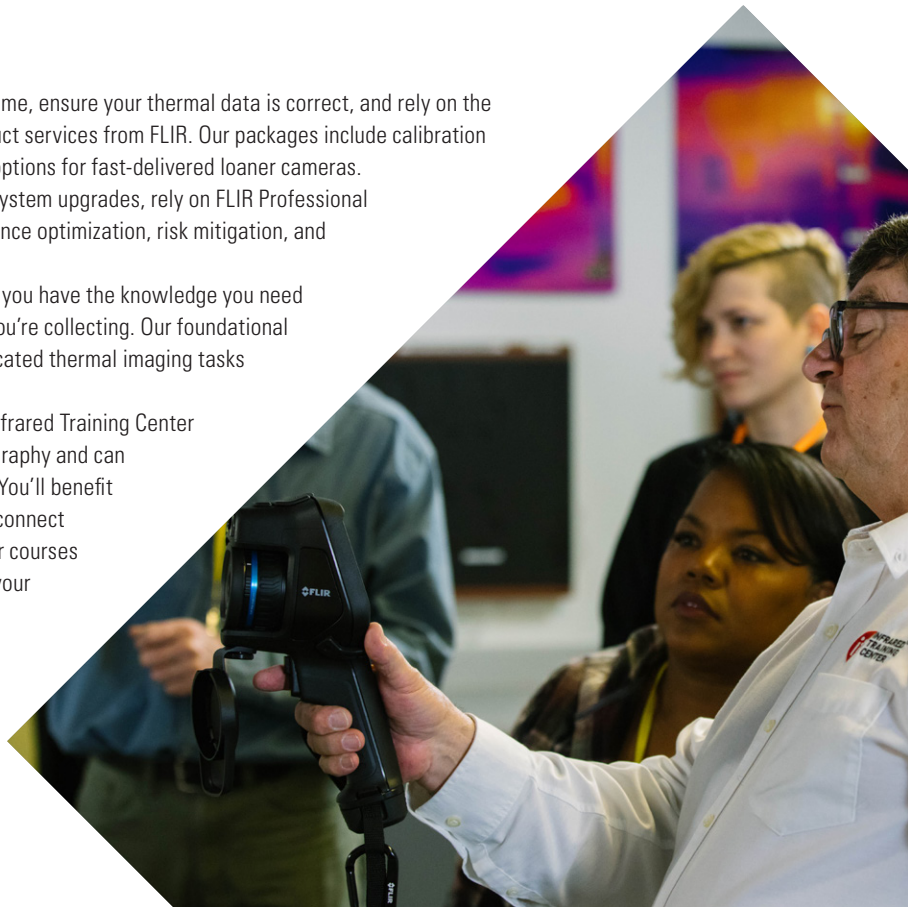
- **Routing with Reference Image:** This feature of FLIR Thermal Studio Pro generates an inspection route with assigned image that users can download to their camera, for a directed path through their inspection. When the camera activates this Routing plan, it loads the reference image for each asset so the thermographer can align new images with the initial baseline shot. This ensures accurate data collection over the history of that asset's inspections.
- **FLIR Acoustic Viewer:** This cloud system allows you to store acoustic images and compile reports you can share with your team. It streamlines camera and user management with features such as Organization, which seamlessly shares device access and camera information such as snapshots and reports within assigned groups.
- **FLIR METERLiNK®:** Connects via Bluetooth® with up to seven FLIR meters, for remote, real-time collection of electrical and environmental data. Use the app to map trends, set alarms, and embed meter data into thermal images or to create and send reports directly to colleagues.
- **Extech ExView® App:** Connects to as many as eight Extech meters at once for safe monitoring—all from one location—as well as remote videoscope control and datalogging.

TORING, AND REPORTING

Software and connectivity

- **FLIR Ignite:** Analyze, share, trend temperature data (Pro version), and create reports with images instantly from your smart device with this cloud storage and reporting software. All FLIR Ignite-enabled cameras provide automatic uploads to this secure site.
- **FLIR Thermal Studio Suite:** Streamline inspections, organize data, and manage thousands of thermal images and videos within this desktop analysis and reporting software. This subscription software offers advanced features such as batch image processing and Magic Wand to accelerate post-processing tasks. Thermal Studio is also compatible with FLIR acoustic imaging cameras, providing features such as automatic fault classification and severity indication for electrical inspections and estimation of leak volume and cost savings for compressed air and gas leaks.
- **FLIR Tools App:** Our mobile image processing app lets you import images from most Wi-Fi-enabled FLIR thermal cameras for editing and adjustments, as well as stream live video to your mobile device. Use the app to incorporate images into reports to send to customers and co-workers.
- **FLIR SDKs:** Our software development kits (SDKs) are powerful, flexible development tools that enable industrial and independent developers to create powerful apps and integrations with compatible thermal cameras and meters.

Service, support, and training



- **FLIR CARE & FLIR PROTECT:** Avoid unforeseen downtime, ensure your thermal data is correct, and rely on the protection of premium warranties with world-class product services from FLIR. Our packages include calibration adjustments, camera service, warranty extensions, and options for fast-delivered loaner cameras.
- **FLIR Professional Services:** For new installations or system upgrades, rely on FLIR Professional Services for system design and commissioning, performance optimization, risk mitigation, and seamless project delivery.
- **FLIR Academy:** This specialized training option ensures you have the knowledge you need to use your camera efficiently and understand the data you're collecting. Our foundational course ensures you are well-equipped to handle sophisticated thermal imaging tasks and succeed in your career.
- **The Infrared Training Center:** Certification from the Infrared Training Center demonstrates you have a clear understanding of thermography and can take a leadership role in an infrared inspection program. You'll benefit from our staff's decades of practical experience as they connect thermography theory to real-world applications. We offer courses at training centers around the globe, at locations within your country, at your company's facility, and even online.

FLIR ONE® Series Thermal Imaging for Mobile Devices

FLIR ONE Series cameras give you the power to find invisible problems faster than ever, with brilliant imagery that is easy for even the casual user to interpret. Choose the FLIR ONE Edge or Edge Pro for wireless connection to your smart device, so you can inspect targets in spaces that are small or difficult to reach. Compatibility with iOS and Android devices ensures your FLIR ONE Edge-Series camera won't be limited by operating systems, port styles, or device upgrades.

All FLIR ONE thermal camera attachments offer FLIR MSX® (Multi-Spectral Dynamic) for enhanced image quality. FLIR ONE Pro models offer additional image processing through FLIR VividIR™ technology, which combines a series of images to produce even more crisp thermal images.

The FLIR ONE App is integrated with the FLIR Ignite cloud for instant image uploads, up to 1 TB of secure storage, and access to image editing, analysis, and custom thermal inspection reports. The app includes a range of step-by-step inspection guides to help you use your FLIR ONE with confidence by demonstrating what to look for, providing tips for better inspections, and offering examples of typical faults for comparison. You can also explore an expanded range of third-party apps or even create your own with the FLIR Mobile SDK.

FLIR ONE Edge & Edge Pro

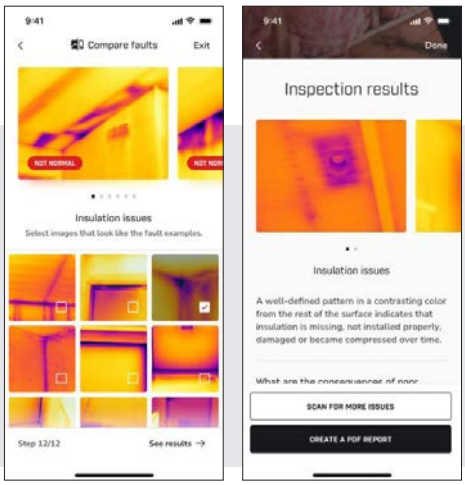
FLIR ONE Pro

Key Features:

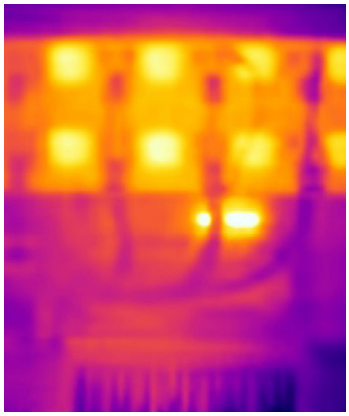
- Identify problem areas easier with the added detail and perspective from FLIR MSX
- Directly upload and store images to the FLIR Ignite cloud, where you can organize and back up files, instantly share images or create professional reports from a mobile device or computer
- FLIR ONE Pro: fit most popular phone cases thanks to OneFit™ adjustable connection
- FLIR ONE Pro and Edge Pro: Measure the temperature of any spot in a scene up to 400°C/752°F

FLIR Ignite™ Cloud Services
Upload, Access, & Edit Images + Create Reports—Anywhere, Anytime

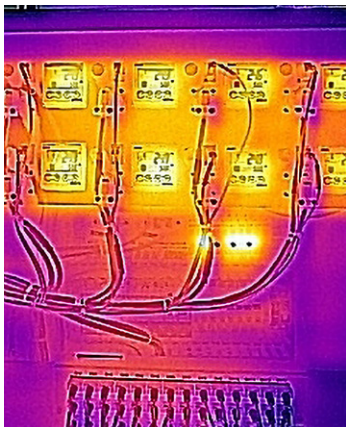
SPECIFICATIONS	FLIR ONE PRO	FLIR ONE EDGE	FLIR ONE EDGE PRO
IR resolution	160 × 120 (19,200 pixels)	80 × 60 thermal resolution (4,800 pixels)	160 × 120 (19,200 pixels)
Thermal sensitivity	<0.07°C @ 30°C		
Object temperature range	-20°C to 120°C (-4°F to 248°F) and 0°C to 400°C (32°F to 752°F)	-20°C to 120°C (-4°F to 248°F)	-20°C to 120°C (-4°F to 248°F) and 0°C to 400°C (32°F to 752°F)
HFOV/VFOV	55° ±1° / 43° ±1°	54° ±1° / 42° ±1°	54° ±1° / 42° ±1°
Accuracy	±3°C (±5.4°F) or ±5%, typical percent of the difference between ambient and scene temperature.		
Focus	Fixed 15 cm - infinity	Fixed 30 cm - infinity	Fixed 30 cm - Infinity
VividIR	Yes	No	Yes
Frame rate	8.7 Hz		
Battery life	1 hour	2.5 hours	2.5 hours
Charging	Female Micro USB-C (5 V/1 A)	Female USB-C (5 V/1 A)	Female USB-C (5 V/1 A)
Interface	Lightning (iOS), USB-C	Wi-Fi	Wi-Fi



Learn to confidently identify air leaks, insulation voids, and moisture using the FLIR ONE app inspection guides, which offer example thermal images and helpful inspection tips and insights. You can also find tailored solutions to your inspection needs through a range of compatible, third-party apps or develop your own with the FLIR Mobile SDK.



Without MSX



With MSX

FLIR Cx-Series Full-Featured, Pocket-Sized Thermal Cameras

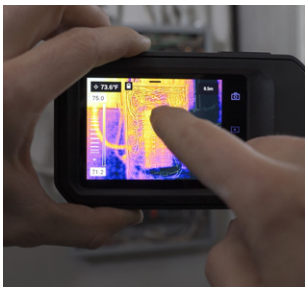
The FLIR Cx-Series cameras are your go-to tools for facilities maintenance, electrical repair, and electro/mechanical inspections. With the addition of the intrinsically safe FLIR Cx5 Hazardous Location-Rated Thermal Camera, the Cx-Series is your go-to choice for quick performance checks on industrial equipment. The C3-X, C5, and Cx5 all offer MSX® real-time image enhancement, picture-in-picture, area maximum or minimum temperature measurement, and Wi-Fi connectivity so you can quickly get to the job of finding and fixing hidden problems, sharing images, and documenting repairs. Cx-Series cameras feature direct connections to the FLIR Ignite cloud for instant image uploads, up to 1 TB of secure storage, and access to image editing, analysis, temperature trending graphs*, custom thermal inspection reports, and unlimited PDF exports*.

Key Features:

- Certified for use in many explosive vapor and dust atmospheres, potentially eliminating the need for hot work permits (Cx5 only)
- Capture thermal measurements from -20°C to 400°C/-4°F to 752°F (C5, Cx5 only)
- Easy viewing thanks to brilliant 3.5 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 Thermal Studio
- Identify problem areas faster using MSX-enhanced thermal images
- Share images with colleagues instantly with Wi-Fi peer-to-peer sharing
- Determine hottest or coldest (max./min.) target in the scene with area measurement box
- Upload images directly to the FLIR Ignite cloud for secure sharing and storage

*FLIR Ignite Pro subscription required

FLIR Ignite™ Cloud Services
Upload, Access, & Edit Images + Create Reports—Anywhere, Anytime



SPECIFICATIONS	C3-X	C5	Cx5
IR resolution	128 × 96 (12,288 pixels)	160 × 120 (19,200 pixels)	
Object temperature range	-20°C to 300°C (-4°F to 572°F)	-20°C to 400°C (-4°F to 752°F)	
Thermal sensitivity	<70 mK		
Accuracy	At ambient temp. 15°C to 35°C (59°F to 95°F) and object temp. above 0°C (32°F), 0°C to 100°C (32°F to 212°F): ±3°C (±5.5°F); 100°C to 300°C (212°F to 572°F): ±3%	At ambient temp. 15°C to 35°C (59°F to 95°F) and object temp. above 0°C (32°F), 0°C to 100°C (32°F to 212°F): ±3°C (±5.5°F), 100°C to 400°C (212°F to 752°F): ±3%	
Image frequency	8.7 Hz		
Field of view (FOV)	54° × 42°		
Focus	Focus free		
Image modes	Infrared, Visual, MSX, Picture-in-picture		
Area box	Box with max/min		
Spotmeters	1 spot		
Image file format	Standard JPEG, 14-bit measurement data included		
Communication interfaces	USB-C, Wi-Fi, Bluetooth®		
Certifications	IP54 (IEC 60529)		IP54 (IEC 60529), EN EIC 60079-0: 2018, IEC 60079-15: 2017, EN EIC 60079-31: 2014, IEC 60079-0: 2017, EN EIC 60079-15: 2019, IEC 60079-31: 2013

FLIR Ex Pro-Series Infrared Cameras with Ignite™ Cloud

FLIR Ex Pro cameras are essential tools designed for pinpointing and diagnosing electrical, mechanical, and building issues. With vibrant thermal imagery enhanced by FLIR's patented MSX®, you can quickly identify hot spots and problem areas. The E5, E6, and E8 Pro models offer an expanded temperature range of up to 550°C (1022°F), along with professional features accessible via the touchscreen. And what's more, all new Ex Pro-Series cameras come with the added value of an extended warranty, professional-level analysis and reporting software, and on-line training that covers both camera use and basic thermography.

Key Features:

- Diagnose faults faster with the help of stunning MSX images
- Edit, analyze, and share images from FLIR Ignite and create quick reports to validate repairs
- Navigate features, add text notes, and organize files through the simplified touchscreen
- Rely on the temperature measurement accuracy of ±2°C (±3.6°F) or ±2% of reading
- Work longer thanks to the swappable Li-ion battery with 4-hour life

FLIR Ignite™ Cloud Services
Upload, Access, & Edit Images + Create Reports—Anywhere, Anytime

SPECIFICATIONS	E5 PRO	E6 PRO	E8 PRO
IR Resolution	160 × 120 (19,200 pixels)	240 x 180 (43,200 pixels)	320 × 240 (76,800 pixels)
Object temperature range	-20°C to 400°C (-4°F to 752°F) in two ranges	-20°C to 550°C (-4°F to 1022°F) in two ranges	20°C to 550°C (-4°F to 1022°F) in two ranges
Thermal sensitivity	<60 mK	<50 mK	<40 mK
Accuracy	At ambient temp. 10°C to 35°C (50°F to 95°F) and object temperature above 0°C (32°F), ±2°C (±3.6°F) or ±2% of reading		
Image frequency	9 Hz		
Field of view (FOV)	33° × 25°		
Focus	Focus free		
Image modes	Infrared, Visual, MSX, Picture-in-picture		
Area box	Box with min/max		
Spotmeters	Center spot		
Image file format	Standard JPEG, 14-bit measurement data included		
Image streaming	Radiometric* and non-radiometric over USB-C (*requires FLIR Thermal Studio software)		
Communication interfaces	USB-C, Wi-Fi, Bluetooth®		
Certifications	IP54 (IEC 60529), UL, CSA, CE, PSE and CCC, WEEE 2012/19/EC, RoHs 2011/65/EC		

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. These high-performance models—E54, E76, E86, E95—are packed with features you need for a wide range of electrical, mechanical, and building applications.

The Exx-Series offers superior sensitivity, up to 307,200 pixel resolution, 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:

- Switch quickly between fields of view during inspections with FLIR FlexView® lenses (dual FOV: 24°/14° or 42°/24°) or easily share single FOV, auto-calibrating lenses between cameras
- Put more pixels on your target from a safe distance with up to 640 × 480 (307,200 pixels) IR resolution
- Maximize efficiency with FLIR Routing with Reference Imaging: a downloadable inspection plan you build in FLIR Thermal Studio Pro that runs from the camera and allows you to align new images with an initial baseline shot
- Add depth and detail to images with our best MSX® image enhancement
- Ensure accurate temperature measurements with laser-assisted autofocus; measure area on-screen using laser distance meter
- Produce brilliant imagery at 4x the thermal pixel resolution with UltraMax® processing
- Directly upload images via Wi-Fi to the FLIR Ignite™ cloud, so you can organize, edit, and share images securely
- Connect to mobile devices via Wi-Fi
- Embed meter readings like load and voltage to aid in issue understanding from FLIR clamps, multimeters, and moisture meters via METERLiNK®
- Instantly improve contrast for target with 1-Touch Level/Span
- Connecting over Wi-Fi automatically prompts Over-the-Air updates, ensuring your camera has the latest features and firmware updates
- Learn to use your camera like a pro through free FLIR Academy training, provided with each Exx purchase

Certain features are model-dependent. See matrix below.

FLIR Ignite™ Cloud Services
Upload, Access, & Edit Images + Create Reports—Anywhere, Anytime

SPECIFICATIONS	E54	E76	E86	E96
IR Resolution	320 × 240 (76,800 pixels)		464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels)
Resolution with UltraMax	NA	307,200 pixels	645,888 pixels	1.2 MP
Object temperature range	-20°C to 650°C (-4°F to 1202°F) in two ranges	-20°C to 650°C (-4°F to 1202°F) in two ranges / optional 300°C to 1000°C (572°F to 1832°F)	-20°C to 1500°C (-4°F to 2732°F) in three ranges	
Laser area measurement (m² or ft²)	No	No	Yes, on screen	
Thermal sensitivity	<40 mK @ 30°C (86°F)			
Accuracy	±2°C (±3.6°F) or ±2% of reading			
Image frequency	30 Hz			
Field of view (FOV)	24° × 18° (fixed)	42° × 32° (10 mm lens), 24° × 18° (17 mm lens), 14° × 10° (29 mm lens), 80° × 63° (5 mm lens), 24° × 18°/14° × 10° (17/29 mm DFOV lens), 42° × 32°/24° × 18° (10/17 mm DFOV lens)		
Focus	Manual	Continuous LDM, One-shot LDM, One-shot contrast, manual		
Image modes	Infrared, Visual, MSX‡, Picture-in-picture			
Area box	1 in live mode	3 in live mode		
Spotmeters	3 in live mode			
Image file format	Standard JPEG, measurement data included			
Video recording and streaming	Radiometric, non-radiometric, and visual video recording to memory card or streaming over Wi-Fi			
Communication interfaces	USB-C, DisplayPort, Wi-Fi, and Bluetooth®			
Certifications	IP54 (IEC 60529), Camera: IEC/EN 60950-1, IEC/EN 62368-1 Power supply: IEC/EN 62368-1, CSA/UL/KC/SAA/PSE 60950-1			

‡ not available with 6°. 80°, or macro lenses

FLIR T-Series Professional Thermal Imaging Cameras

The FLIR T-Series simplifies inspections through a broad range of professional features—from on-board inspection routing and multiple spot meters to dual FOV lenses for instantaneous shifts between wide and narrow fields of view. Choose from a range of resolutions, maximum temperatures, and measurement features with the T5xx and T8xx models, or gain the highest resolution, crisp imagery, and measurement accuracy with our flagship T1K HD thermal camera.

Key Features:

- Ergonomic design provides all-day comfort, so you can scan from tough angles while keeping the display in view
- Add the FLIR FlexView® dual-FOV lens so you can instantly switch from wide angle to telephoto with the press of a button instead of exchanging lenses (T5xx & T8xx models)
- Maximize efficiency by enabling Inspection Route, which runs a pre-defined survey route you can build with the Route Creator feature in FLIR Thermal Studio Pro
- Connect via Wi-Fi to the FLIR Ignite cloud where you can organize, edit, and share images securely
- Add depth and brilliant detail to images with FLIR MSX® enhancement and FLIR UltraMax super resolution
- Simplify manual contrast adjustments with 1-Touch Level/Span
- Analyze, edit, and process images then output professional reports with free 3-month subscription to FLIR Thermal Studio Pro software
- Quickly access measurement tools, parameters, image modes, and more through easy-to-use touchscreen interface
- Ensure you always have the latest features and firmware with over-the-air updates any time you connect to Wi-Fi
- Learn to use your camera like a pro through free FLIR Academy training, provided with the purchase of any T5xx or T8xx camera

Certain features are model-dependent. See matrix below.

FLIR Ignite™ Cloud Services
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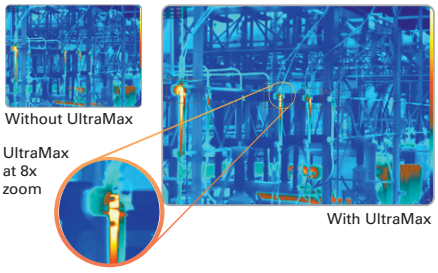


ULTRAMAX®
Unmatched performance at four times the resolution
A unique image processing technique that allows you to generate reports with images that have four times as many pixels, improving image detail and measurement accuracy.

SPECIFICATIONS	T530	T540	T560	T840	T865	T1010	T1020
IR Resolution	320 × 240 (76,800 pixels)	464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels	464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels)	1024 × 768 (786,432 pixels)	1024 × 768 (786,432 pixels)
Resolution with UltraMax	307,200 pixels	645,888 pixels	1.2 MP	645,888 pixels	1.2 MP	3.1 MP	
Object temperature range	-20°C to 650°C (-4°F to 1202°F) in two ranges / optional 300°C to 1200°C (572°C to 2192°F)	-20°C to 1500°C (-4°F to 2732°F) in three ranges	-20°C to 1500°C (-4°F to 2732°F) in three ranges	-20°C to 1500°C (-4°F to 2732°F) in three ranges	-40°C to 2000°C (-40°F to 3632°F) in three ranges	-40°C to 650°C (-40°F to 1202°F) in two ranges	-40°C to 2000°C (-40°F to 3632°F) in three ranges
Laser area measurement (m^2 or ft^2)	Yes					No	
Thermal sensitivity	<40 mK @ 30°C (86°F)					<25 mK @ 30°C (86°F)	<20 mK @ 30°C (86°F)
Accuracy	±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% at 25°C for temperatures between 5°C to 150°C ±2°C (±3.6°F) or ±2% of reading at 25°C for temperatures up to 1200°C
Image frequency	30 Hz						
Field of view (FOV)	42° × 32° (10 mm lens), 24° × 18° (17 mm lens), 14° × 10° (29 mm lens), 80° × 63° (5 mm lens), 24° × 18°/14° × 10° (17/29 mm DFOV lens), 42° × 32°/24° × 18° (10/17 mm DFOV lens)					45° × 34° (21.2 mm lens), 28° × 21° (36 mm lens), 12° x 9° (83.4 mm lens), 7° × 5.3° (142 mm lens)	
Focus	Continuous LDM, One-shot LDM, One-shot contrast, manual					One-shot, manual	
Image modes	Infrared, Visual, MSX*, Picture-in-picture					Infrared, Visual, MSX	Infrared, Visual, MSX, Picture-in-picture
Area box	3 in live mode				5 in live mode	1 box with max/min/avg	5 + 5 areas (boxes & circles)
Spotmeters	3 in live mode				10 in live mode	1 in live mode	10 in live mode
Image file format	Standard JPEG, measurement data included						
Video recording and streaming	Radiometric, non-radiometric, and visual video recording to memory card or streaming over USB video class (UVC) and Wi-Fi					Radiometric, non-radio-metric, and visual video recording to memory card or streaming over USB	Radiometric, non-radiometric, and visual video recording to memory card or streaming over USB and Wi-Fi
Communication interfaces	USB 2.0, DisplayPort, Wi-Fi, and Bluetooth®					USB Micro-B, HDMI	USB Micro-B, Wi-Fi, Bluetooth, HDMI
Certifications	IP54 (IEC 60529) Camera: IEC/EN 60950-1, IEC/EN 62368-1 Power supply: IEC/EN 62368-1, CSA/UL/KC/SAA/PSE 60950-1					IP54 (IEC 60529), ETSI EN 301 489-1 (radio), ETSI EN 301 489-17, EN 61000-6-2 (Immunity), EN 61000-6-3 (Emission), FCC 47 CFR Part 15 Class B (Emission), ICES-003	

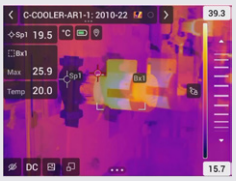
*not available with 6°. 80°, or macro lenses

FLIR Ignite™

FLIR Ignite is an image upload, storage, sharing, editing, analysis and reporting tool for mobile and desktop. Automatically upload images from your FLIR handheld thermal camera to the cloud or organize files and produce inspection reports from the field that you can share via password-protected link.

FLIR Thermal Studio Suite

Analyze inspection data and manage extensive collections of the images and videos needed for efficient reporting. This desktop software offers thermal image analysis and even leak-rate and cost analysis data mined from acoustic images—critical tools for predictive maintenance programs.



FLIR Routing with Reference Image

Thermal Studio Pro includes Routing with Reference Image, a powerful feature for creating inspection maps that can be downloaded directly to select FLIR thermal cameras. As users follow a guided inspection plan, the camera automatically aligns new images with an initial baseline shot, ensuring accurate data collection.

Improve your skills with the right training

FLIR ACADEMY

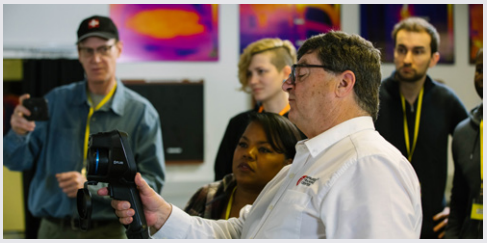
Whether your goal is to enhance operational efficiency or to grow your skill set, FLIR Academy offers a range of courses that will help you harness the full potential of FLIR technology. The online courses are live and interactive, providing you with direct access to skilled trainers so you can learn to master your thermal imaging camera with confidence. Registering your Ex Pro-, Exx-, or T-Series camera will provide you with a free credit to attend FLIR Academy training.

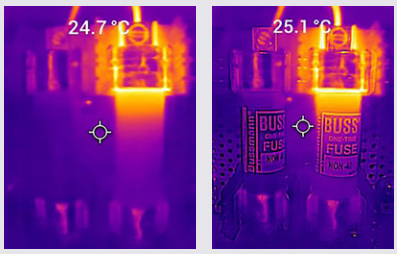
academy.flir.com

THE INFRARED TRAINING CENTER

The Infrared Training Center offers a range of infrared & acoustic theory and application courses, online and in-person courses taught by industry experts. The courses range in skill level and application, with classes focusing on everything from electrical inspections to optical gas imaging inspections, to sUAS, acoustic imaging inspections and more. Infrared Training Center courses follow industry best practice standards (ASNT/ISO) to provide students and organizations with globally-recognized, gold- standard thermography certification.

infraredtraining.com





Fuse without MSX *Fuse with MSX*

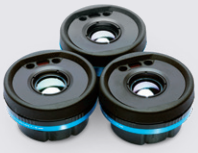
Get the added value of FLIR MSX®

FLIR's patented Multi-Spectral Dynamic Imaging (MSX) technology adds visible definition to IR images by detecting the edges of objects and including that detail in the thermal image. Text becomes clearly visible while extraordinary thermal detail instantly highlights and orients problem locations, eliminating the need to refer to a visual image for detail.

See more, work faster with FLIR optics

FLIR FlexView® Dual Field-of-View Lens

FlexView lenses for Exx-, T5xx-, T8xx-, and Axxx-Series cameras allow you to quickly switch from wide to narrow fields of view with the touch of a button. Offered as 42°/24° and 24°/14° dual field-of-view lenses, FlexView allows you to capture the entire target and then instantly zero in on your target with the 14° telephoto FOV. Or you can switch from the 42° field of view to 24° in manufacturing applications where wider angles are needed for small spaces.



FLIR AutoCal™ Lenses

Exx-, T5xx-, and T8xx-Series AutoCal lenses, can be calibrated to the camera by the user, freeing you to switch between multiple lenses without the need to send the camera to a FLIR service department.

FLIR 80° Lens

Use this ultra-wide field-of-view lens to monitor wide target assets or in restricted spaces with limited viewing angles, such as electrical cabinets fitted with infrared windows. It pairs with a port adapter that makes inspection through third-party ports fast and simple.





Specifications	Mobile			Compact			Industrial				
Model	**FLIR ONE Pro**	**FLIR ONE Edge**	**FLIR ONE Edge Pro**	**C3-X**	**C5**	**Cx5 (ATEX)**	**TG268**	**TG298**	**E5 Pro**	**E6 Pro**	**E8 Pro**
IR Resolution	160 × 120 (19,200 pixels)	80 × 60 (4,800 pixels)	160 × 120 (19,200 pixels)	128 × 96 (12,288 pixels)	160 × 120 (19,200 pixels)		160 × 120 (19,200 pixels)		160 × 120 (19,200 pixels)	240 x 180 (43,200 pixels)	320 × 240 (76,800 pixels)
Resolution with UltraMax®	NA			NA			NA		NA		
Object temperature range	-20°C to 120°C (-4°F to 248°F) and 0°C to 400°C (32°F to 752°F)	-20°C to 120°C (-4°F to 248°F)	-20°C to 120°C (-4°F to 248°F) and 0°C to 400°C (32°F to 752°F)	-20°C to 300°C (-4°F to 572°F)	-20°C to 400°C (-4°F to 752°F)		-25°C to 400°C (-13°F to 752°F)	-25°C to 1080°C (-13°F to 1976°F)	-20°C to 400°C (-4°F to 752°F) in two ranges	-20°C to 550°C (-4°F to 1022°F) in two ranges	20°C to 550°C (-4°F to 1022°F) in two ranges
Laser area measurement (m² or ft²)	No			No			No		No		
Thermal sensitivity	<0.07°C @ 30°C			<70 mK			<70 mK		<60 mK	<50 mK	<40 mK
Accuracy	±5% of reading			±3% of reading			±3% of reading		±2% of reading		
Image frequency	8.7 Hz			8.7 Hz			8.7 Hz		9 Hz		
Field of view (FOV)	HFOV: 55° ±1° / VFOV 43° ±1°	HFOV: 54° ±1° / VFOV 42° ±1°		54° × 42°			57° × 44°		33° × 25°		
Focus	Fixed 15 cm - infinity Fixed 30 cm - infinity Fixed 30 cm - Infinity			Focus free			Focus free		Focus free		
Image modes	Infrared, Visual, MSX®			Infrared, Visual, MSX, Picture-in-picture			Infrared, Visual, MSX		Infrared, Visual, MSX, Picture-in-picture		
Measurement tools	Hottest, coldest; 3 spot measurements			Center spot, box with max/min			Center spot (on/off)		Center spot, box with min/max, Delta T		
Image file format	Standard JPEG, 14-bit measurement data included			Standard JPEG, 14-bit measurement data included			Standard JPEG, 14-bit measurement data included		Standard JPEG, 14-bit measurement data included		
Video recording and streaming	No			No			Non-radiometric thermal and visual video recording to memory card		Radiometric* and non-radiometric over USB-C (*requires FLIR Thermal Studio software)		
Communication interfaces	Lightning (iOS) or USB-C	Wi-Fi		USB-C, Wi-Fi, Bluetooth®			USB 2.0, BLE		USB-C, Wi-Fi, Bluetooth		
Certifications	IP54 (IEC 60529), RoHS, CE/FCC, CEC-BC, EN62133, UL1642, WEEE 2012/19/EU			IP54 (IEC 60529)		IP54 (IEC 60529), EN EIC 60079-0: 2018, IEC 60079-15: 2017, EN EIC 60079-31: 2014, IEC 60079-0: 2017, EN EIC 60079-15: 2019, IEC 60079-31: 2013	IP54 (IEC 60529), CE, CB, RCM, IEC60825-1, FDA, UL, CEC, NRCan		IP54 (IEC 60529), RoHs 2011/65/EC, UL, CSA, CE, PSE, CCC, WEEE 2012/19/EC		
Over-the-air updates	No			Yes			No		Yes		
Touchscreen	No			3.5 in (8.9 cm)			No		3.5 in (8.9 cm)		
Text, image sketch	No			Touch keyboard for text only			No		Touch keyboard for text only		
Voice annotation	No			No			No		No		
Laser pointer	No			No			Center-spot and circular area		No		
Built-in GPS	No			No			No		No		
Routing with Reference Image	No			No			No		No		
1-touch Level/Span	No			No	Yes		No		Yes		

*not available with 6°, 80°, or macro lenses
**Hot spot to center spot Delta measurement

Specifications subject to change. For the most up-to-date specifications, please visit flir.com.

HANDHELD THERMAL CAMERA MATRIX




Professional				High-Performance						
E54	**E76**	**E86**	**E96**	**T530**	**T540**	**T560`**	**T840**	**T865**	**T1010**	**T1020**
320 × 240 (76,800 pixels)		464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels)	320 × 240 (76,800 pixels)	464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels	464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels)	1024 × 768 (786,432 pixels)	1024 × 768 (786,432 pixels)
NA	307,200 pixels	645,888 pixels	1.2 MP	307,200 pixels	645,888 pixels	1.2 MP	645,888 pixels	1.2 MP	3.1 MP	
-20°C to 650°C (-4°F to 1202°F) in two ranges	-20°C to 650°C (-4°F to 1202°F) in two ranges / optional 300°C to 1000°C (572°F to 1832°F)	-20°C to 1500°C (-4°F to 2732°F) in three ranges		-20°C to 650°C (-4°F to 1202°F) in two ranges / optional 300°C to 1200°C (572°C to 2192°F)	-20°C to 1500°C (-4°F to 2732°F) in three ranges	-20°C to 1500°C (-4°F to 2732°F) in three ranges	-20°C to 1500°C (-4°F to 2732°F) in three ranges	-40°C to 2000°C (-40°F to 3632°F) in three ranges	-40°C to 650°C (-40°F to 1202°F) in two ranges	-40°C to 2000°C (-40°F to 3632°F) in three ranges
No		Yes, on screen		Yes					No	
<40 mK				<40 mK					<25 mK	<20 mK
±2% of reading				±2% of reading				±1°C (±1.8°F) or ±2% of reading	±2% of reading	±1°C (±1.8°F) or ±2% of reading
30 Hz				30 Hz						
24° × 18° (fixed)	42° × 32° (10 mm lens), 24° × 18° (17 mm lens), 14° × 10° (29 mm lens), 80° × 63° (5 mm lens), 24° × 18°/14° × 10° (17/29 mm DFOV lens), 42° × 32°/24° × 18° (10/17 mm DFOV lens)			42° × 32° (10 mm lens), 24° × 18° (17 mm lens), 14° × 10° (29 mm lens), 80° × 63° (5 mm lens), 24° × 18°/14° × 10° (17/29 mm DFOV lens), 42° × 32°/24° × 18° (10/17 mm DFOV lens)					45° × 34° (21.2 mm lens), 28° × 21° (36 mm lens), 12° x 9° (83.4 mm lens), 7° × 5.3° (142 mm lens)	
Manual	Continuous LDM, One-shot LDM, One-shot contrast, manual			Continuous LDM, One-shot LDM, One-shot contrast, manual					One-shot, manual	
Infrared, Visual, MSX*, Picture-in-picture				Infrared, Visual, MSX*, Picture-in-picture					Infrared, Visual, MSX	Infrared, Visual, MSX, Picture-in-picture
Center spot, hot spot, cold spot, 3 spots, hot spot-spot**	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 area boxes (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T	10 spotmeters, 5 area boxes (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
Standard JPEG, measurement data included				Standard JPEG, measurement data included						
Radiometric, non-radiometric, and visual video recording to memory card or streaming over Wi-Fi				Radiometric, non-radiometric, and visual video recording to memory card or streaming over USB video class (UVC) and Wi-Fi					Radiometric, non-radiometric, and visual video recording to memory card or streaming over USB	Radiometric, non-radiometric, and visual video recording to memory card or streaming over USB and Wi-Fi
USB-C, DisplayPort, Wi-Fi, and Bluetooth				USB 2.0, DisplayPort, Wi-Fi, and Bluetooth					USB Micro-B, HDMI	USB Micro-B, Wi-Fi, Bluetooth, HDMI
IP54 (IEC 60529) Camera: IEC/EN 60950-1, IEC/EN 62368-1 Power supply: IEC/EN 62368-1, CSA/UL/KC/SAA/PSE 60950-1				IP54 (IEC 60529) Camera: IEC/EN 60950-1, IEC/EN 62368-1 Power supply: IEC/EN 62368-1, CSA/UL/KC/SAA/PSE 60950-1					IP54 (IEC 60529), ETSI EN 301 489-1 (radio), ETSI EN 301 489-17, EN 61000-6-2 (Immunity), EN 61000-6-3 (Emission), FCC 47 CFR Part 15 Class B (Emission), ICES-003	
Yes				Yes					No	
4 in (10.16 cm)				4 in (10.16 cm)					4.3 in (10.92 cm)	
Yes				Yes					No	Yes
Yes				Yes					No	Yes
Yes				Yes						
Yes				Yes					No	Yes
Yes				Yes						
Yes				Yes						

FLIR Si-Series Acoustic Imaging Cameras

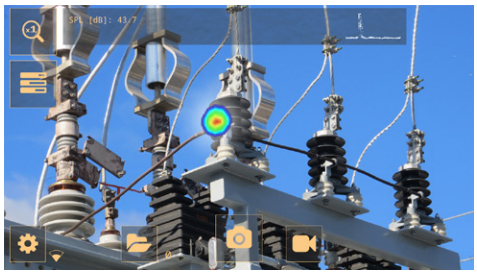
Cut energy costs, prevent downtime, and identify issues with bearings, compressed air systems, industrial gas systems, or electric utility transmission lines with the FLIR Si-Series industrial acoustic imaging cameras. This series includes a range of lightweight, handheld models: the Si1-LD, an entry-level acoustic imager for detecting and quantifying compressed air leaks; the Si2-LD, which locates and measures specialized gas leaks and mechanical faults as well as finding and quantifying compressed air leaks; the Si2-PD, for detecting, classifying, and determining the severity of partial electrical discharge; and the Si2-Pro, with detection and analysis capabilities for partial discharge, leaks, and mechanical faults for efficient inspections across applications.

Key Features:

- Pinpoint the source of compressed air or industrial gas leaks from a distance, even in noisy environments
- Quantify compressed air leak rates and estimated yearly energy loss, so you can prioritize repair and calculate savings
- Locate and quantify expensive compressed industrial gas leaks
- Detect and measure bearing and other mechanical faults to avoid production disruptions
- Asses the severity and type of partial discharge issues through on-camera and in-software
- Manage tool use and maintenance across large-scale operations with fleet management functionality
- Automatically upload, store, and backup acoustic images to the FLIR Acoustic Camera Viewer (cloud service)
- Evaluate images in FLIR Thermal Studio Pro and determine costs, severity, and classifications
- Featuring automatic frequency tuning, 8x zoom, 12 MP digital camera, IP54 rating, and a QR code reader

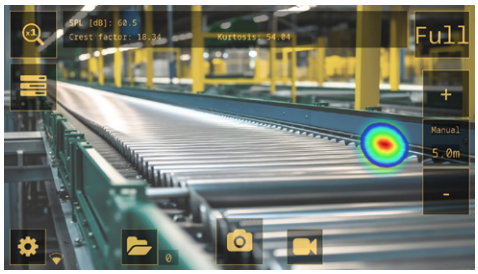
Certain features are model-dependent. See matrix below.

SPECIFICATIONS	SI1-LD	SI2-LD	SI2-PD	SI2-PRO
Leak localization		Yes	No	Yes
Leak rate detection threshold	Minimum detectable: 0.01 l/min from 2.5 m (8.2 ft)	0.0032 l/min from 2.5 m 0.0044 l/min from 6 m	NA	0.0032 l/min from 2.5 m 0.0044 l/min from 6 m
Discharge detection	No		Yes	Yes
Severity assessment	NA		Automatic AI-based severity assessment including recommended actions onboard camera	
Acoustic measurement	96 low-noise MEMS microphones, real-time sound visualization	124 low-noise MEMS microphones, real-time sound visualization		
Detection threshold	20 kHz to 100 kHz range: -5 dB to 56 dB SPL	20 kHz to 100 kHz range: -7 dB to 51 dB SPL		
Bandwidth	2 kHz to 100 kHz	2 kHz to 130 kHz		
Data transfer	Over Wi-Fi or USB memory stick			
Video recording	Yes, up to 5 minutes			
Image storage	Internal: 32 GB SD card; external: USB 8 GB. Cloud storage capacity is unlimited	Internal: 128 GB SD card; external: USB 8 GB. Cloud storage capacity is unlimited		
Explosive (hazardous) environment ratings	NA			



Partial Discharge

Compressed Air Leak



Mech Mode

FLIR Si2x-Series Industrial Acoustic Imaging Cameras

Reduce energy costs, identify mechanical issues, and work efficiently without compromising safety with FLIR Si2x-Series acoustic imagers. These cameras are certified for use certain explosive vapor and dust atmospheres for monitoring leaks, detecting mechanical faults, and identifying partial discharge in hazardous environments. FLIR designed the Si2x-Series for safe use locations where there's a risk for combustible dust and explosive vapor, including wood and paper mills, petrochemical factories, mines, wastewater facilities, and pharmaceutical manufacturing facilities.

Key Features:

- Work safely in hazardous environments certifications for Zone 2 (gas) and Zone 22 (dust), certifications available at support.flir.com/Si2
- Quantify pressurized gases, including compressed air, ammonia, hydrogen, CO^2, methane, helium, and argon, efficiently and precisely
- Ensure optimal use and maintenance of equipment in large-scale industrial settings with fleet management, cloud data integration, and OTA software updates
- Speed audits in hazardous areas with wide, 75° diagonal field of view, which allows for scanning large areas quickly without interrupting operations
- Asses the severity and type of partial discharge issues through on-camera and in-software
- Automatically upload acoustic images to the FLIR Acoustic Camera Viewer and evaluate in FLIR Thermal Studio Pro to determine costs, severity, and classifications

SPECIFICATIONS	SI2X-LD	SI2X-PRO
Leak localization	Yes	Yes
Leak rate detection threshold	0.0032 l/min from 2.5 m 0.0044 l/min from 6 m	0.0032 l/min from 2.5 m 0.0044 l/min from 6 m
Discharge detection	No	Yes
Severity assessment	NA	Automatic AI-based severity assessment including recommended actions onboard camera
Acoustic measurement	124 low-noise MEMS microphones, real-time sound visualization	
Detection threshold	20 kHz to 100 kHz range: -7 dB to 51 dB SPL	
Bandwidth	2 kHz to 130 kHz	
Data transfer	Over Wi-Fi or USB memory stick	
Video recording	Yes, up to 5 minutes	
Image storage	Internal: 128 GB SD card; external: USB 8 GB. Cloud storage capacity is unlimited	
Explosive (hazardous) environment ratings	Ex II 3 G Ex ic IIIC T4 Gc Ex II 3 D Ex ic IIIC T135°C Dc Tamb -10°C to 40°C	

Upload, Analyze, Report, and Share

FLIR Acoustic Viewer and FLIR Thermal Studio for the Si-Series

Understanding the data captured by your FLIR acoustic camera is the most important step of any acoustic inspection, so it's crucial to have the right tools in place for your team. Whether you need to categorize and determine the severity of partial discharge, are inspecting for signs of bearing faults or other mechanical issues, or want to determine the cost of air and gas leaks, FLIR offers the software solutions to help you analyze, quantify, and report on acoustic imaging inspections.

FLIR Acoustic Camera Viewer:
This cloud system offers not only image storage but the ability to easily compile reports. Once you've set up a cloud profile you can connect and upload data in real-time through Wi-Fi or a hot spot.

A key advantage of the Acoustic Camera Viewer is its Organization feature: a simplified solution for following up on reporting from several separate locations, such as factories and production units, by different cameras and users. The Organization feature lets you share snapshots, reports, and other information from the camera to an assigned group, so you can centralize and execute management tasks from within Acoustic Camera Viewer.

FLIR Thermal Studio Suite:
This fully customizable reporting and analytics software offers acoustic-specific tools such as estimated leak volume and cost savings analysis for industrial gas and air leaks, support for automatic fault classification from mechanical inspections, and severity indication and recommended action for utility inspections. This software can quantify gas leaks based on images and videos as well as allow you to combine acoustic images with thermal images within the same report for a more comprehensive inspection analysis. Finally, if your company's IT policy doesn't allow Wi-Fi uploads and cloud sharing through Acoustic Viewer, you can still access the reporting and analytics available in Thermal Studio by downloading files to a USB stick or the new USB to USB direct transfer cable and moving them into your Thermal Studio library.

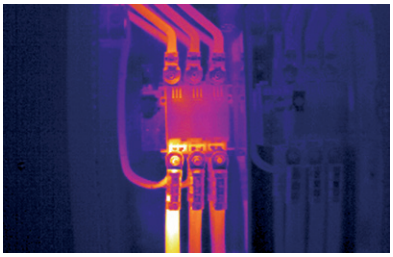
FLIR AX8 Thermal Imaging Temperature Sensor

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)
Object temperature range	-10°C to 150°C (-14°F to 302°F)
Thermal sensitivity	<100 mK
Accuracy	±2°C (±3.6°F) or ±2% of reading
Image frequency	9 Hz
Field of view (FOV)	48° × 37°
Focus	Fixed
Image modes	Infrared, Visual, MSX
Area box	6 boxes with min/max/average
Spotmeters	6
Image file format	Standard JPEG, 14-bit measurement data included
Image streaming	Motion JPEG, MPEG-4, h.264
Storage media	Built-in memory for image storage
Ethernet protocols	Ethernet/IP, Modbus TCP, TCP, UDP, SNTP, RTSP, RTP, HTTP, ICMP, IGMP, sftp, SMTP, SMB (CIFS), DHCP, MDNS (Bonjour)
Alarm function	Set up to 5 alarms on any selected measurement function
Alarm output	Digital Out, store image, file sending (ftp), email (SMTP), notification



FLIR SV88 and SV89 Vibration Monitoring Solution Kits

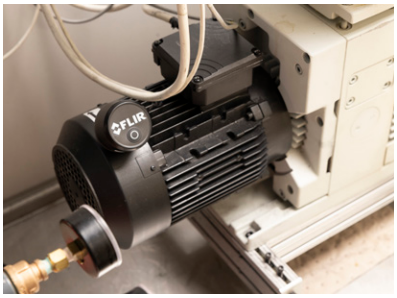
FLIR SV8x vibration monitoring kits continuously analyze vibrations from critical equipment, allowing you to detect faults such as misalignment or spot potential issues such as bearing defects and gear damage. Featuring multi-communication protocols, rugged, IP66 rating and wireless capability, these vibration monitors allow you to make critical, data-driven decisions that ensure the continued, consistent functioning of valuable assets.

SV89-KIT

Key Features:

- Gain detailed insights into equipment's vibrational characteristics through precise measurements of GRMS, VRMS, peak, crest factor, kurtosis, skewness, and standard deviation
- Identify patterns, trends, potential failure modes, and the severity of detected issues in your equipment
- Easily deploy throughout industrial environment thanks to wireless connectivity
- Web based GUI ensures complete control over collection of vibration data, deployment of sensors, and management of integrations on Gateway
- Rely on the monitor's performance in demanding conditions—including moisture, dust, and debris—thanks to IP66 rating
- Integrate with advanced analysis tools through multi-communication protocols (Modbus, MQTT, OPC UA)

SENSOR SPECS	SV88	SV89
Sensitivity range	±16 g	±50 g
Frequency range	10 Hz to 5 kHz	10 Hz to 10 kHz
Output data	5 KHz, X/Y/Z: 19,200 raw data	10 KHz, Z: 12,800 raw data
Vibration analysis data	Grms, Vrms, ISO10816, Peak, Crest Factor, Kurtosis, Skewness, Standard Deviation, FFT	
Capture rate	Configurable: 1 min (minimum) to 1 day (maximum	
Temperature range	Display measurement trend of contact temperature -20°C to 80°C (-4°F to 176°F)	
Range (during a session)	Up to 50 m (160 ft), line of sight	
GATEWAY SPECS		
Processor	ARM Cortex-A7	
Memory	DDR3L 512 MB	
Storage	32 MB NOR Flash	
Communication protocol	MQTT, Modbus, OPC UA	
Operating systems	Built-in webserver (Linux)	
Output data	Vibration analysis data: Grms, Vrms, (ISO10816), Peak, Crest Factor, Kurtosis, Skewness, Standard Deviation, FFT	



FLIR IRP-1 Indoor Inspection Port

Designed specifically for use with the FLIR 80° thermal camera lens, the FLIR IRP-1 lens-free port reduces the risk of arc flash, improves worker safety, and increases inspection efficiency. Technicians can execute predictive maintenance inspections faster, reducing the time needed to take on and off heavy arc-flash PPE or remove and replace electrical panels—plus, there's no need to access your thermal camera settings menu to input transmission and IR window temperature correction factors. IRP-1 offers quick, precise connection with the FLIR 80° lens (T300805) for a super-wide view in confined spaces. Easy and inexpensive to install, this inspect port ensures companies comply with electrical codes (e.g. NFPA 70B) requiring direct line of sight inspection of all electrical equipment.

Electrical Safety Product

Key Benefits:

- Provides instant access to energized equipment without opening the panel door and compromising safety
- Ensures accurate thermal measurements with no glass, plastic, or mesh to compromise the image
- Designed for quick and precise connection with a FLIR 80° lens
- Decreases the risk of arc flash incidents and resultant injuries
- Installs easily using standard knockout punches, no screws

SPECIFICATIONS	IRP-1
Viewing aperture diameter	12.5 mm (0.49 in)
Viewing aperture area	123 mm² (0.1885 in²)
NEMA environment type	Standard 250
Maximum operating temperature	100°C (212°F)
Body material	Body: Plastic (PC/PBT) Cover: Anodized aluminum Hardware: Stainless steel
Required hole diameter	21 mm (0.827 in)
Certifications	CE, UL (UL50V), IP67

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 corrosion.

Electrical Safety Product

Key Benefits:

- Minimize time/cost of complying with NFPA 70B 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-3C-XT*	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)
Viewing aperture diameter	45 mm (1.77 in)	69 mm (2.71 in)	89 mm (3.50 in)	45 mm (1.77 in)	69 mm (2.71 in)	89 mm (3.50 in)
Viewing aperture area	1590 mm² (2.46 in²)	3739 mm² (5.79 in²)	6221 mm² (9.64 in²)	1590 mm² (2.46 in²)	3739 mm² (5.79 in²)	6221 mm² (9.64 in²)
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		
Greenlee punch	76BB	739BB	742BB	76BB	739BB	742BB

*IRW-3C-XT has extended thread with a total depth of 24.6 mm (0.97 in)

FLIR IRW-xPC/xPS Large Format IR Windows

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

Electrical Safety Product

SPECIFICATIONS	IRW-6PC	IRW-12PC	IRW-24PC	IRW-12PS	IRW-24PS
Overall height	21.8 cm (8.6 in)	20.6 cm (8.1 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)	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)	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)	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)	

FLIR Product Service and Support

Extended warranties, calibration packages, and product services from FLIR help ensure your camera is functioning well, properly calibrated, and protected from material defects.

FLIR PROTECT warranty options range from a three-year extension to premium plans that include one free service with calibration, discounts on additional service needs, and fast delivery of loaner cameras.

FLIR CARE calibration services range from performance verification to priority calibration and adjustment, with a multi-point inspection as well as traceable calibration included at every level to ensure your camera is accurate and performing to factory specifications.

Finally, **FLIR Professional Services** delivers comprehensive remote and on-site services customized to meet the unique demands of every project, plus in-depth system training to empower your team.

FLIR TG-Series Spot Thermal Cameras

Bridging the gap between single spot IR thermometers and FLIR's legendary infrared cameras, FLIR TG-Series cameras—the TG268 and TG298—give you the advantage of thermal imaging to help you discover temperature issues you can't see with typical spot radiometers. These spot thermal cameras 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. Patented FLIR MSX® enhancement improves image clarity, while the laser-projected bullseye target aids in pinpointing areas of concern.

Key Features:

- Super Resolution upscales native thermal resolution to 320 × 240, delivering greater detail and improved sharpness
- True thermal detection – best-in-class image quality
- Wide field-of-view provides a comprehensive view for faster, easier inspections
- Simple to operate, with pull-trigger to activate lasers or freeze images
- Rugged and reliable – withstands a 2-meter drop
- Multi-point laser with circle and center spot ("bullseye") for easier subject targeting
- USB-C port for downloading images and charging

SPECIFICATIONS	TG268	TG298
IR Resolution	160 × 120 (19,200 pixels)	
Object temperature range	-25°C to 400°C (-13°F to 752°F)	-25°C to 1080°C (-13°F to 1976°F)
Thermal sensitivity	<50 mK	
Accuracy	±2.5°C (±3.6°F) or ±2.5% of reading	
Image frequency	9 Hz	
Field of view (FOV)	44° × 57°	
Focus	Focus free	
Image modes	Infrared, Visual, MSX	
Spotmeters	Center spot	
Contact Measurement	Type-K, -30°C to 390°C (-22°F to 734°F), ±1% or 3°C accuracy	NA
Image file format	JPEG with spot temperature	
Flashlight	Bright LED flashlight	
Laser	Class 1 bullseye laser visually highlights the measurement area; button-activated	
Communication interfaces	USB-C, Bluetooth® (METERLiNK® compatible)	
Certifications	CE, CB, RCM, IEC60825-1, FDA, UL, CEC, NRCan	

FLIR TG54-2/TG56-2 Spot IR Thermometers

The TG54-2 and TG56-2 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 TG54-2 and TG56-2 can measure smaller targets from a safer distance. Achieve pinpoint precision with infrared technology, Class II laser sighting, and a maximum IR temperature of 1300°C (2372°F). These spot IR thermometers are built to withstand a drop of 3 m (9.8 ft) and IP65 rated for reliable performance in demanding industrial applications. The TG54-2 and TG56-2 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
- Intuitive menu structure allows easy access to settings
- Easy emissivity selection with predetermined levels and custom adjustment
- Rugged, industrial design that can withstand up to a 3-meter drop (TG54-2)
- Bright LED worklight to help you see your target in poor lighting conditions
- TG56-2 includes a Type-K thermocouple for contact temperature readings

SPECIFICATIONS	TG54-2	TG56-2
Distance-to-spot ratio (D:S)	20:1	30:1
Range	-30°C to 850°C (-22°F to 1562°F)	-30°C to 1300°C (-22°F to 2372°F)
Basic accuracy	±1°C (±1.8°F) or 1% of reading	
Emissivity	0.01 to 1.00 with 5 presets	
Resolution	0.1°C / 0.1°F	
Response	≤250 ms	
Spectral response	8 to 14 µm	

FLIR EV45-NACS/EV45-T2
EV Charger Test Adapters

Designed to test charging stations and AC wall connections for electric vehicles, FLIR's EV45-NACS (for NACS plug) and EV45-T2 (for IEC 62196-2 Type 2 plug) allow you to check current output and verify performance at commercial and residential charging stations. Maintain EV charging station safety by checking Protective Earth (PE), electrical wiring, and the charge current interrupt device (CCID or RCD). Verify output charging voltages with a FLIR DM286 IGM multimeter (sold separately or with complete EV Kit), which connects via Bluetooth® to the FLIR METERLiNK® app for instantaneous documentation, reporting, and sharing of results.

Key Features:

- Diagnose and troubleshot Level 1/2 and Mode 1/2/3 EV charging stations
- Verify protective earth (PE) and electrical wiring integrity
- Test well as charge current interrupt device (CCID) or residual current device (RCD)
- Measure the maximum current output for the EV charger
- Ensure compliance with CAT II 300 V and IEC 61851-1 EV safety standards

SPECIFICATIONS	EV45-NACS	EV45-T2
Built-in plug	NACS	Type 2
PE pre-test	Pass / Fault (>50 V AC/DC between PE conductor and touch sensor)	
PP State indication	Open, 13 A, 20 A, 32 A, 63 A	
CP State simulation	A (Disconnected) , B (Connected) , C (Charging), D (Charging w/ ventilation), E (Error)	
Voltage phase indication	L1, L2	L1, L2, L3
CP Error (E state) simulation	Pass / Fault (CP signal short-circuited to PE)	
PE Error simulation	Pass / Fault (interruption of PE conductor)	Pass / Fault (interruption of PE conductor)
RCD/CCID Trip test	Pass / Fault (Test RCD/CCID activation once tripped)	
Outputs (for test purposes only)		
Measuring terminals	L1, L2/N, PE for EV45-NACS Max. 250 V (Single Phase), 50 / 60 Hz, CAT II 300 V, Max. 10 A	L1, L2, L3, N, PE for EV45-T2 Max. 250 V (Single Phase) / 430 V (3 phase), 50 / 60Hz, CAT II 300 V, Max. 10 A

EV45-NACS

EV45-T2

3 YEAR FULL PRODUCT WARRANTY*

FLIR EV-KIT-1/EV-KIT-2 EV Charger Test Kits

Ensure your charging stations meet the highest safety and performance standards while reducing downtime and maintenance costs with the FLIR EV test kits. Featuring the EV45-NACS (KIT-1) or EV45-T2 (KIT-2), FLIR DM286, test leads, and a Type 1 converter, these kits include everything you need to inspect and verify level 1 or level 2 electric vehicle AC charging stations (EVSEs).

*For DM286 specifications, please see page 23

EV-KIT-1

FLIR PV Series for Solar Panel Testing

The FLIR PV Series is designed for solar professionals, utility companies, and manufacturers who want to ensure optimal performance, compliance, and long-term reliability of solar panel installations. These tools are essential for accurate solar panel testing, ongoing solar panel check-ups, and maintaining high standards in the field.

FLIR PV78 Solar Irradiance and Temperature Meter

The FLIR PV78 is designed for solar site surveys, panel installation, and maintenance of photovoltaic systems, allowing for instant measurements to determine solar irradiation (W/m²) as required by the IEC 62446-1 Electrical Safety of PV Installations standard. Measure panel temperatures, verify the inclination of a roof or panel, or use the compass to check panel facing direction. The PV78 connects via Bluetooth® to the FLIR METERLiNK® app for instantaneous documentation, reporting, and sharing of results from the field.

Key Features:

- Instantly measures solar irradiance up to 1400 W/m² as required by IEC 62446-1 standard
- Measures panel temperature, array direction, and inclination
- Connects with the METERLiNK mobile app for viewing, reporting on, and sharing data
- Supports continuous measurements with external temperature probe and mounting bracket
- Offers high contrast, large LCD that's easy to read in direct sunlight

MEASUREMENT	RANGE	ACCURACY
Irradiance	50 W to 1400 W/m²	±5%
Inclination angle	–90° to 90°	±3°
Temperature from meter	–10°C to 50°C (14°F to 122°F)	±1.5°C (±2.7°F)
Temperature from external probe	–30°C to 100°C (–22°F to 212°F)	±1.5°C (±2.7°F)
Compass	0° to 360°	±7°

FLIR PV48 Solar Irradiance and Temperature Meter

The FLIR PV48 allows you to verify the maximum power and performance of solar panels, measuring parameters such as maximum power, voltage, current, open circuit voltage (VOC), short circuit current (ISC), and ambient temperature. The I-V curve tracer affords visual analysis of up to 800 W per panel, ensuring optimal solar panel performance. With its high-contrast LCD screen that's easy to read in direct sunlight, the PV48 is a practical solution for in-depth solar panel testing.

Key Features:

- Measures maximum power, temperature, and I-V curve
- Provides graphical data analysis with I-V curve up to 800 W per panel
- Diagnoses and troubleshoots solar panels with included MC4 PV plugs and clips
- Offers high contrast, large LCD that's easy to read in direct sunlight

MEASUREMENT	RANGE	ACCURACY
Maximum Power Value (Pmax)	0 W to 800 W	±5%
Voltage at MMPT point (Vmax)	0 V to 60 V	±5%
Current at MMPT point (Imax)	0 A to 30 A	±5%
Open Circuit Voltage (VOC)	0 V to 60 V	±1%
Short Circuit Current (ISC)	0 A to 30 A	±1%
Device Temperature Protection	0°C to 60°C	±3%

FLIR PV-KIT-1 AND PV-KIT-2

These solar tool kits include the FLIR TG268* (Kit 2), FLIR CM78-PV* clamp meter, PV78, and PV48 for routine solar panel testing and scheduled solar panel check-ups. This compact and dependable kit combines essential tools into one reliable solar PV testing kit for professionals conducting field diagnostics.

Key Features:

- Measure solar string DC power and performance up to 1500 kVA at CAT III 1500 V rating
- Safely locate and identify overheating components with the integrated non-contact IR thermometer with laser pointer
- Make instant measurements to determine solar irradiance as required by the IEC 62446-1 standard
- Measure solar irradiance with panel temperature, array direction and inclination
- Wireless METERLiNK® connectivity to quickly collect and share your findings from the field

*For FLIR TG268 specifications, see page 17. For CM78-PV specifications, please see page 21

FLIR CM276 Clamp Meter and Thermal Imaging Camera with METERLiNK®

The FLIR CM276 clamp meter guides you to the source of electrical issues in facilities, pumps, motors, and solar panels. An on-board thermal camera powers IGM™ (Infrared Guided Measurement), helping you quickly identify the hot spots that indicated overloaded circuits, and reducing inspection and troubleshooting time on solar photovoltaic (PV) systems. Compatibility with the METERLiNK® app provides quick and efficient capture of readings, images, and videos for analysis, trending, and sharing.

Electrical Safety Product

10 YEAR FULL PRODUCT WARRANTY*

METER LiNK Bluetooth

Key Features:

- Safer, non-contact thermal inspections with IGM
- Easily interpret thermal scene with image-enhancing FLIR MSX® (Multi-Spectral Dynamic Imaging)
- Faster troubleshooting, repair, and reporting with advanced connectivity to the METERLiNK app
- Streamlined inspections and efficient analysis of PV cell issues
- Ensure accurate measurement of AC/DC voltage up to 1000 V (1500 V with optional TA85/TA86 test leads)
- Ideal for electrical service providers who incorporate thermal imaging and visual documentation into their services, aligning with NFPA 70B requirements

SPECIFICATIONS	MEASUREMENT	BASIC ACCURACY
IR resolution:	160 × 120 (19,200 pixels)	
Thermal sensitivity/NETD:	150 mK	
Image modes:	Thermal, MSX, digital	
Field of view:	44° × 57°	
IR temperature measurement:	-10°C to 300°C (14°F to 572°F)	
IR temperature accuracy:	±3°C (5.4°F) or ±3% of the reading; whichever is greater	
AC/DC current:	Range 600.0 A	±2.0%
AC/DC voltage:	Range 1000 V	±1.0%
VFD AC current:	Range 600.0 A	±2.0%
VFD AC voltage:	Range 1000 V	±1.0%
Capacitance:	Range 1000 µF	±1.0%
Diode:	1.5 V	±1.5%
PV DC voltage:	(with TA85/TA86): Range 1500 V	±2.0%
PV DC power:	Range 900 kVA	±2.0%
Jaw opening:	35 mm (1.37 in)	

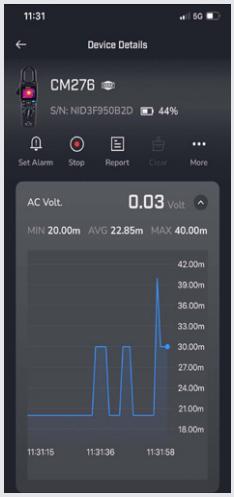
FLIR TA85 Solar Photovoltaic Test Leads for FLIR CM276 Clamp Meter

FLIR TA86 MC4 Solar Photovoltaic Test Plugs for FLIR CM276 Clamp Meter

Monitor key readings and share them easily with FLIR METERLiNK®

The FLIR METERLiNK allows you to connect up to seven compatible test and measurement tools to your smart device via Bluetooth®, so you can monitor a variety of electrical and environmental conditions simultaneously. Capture images and monitor measurement data in real time, with min, max, and average readings and preset alarms. With METERLiNK, you can compare log files across any combination of meters for effective troubleshooting, and share the information through detailed, custom reports.

METER LiNK Bluetooth



FLIR CM78-PV Solar Clamp Meter

The FLIR CM78-PV supports commercial and industrial solar inspections. Take photovoltaic (PV) DC measurements up to 1,500 V using test leads or use the clamp jaw to measure up to 1,000A DC or AC. The built-in non-contact infrared thermometer aids in troubleshooting panels, conduits, and motors allowing for issue diagnosis and confirmation through contact measurements or by capturing intermittent faults with its datalogging function. FLIR METERLiNK-compatible, the CM78-PV connects via Bluetooth® to your mobile device for instant documentation, reporting, and sharing.

Key Features:

- Features inrush AC current measurement, variable frequency drive (VFD) mode, True RMS, and Low Impedance (LoZ) mode
- Measures solar string DC power and performance up to 1500 kVA at CAT III 1500 V rating
- Connects with the METERLiNK mobile app for viewing, reporting on, and sharing data
- Supports continuous measurements with external temperature probe and mounting bracket
- Offers high contrast, large LCD that's easy to read in direct sunlight

MEASUREMENT	RANGE	ACCURACY
AC voltage	1000 V	±1.0%
DC voltage	1500 V	±1.0%
VFD AC V	1000 V AC	±2.0% at 45 Hz to 65 Hz
AC LoZ V	1000 V	±1.5%
DC LoZ V	1500 V	±1.5%
AC Inrush A	1000 A	±3.0%
Frequency	60 kHz	±1.0%
Resistance	60 KΩ	±1.0%
Capacitance	6000 µF	±3.0%
Diode test	3.0 V	±1.5%

FLIR CM57-2 Flexible Clamp Meter

Take current measurements in cramped areas with ease with the FLIR CM57-2 Flexible Clamp Meter. Its 18-inch (45.72 cm) flexible coil clamp allows you to take measurements in tight spots, making it ideal for multiple-conductor measurements and double-wrap requirements. Stream live data to the METERLiNK® app on your mobile device so you can compare log files, customize alarm thresholds, create reports, and share readings with team members.

Key Features:

- Operates at temperatures as low as 32°F or as high as 122°F
- Easy to grip but strong enough to handle a 2-meter drop
- Provides critical features including AC 3000A maximum measurement and True RMS
- Accepts up to a 12 cm (4.7 in) max conductor

MEASUREMENT	RANGE	ACCURACY
AC/DC voltage (digital low-pass filter/VFD)	600 V	±1.0%
AC voltage (digital low-pass filter/VFD)	600 V	±1.2%
Frequency	50-400 Hz	±1.0% nominal
Resistance	60 kΩ	±1.0%
Capacitance	2500 µF	±2.0%
Diode	2.0 V	±1.5% nominal
Jaw opening	30 mm max	

FLIR TA74 Flexible Clamp Adaptor

Designed to add capabilities and simplify challenges, FLIR 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 18 in. (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	TA74
Flexible Conductor Length	18 in. (45.7 cm)
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)
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 VT8-1000 Voltage, Continuity, and Current Tester

These high-quality voltage, continuity, and current testers are 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 that can easily get the job done.

Key Features:

- Take measurements in tight spaces with the optimized jaw design, and measure large-diameter cables with the wide jaw opening
- Measure True RMS AC/DC voltage and current, continuity, resistance, and capacitance
- Improve accuracy of readings with True RMS measurements
- Detect live AC voltages with the built-in non-contact voltage (NCV) detector
- Measures up to 200 A/1000 V with the CAT III-1000 V/CAT IV-600 V safety rating

SPECIFICATIONS	VT8-1000
AC/DC current range	200 A
AC/DC current resolution	0.1 A
AC (50 to 60 Hz) / DC current accuracy	±2.5%
AC/DC voltage range	1000 V
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)
Additional measurement functions	DCA zero, relative mode (AC/DC voltage, AC current, and capacitance), data hold

FLIR CM85-2 True RMS Power Clamp Meter (Wireless)

The FLIR CM85-2 offers the advanced power analysis and variable frequency drive (VFD) filtering functions you need to troubleshoot electrical/mechanical equipment easily. Analyze voltage in complex machinery by including harmonics, inrush, current, and phase rotation testing with a wide AC/DC voltage range. Stream live data to the METERLiNK® app on your mobile device so you can compare log files, customize alarm thresholds, create reports, and share readings with team members.

Key Features:

- Ensure accurate measurements of both current and voltage on VFD-controlled equipment
- Take multiple conductor measurements with True RMS AC Current up to 1000 Amps
- Work easily in any conditions with dual LED lights and ergonomic, industrial design
- Stream live readings in real time from the meter to the METERLiNK app over Bluetooth

SPECIFICATIONS	MEASUREMENT	BASIC ACCURACY
AC current	99.99 A 999.9 A	± (2%+5) ± (2%+5)
AC voltage	99.99 V 999.9 V	±(1.0%+5) ±(1.0%+5)
DC current	99.99 A 999.9 A	±(2%+0.5 A) ±(2%+5)
DC voltage	99.99 V 999.9 V	±(0.7%+2) ±(0.7%+2)
Frequency	20.00 to 9.999 kHz	±(0.5%+3)
AC watts	9.999 kW (10 V, 5 A min) 99.99 kW (10 V, 5 A min) 999.9 kW (10 V, 5 A min)	±(3% + 10 digits) ±(3% + 10 digits) ±(3% + 10 digits)
DC watts	9.999 kW (10 V, 5 A min) 99.99 kW (10 V, 5 A min) 999.9 kW (10 V, 5 A min)	±(3% + 0.05 kW) ±(3% + 0.5 kW) ±(3% + 10 digits)
Resistance	999.9 Ω to 99.99 kΩ	±(1.0%+5) to ±(1.0%+3)
Capacitance	3.999 µF to 3.999 mF	±(1.9%+8)
Diode	0.40 to 0.80 V	±0.1 V
Harmonics		
Total harmonic distortion ACA/ACV	99.9%	±(3.0% + 10 digits)
Harmonic distortion	H01–H12 99.9%	±(5% + 10 digits)
Harmonic distortion	H13–H25 99.9%	±(10% + 10 digits)
Jaw opening	45 mm (1.77 in)	

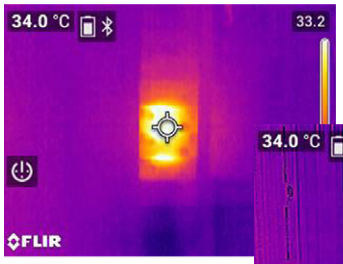
FLIR DM286 Industrial Thermal Imaging Multimeter with IGM™

Electrical Safety Product

The FLIR DM286 is the ultimate tool for safe, accurate, and efficient electrical inspections. The on-board thermal camera with MSX® enhancement makes it easy to safely identify hot spots and potential electrical faults before any contact with equipment. Stream live data to the METERLiNK® app on your mobile device so you can compare log files, customize alarm thresholds, create reports, and share readings with team members.

Key Features:

- Find electrical faults easily with 19,200 pixel thermal camera
- Safely check for live connections using non-contact temperature measurement
- Removes high-frequency interference with reading through VFD mode
- Includes high-quality test probes and a Type-K thermocouple
- Offers CAT IV - 600 V, CAT III - 1000 V safety rating



Without MSX

With MSX

THERMAL IMAGING SPECIFICATIONS	
IR resolution	160 × 120 (19,200) pixels
Temperature sensitivity /NETD	≤150 mK
Temperature measurement range	-5°C to 300°C (23°F to 572°F)
Temperature measurement accuracy	3°C or 3%
Field of view	57° × 44°
Laser	Class I (red) laser pointer
Focus	Fixed

MEASUREMENT SPECIFICATIONS	
AC/DC voltage	1000 V RMS AC: ±(1.0%+3) DC: ±(0.09%+3)
AC/DC voltage (mV)	600 V AC: ±(1.0%+3) DC: ±(0.2%+3)
VFD AC voltage	1000 V AC RMS ±(1.3%+4) at 45–65 Hz
AC/DC amps	10A AC RMS ±(1.5%+3) 10A DC ±(1.0%+3)
Resistance	6.00 MΩ ±(0.9%+5) 60.00 MΩ ±(3.0%+5)
Continuity check threshold	10-100 Ω
Capacitance	10.00 mF ±(4.0%+5)

FLIR DM93-2 Industrial Digital Multimeter with METERLiNK®

The FLIR DM93-2 is a world-class digital multimeter that can help you accurately analyze non-traditional sine waves and noisy signals found in VFD-controlled equipment. Stream live data to the METERLiNK® app on your mobile device so you can compare log files, customize alarm thresholds, create reports, and share readings with team members. With its durable design and powerful worklight, the DM93-2 is up for your electrical challenge.

Key Features:

- Troubleshoot wide range of electrical problems quickly and efficiently
- Clearly analyze non-traditional sine waves and noisy signals
- Avoid ghost voltage error readings with low Impedance (LoZ) mode
- Work in dim lighting with ease, using the powerful LED worklights
- Capture readings, create reports and share them with your team via the METERLiNK app

MEASUREMENTS	RANGE	BASIC ACCURACY
AC voltage	1000.0 V	±0.5%
VFD AC voltage	1000.0 V	±0.5%
DC voltage	1000.0 V	±0.05%
AC current	10.000 A	±1.0%
DC current	10.000 A	±0.2%
Resistance	40.00 MΩ	±0.2%
Continuity threshold	30 Ω	±0.2%
Capacitance	40.00 mF	±0.9%

FLIR IM75-2 Insulation Tester and Digital Multimeter with METERLiNK®

The FLIR IM75-2 is an all-in-one digital multimeter plus handheld insulation tester for installation, troubleshooting and maintenance for professionals. Gain in-depth understanding of insulation issues by performing tests instantly, continuously, and over a timed duration. Stream live data to the METERLiNK® app on your mobile device so you can compare log files, customize alarm thresholds, create reports, and share readings with team members.

Key Features:

- Constructed to make any electrical problem easier to troubleshoot.
- Powerful LED worklights eliminate the need for a flashlight in dim lighting.
- Allows for testing of insulation voltage up to 1 kV.
- Capture readings, create reports and easily share them with your team
- Check voltage and frequency at once with dual display.
- Set custom alarm thresholds to provide additional assurance of operating ranges while performing testing procedures.

MEASUREMENTS	MAX RANGE	BASIC ACCURACY
Insulation resistance	4 MΩ to 20 GΩ	±(1.5%+5) to ±(10.0%+3)
Insulation test voltages	50, 100, 250, 500 and 1000 V	±3.0%
AC/DC voltage	1000 V	±(1.5%+5)/±(0.1%+5)
VFD AC voltage	1000 V	±(1.5%+5)
Earth bond resistance	40.00 Ω to 40.00 kΩ	±(1.5%+5) to ±(1.5%+3)
Capacitance	1000 µF / 10.00 mF	± (1.2%+2) / ± (1.2%+20)
Frequency (ACV)	400.0 Hz to 40.00 kHz	±5 digits
Continuity	400.0 Ω	±(0.5%+2)

FLIR DM66 TRMS Multimeter with VFD Mode

The FLIR DM66 is the ideal digital multimeter for automation field service or electronics technicians, providing the comprehensive feature set technicians need to quickly troubleshoot electrical issues. Easy to use and built to last, the DM66 offers long-term stability for everyday use in electrical applications including AC/DC measurement, non-contact voltage detection, and temperature measurement (included Type K thermocouples). Drop-tested, IP40 rated, and offering a CAT IV-300V/CAT III-600V safety category rating, this multimeter can handle rugged environments for safe, accurate operation.

Key Features:

- Measure both AC/ DC voltage and current (A, mA, µA)
- Diagnose faults with broad DMM test functions including variable-frequency drive (VFD) mode
- Operate the meter with one hand, thanks to compact design and easy-to-access buttons
- Work efficiently using integrated non-contact voltage detector with a flashing backlight and audible indicator

MEASUREMENTS	MAX 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 Test	3.000 V	±0.9%
Frequency Counter	50.00 kHz	±0.1%
Temperature (Type-K Thermocouple)	-40°C to 400°C (-40°F to 752°F)	±1.0% + 2°F/1°C

FLIR VP5x-2 Non-Contact Voltage (NCV) Detector + Flashlight

The FLIR VP5x-2 is a CAT IV-rated, non-contact voltage detectors designed to reliably detect voltages on the latest tamper-proof outlets and electrical systems. Toolbox-tough, 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
- Includes two AAA batteries

SPECIFICATIONS	VP50-2	VP52-2
Voltage ranges	90 to 1000 V AC	190 to 1000 V AC
Category rating	CAT IV-1000 V	
Frequency range	45 to 65 Hz	
Alarm notification	Sound, Flashing LED, Vibration	
On/Off switch	Yes	

FLIR VS80 High-Performance Videoscope Kits

The rugged, versatile VS80 Videoscope is the perfect solution for inspecting difficult to reach or unsafe locations. With one or more of the VS80 videoscope probes, you can inspect everything from industrial equipment to HVAC/R systems or vehicle engines. Easily maneuver the narrow camera probes into small openings and tight spaces, and view sharp, vivid images and videos from the large, 7-inch touchscreen display. Record videos or still images to document your finding for reports or to share with repair technicians.

Key Features:

- View detailed imagery with visual depth of field extending from 10 mm to infinity
- Drop-tested and IP rated for splash and water resistance
- Work for 8+ hours on one battery charge
- Choose from 7 small-diameter probe options to respond to any inspection requirement, including HD and thermal camera probes
- Capture up to 1280 × 720 HD resolution still images and video with audio
- View live video on an external monitor or screen using the HDMI output

SPECIFICATIONS	VS80
Display resolution	1024 × 600 pixels
Display size	178 mm (7 in)
Battery life (continuous)	8 hours (integrated)
Video file format	MPEG-4
Video/image transfer	SD card or USB
Camera diameter range	4.5 mm to 19 mm
Camera focal length options	Long view or short view macro
Camera length range	1 m to 25 m (3.28 ft to 82 ft)
Certifications	CE, FCC

VS80-KIT-8

Available Kits:

- **VS80-KIT-1:** General purpose, 5.5 mm × 1 m camera probe
- **VS80-KIT-2:** 2-way articulating, 4.5 mm × 1 m camera probe
- **VS80-KIT-5:** Kit with plumbing spool and 10 mm × 25 m camera probe
- **VS80-KIT-6:** HD 5.5 mm × 1 m camera probe
- **VS80-KIT-7:** Dual HD, 4.9 mm x 3 camera probe
- **VS80-KIT-8:** 4-way articulating, 3.9 mm x 2 m camera probe
- **VS80-IR21:** IR thermal, 19 mm × 1 m camera probe

FLIR VS290 Thermal Videoscope Kits

The FLIR VS290 is an industrial-grade thermal videoscope enhanced with FLIR MSX® to help you accurately target potential issues in electrical, mechanical, or building applications. Choose one of three field-replaceable probes designed for inspecting hard to reach areas, so you can find problems quickly and take corrective action. A bright LED worklight (VS290-32 & VS290-33) helps navigate dark environments such as attics, crawlspaces, and underground utility vaults.

Key Features:

- Identify problems faster with the 160 × 120 thermal imager and 2 MP visual camera
- Easily maneuver 2 m or 1 m probes into small spaces where thermal cameras can't reach
- Use color alarms (Isotherms) to quickly identify areas of concern
- Improve workflow by analyzing images and creating reports in FLIR Thermal Studio Pro
- IP67 camera tips, IP54 videoscope unit help protect against dust and water
- CAT IV 600 V rated probes help make electrical inspections safer

SPECIFICATIONS	VS290
IR resolution	160 × 120
Object temperature range	-10°C to 400°C (14°F to 752°F)
Thermal sensitivity	<1.0°C
Accuracy	±3°C (±5.5°F) or ±3% of reading
Image frequency	8.7 Hz
Field of view	57° × 44°
Focus	Focus free
Image modes	Thermal, visual, MSX® (VS290-32 & VS290-33 only)
Spotmeters	Center, hot spot, cold spot
Image file format	Standard JPEG, 14-bit measurement data included
Video recording	MPEG4, saved to SD card
Communication interfaces	USB Type-C
Certifications	ETL (EN 61010-1), CE, RCM, FCC, WEEE, RoHS, REACH

Available Kits:

- **VS290-21:** 1-meter probe, 19 mm rounded, forward-viewing thermal camera
- **VS290-32:** 2-meter probe, 11 mm rectangular, side-viewing thermal + visual camera
- **VS290-33:** 2-meter probe, 19 mm rounded, side-viewing thermal + visual camera

FLIR MR277/MR265 Imaging Moisture Meters with MSX® and METERLiNK

Step up to advanced moisture imaging with the FLIR MR277 and MR265, our first FLIR building inspection systems combining the advantages of Infrared Guided Measurement (IGM) and FLIR MSX enhancement with advanced moisture detection. These moisture meters can help you quickly scan and target problem areas, visually guiding you to the spot where you can confidently take moisture measurements, analyze readings, and ensure problems are fixed. Import your findings into FLIR Thermal Studio software to create and share professional reports.

Common Features of the MR277 & MR265

- Crisp 19,200 pixels (160 × 120) thermal imagery helps you quickly identify moisture in walls, ceilings, and floors
- Patented FLIR MSX image enhancement adds details and perspective to images
- Included pin probe measures 11 material groups
- Target the exact source of problems with the integrated laser pointer

MR277 Only

- Take comprehensive readings with pinless meter, pin probe, and field-replaceable humidity/temperature sensor
- Calculate parameters based on multi-sensor input, including grains per pound, vapor pressure, and dew point

The Original IGM™ INFRARED GUIDED MEASUREMENT

YEAR 10 FULL PRODUCT WARRANTY*

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 imager guides you to potential moisture areas
- 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

MR176 only

- Customize thermal images: select which measurements are integrated (including moisture, temperature, and dew point)
- A lock image setting prevents extreme hot and cold temperatures from interfering with images while scanning for issues
- Field-replaceable temperature/ relative humidity sensor

The Original IGM™ INFRARED GUIDED MEASUREMENT

YEAR 10 FULL PRODUCT WARRANTY*

FLIR MR77 5-in-1 Moisture Meter with METERLiNK®

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, with compact, rubberized 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 MR59 Ball Probe Moisture Meter with METERLiNK®

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)

FLIR MR60 Combination Pin/Pinless Moisture Meter

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:

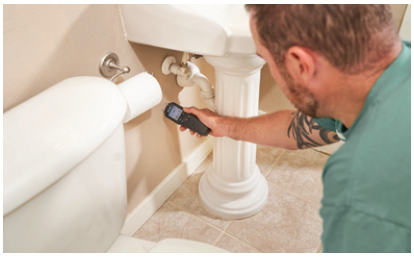
- Save up to 10,000 screenshots to transfer and view on a PC
- Programmable high-moisture alarm with audible and color/visual alerts
- Bright, easy-to-read display
- Includes FLIR Tools® professional reporting software
- Rugged design that can withstand a 3-meter drop

FLIR 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

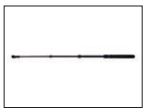
Key Features:

- 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, 2nd 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'

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.

MR13 Temperature/RH Sensor
Designed for use with the FLIR MR277 to take accurate temperature and humidity measurements. A metallic screw secures the probe in place.



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

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.

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

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

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

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

MR10-2 Protective Case
Safeguard your FLIR Test and Measurement instruments with this durable EVA protective case.

MR12 Ball Probe Moisture Sensor
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 C3-X 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 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 Pro Infrared Camera with Ignite™ Cloud, and FLIR MR08 Hammer and Wall Cavity Probe

EXTECH®

What Do You Need To Measure Today?

NO MATTER HOW DEMANDING YOUR PROJECT REQUIREMENTS, WE HAVE THE SOLUTION TO HELP GET THE JOB DONE!

EXTECH meters and testers help you ensure uptime, maximize productivity and verify compliance. Whether used as a component of an effective predictive maintenance program or as a key tool for a rapid response repair team, EXTECH instruments are the meters of choice for professionals who need to solve problems.

Find all your EXTECH products on Extech.com

EX820A/EX840A 1000 A True RMS Clamp Meters with IR

Clamp meters with built-in non-contact infrared thermometer

- 43 mm (1.7 in) jaw opening accommodates one 750 MCM conductor or two 500 MCM conductor
- Peak hold captures inrush currents and transients
- Multimeter functions include AC/DC Voltage and Current, Resistance, Capacitance, and Frequency
- Quickly locate hot spots on motors and electrical devices with non-contact IR thermometer or Type-K thermocouple
- 6000-count backlit display and laser pointer improve visibility in dimly-lit areas
- Activate auto-ranging with manual range button
- Includes test leads, one 9 V battery, general purpose Type-K probe, and case
- EX820A measures AC current; EX840A includes both AC and DC current measurements

Specifications	Measurement	Basic Accuracy
IR temperature (IR)	-50°C to 270°C (-58°F to 518°F)	±2.0% rdg or ±4°F/±2°C
AC current	0.1 A to 1000 A	±(2.5% + 8d)
DC current	0.1 A to 1000 A (EX840A)	±2.5%
AC voltage	0.1 mV to 1000 V	±1.5%
DC voltage	0.1 mV to 1000 V	±1.5%
Resistance	0.1 Ω to 60 MΩ	±1.5%
Capacitance	0.001 nF to 40 mF	±3.0%
Frequency	0.001 Hz to 100 kHz	±1.5%
Type-K temperature	-20°C to 760°C (-4°F to 1400°F)	±3% rdg+9°F/5°C
LoZ	Yes	
Inrush	Yes	
Diode	Yes	
True RMS	Yes	

EX820A

EX840A

MA440/MA443/MA445 400A Clamp Meters + NCV

Three models to choose from, with or without True RMS and AC or AC/DC Current functions, with built-in non-contact voltage detector

- 30 mm (1.2 in) jaw size accommodates conductors up to 500 MCM
- 4000-count backlit LCD display
- Built-in flashlight illuminates work area (MA443/MA445)
- CAT III-600V category rating
- Complete with test leads, three AAA batteries, general purpose Type-K temperature probe (MA443/MA445), and pouch

Specifications	MA440 (Max. Resolution)	MA443 (Max. Resolution)	MA445 (Max. Resolution)
AC current	400.0 A (1 mA)	400.0 A (1 mA) True RMS	400.0 A (10 mA) True RMS
DC current	—	—	400.0 A (10 mA)
	AC: ±2.0%	AC: ±1.8%	AC: ±2.5%, DC: ±2.0%
DC voltage	600 V (0.1 mV)	600 V (0.1 mV) True RMS	600 V (0.1 mV) True RMS
AC voltage	600 V (1 mV)	600 V (1 mV)	600 V (1 mV)
	AC: ±1.2% DC: ±0.8%	AC: ±1.2% DC: ±0.8%	AC: ±1.2% DC: ±0.8%
Non-contact voltage (NCV)	100 to 600 V	100 to 600 V	100 to 600 V
Resistance	40 MΩ (0.1 Ω)	40 MΩ (0.1 Ω)	40 MΩ (0.1 Ω)
Capacitance	100 µF (0.01 nF)	40 mF (0.01 nF)	40 mF (0.01 nF)
Frequency	1 MHz (0.01 Hz)	1 MHz (0.01 Hz)	1 MHz (0.01 Hz)
Temperature (Type K - meter range)	—	-40°C to 1000°C/-40°F to 1832°F (1°)	-40°C to 1000°C/-40°F to 1832°F (1°)
Duty cycle	Yes	Yes	Yes
Diode/continuity	Yes	Yes	Yes

MA440

MA443

MA445

EX623A Dual Input Clamp Meter + NCV + IR Thermometer

TRMS AC/DC clamp meter with dual thermocouple inputs for T1, T2, T1-T2 differential temperature measurement plus a built-in infrared thermometer

Specifications	EX623A
AC current	600 A
DC current	600 A
Basic accuracy	±1.5% + 5d
DC voltage	600 V
AC voltage	600 V
µA current	600 µA
NCV detection	Yes
Resistance max.	60 MΩ
Capacitance max.	40 mF
Frequency (clamp)	400 Hz
Temperature	-50°C to 1000°C (-58°F to 1832°F)
Infrared temperature	-50°C to 270°C (-58°F to 1832°F)

- Accurately measure up to 600 A AC/DC current
- AC/DC µA multimeter function designed for HVAC flame rod current measurement
- 32 mm (1.25 in) clamp jaw opening designed for conductors up to 500 MCM
- Low pass filter (LPF) ensures accuracy in electrically-noisy environments

EX655 True RMS 600A Clamp Meter

Professional clamp 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
- µA function for HVAC flame rod current measurements
- Built-in non-contact AC voltage (NCV) detector with LED indicator, 6000-count backlit display

Specifications	EX655
AC current (max res.)	60 A, 600 A (0.01 A)
DC current (max res.)	60 A, 600 A (0.01 A)
Basic accuracy	ACA: ±2.5 % of rdg / DCA: ±2.5 % of rdg
AC/DC µA current (max res.)	600 µA (0.1 µA)
DC voltage (max res.)	1000 V (0.1 mV)
AC voltage (max res.)	750 V (1 mV)
Basic accuracy	ACV: ±1.2 % of rdg / DCV: ±0.8 % of rdg
NCV detection	100 V to 1000 V
Temperature (max res.)	-40°C to 1000°C (1°C) / -40°F to 1832°F (1°F)

380942 30A True RMS AC/DC Mini Clamp Meter

Mini AC/DC clamp meter offering a remarkable 0.1 mA resolution (AC) and very low-current sensitivity while being small enough to reach into tight areas easily.

- One touch "Auto Zero" for DCA measurements eliminates the need to turn a knob to zero adjust
- Measures current draw when conducting energy usage audits
- 4000 count LCD display offers full function indication
- 23 mm (0.9 in) clamp jaw opening is sized for tight spaces
- Fast 40-segment analog bar graph

Specifications	380942
AC current	30 A (0.1 mA)
DC current	30 A (1 mA)
Basic accuracy	ACA: ±2.0% + 5d DCA: —
DC voltage	400 V (0.1 V)
AC voltage	400 V (0.1 V)
Basic accuracy	ACV: ±2.0% + 5d DCV: ±1.0% + 2d
Overload protection	to 400 A DC

MS420 20 MHz 2-Channel Digital Oscilloscope

Designed for effective troubleshooting of electronics and electronically-controlled systems, with complete DMM functions and the ability to display multiple waveforms.

Specifications	MS420
Bandwidth	20 MHz
Real time sample rate	100 MS/s
Risetime	17.5 ns
Glitch capture	50 ns
Vertical sensitivity	5 mV to 5 V/div
Timebase Range	5 ns to 5 s/div
Input impedance	1 MΩ/20 pF
Max Input Voltage	400 V (peak)
True RMS Multimeter Functions	
AC/DC voltage	400 mV, 4 V, 40 V, 400 V
AC/DC current	40 mA, 300 mA, 20 A

- Auto-set function optimizes the position, range, timebase, and triggering to assure a stable display of virtually any waveform
- Peak Detect function makes 50 ns glitch capture possible
- FFT function for viewing component frequencies
- Trigger Hold off function stabilizes complex waveforms

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	±0.5 %	±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 µA to 10.00 A	0.1 µA to 10.00 A
Resistance	0.1 Ω to 40.00 MΩ	0.1 Ω to 60.00 MΩ
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

EX500A Series Heavy Duty TRMS Industrial Multimeters

True RMS DMM with large LCD display, and IP67 waterproof housing

- Rated CAT IV-600 V for electrical safety
- Offers True RMS for reliable measurements on non-sine wave forms
- Features include resistance, capacitance, frequency, duty cycle, temperature, diode, and continuity
- Up to 50,000-count segment LCD display for easy viewing
- Waterproof and dustproof (IP67-rating), plus drop-tested to 2 m (6.5 ft)
- Comes complete with test leads, magnetic hanging strap, Type K bead wire temperature probe, carrying case, and 9 V battery

Specifications	EX505A	EX520A	EX530A
AC/DC voltage		0.01 mV to 1000 V	
AC/DC current		0.1 µA to 10 A	
Basic accuracy	±0.5%	±0.09%	±0.06%
Resistance	0.1 Ω to 60 MΩ	0.1 Ω to 40 MΩ	0.1 Ω to 50 MΩ
Capacitance		0.01 nF to 99.99 mF	
Frequency		0.001 Hz to 10 MHz	
True RMS		Yes	
Diode test		Yes	
Continuity		Yes	
Temperature (Type-K)	-20°C to 760°C (-4°F to 1400°F)	-45°C to 760°C (-50°F to 1400°F)	
Display	6000-count segment LCD		50,000-count segment LCD
LoZ	No		Yes
Low pass filter	No		Yes

EX505A

EX520A

EX530A

380580 Battery Powered Milliohm Meter

High-accuracy, high-resolution, portable milliohm meter with 4 terminal Kelvin measurements, designed for field use

- Offers over-temperature and over-voltage protection
- Measures 5 ranges with 100 µ max resolution
- Easy-to-read 2000 count LCD display includes Auto-Hold and Auto power off functions
- Invalid test indicators prevent inaccurate measurements
- Features built-in water resistant case with shoulder strap

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
- Auto-ranging, 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
- Auto-ranging 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 30.00 A
- 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

480400

- 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)

AN310 Anemometer/Psychrometer

Large vane thermo-anemometer ideal for measuring air velocity, relative humidity, dew point, and more

- Built-in thermistor for air temperature
- Takes multi-point and timed average calculations
- Features include min/max, data hold, and auto power off
- Optional air flow cone kit for easy airflow measurements in common large size ducts
- Complete with four AAA batteries and hard case

SDL350 Hot Wire CFM Thermo-Anemometer/Datalogger

Measure Air Velocity/Air Flow meter with telescoping probe designed to fit into HVAC ducts and other small openings and records data on an SD card in Excel® format

- Datalogger date/time stamps and stores readings on an SD card for easy transfer to a PC
- Probe extends up to 215 cm (7.05 ft) maximum length with cable
- Adjustable data sampling rate: 1 to 3600 seconds
- User selectable units for air velocity: ft/min, m/sec, km/h, MPH, and knots
- Type K/J Thermocouple input for high temperature measurement
- Large backlit LCD displays Air Velocity or Air Flow and Temperature simultaneously

AN100/AN200 CFM/CMM Thermo-Anemometers

Simultaneous display of ambient temperature and air flow/air velocity

AN200

- Up to 8 easy-to-set area dimensions (m^2 or ft^2) 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

45158 Mini Thermo-Anemometer with Humidity

- Displays of air velocity and relative humidity simultaneously
- Measures temperatures from -18°C to 50°C (0°F to 122°F) and dew point from 0°C to 50°C (32˚F to 122˚F)
- Selectable averaging function offers 5, 10, or 13 second intervals
- Data Hold to freeze most recent display
- Water resistant housing floats and drop tested to 6 feet
- Replaceable non-corrosive plastic wind vane (impeller)

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

IR320 Waterproof Dual Laser IR Thermometer with Alarm

Rugged design with Waterproof (IP65) and 9.8ft (3m) drop-proof protection, 12:1 Fast-response IR thermometer offers programmable hi/low alarms

- Accurate temperature measurements from -20 to 650°C (4 to 1202°F)
- Maximum resolution of 0.1°C/°F, basic accuracy of ±(1% of reading 1°C/2°F)
- Dual laser pointer identifies target area between the two points
- Adjustable emissivity
- Programmable high/low alarms with dual color LED indicators
- Lock function for continuous temperature measurement
- 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 Sound Level Calibrator—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

CO240 Indoor Air Quality, Carbon Dioxide (CO_2)

Measure CO_2, air temperature, humidity, and other environmental conditions in enclosed areas

- Dual display of CO_2 concentrations and Relative Humidity, Temperature, Dew Point, or Wet Bulb
- Maintenance-free non-dispersive infrared (NDIR) CO_2 sensor
- Alarm sounds when CO_2 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

CO15 Carbon Monoxide (CO) Meter

Checks CO levels up to 999 ppm, with audible and display alarms that begins at 25 ppm and continue until levels return to safe levels

- Audible alarm sounds when CO level reaches the warning set point level
- CO warning levels can be adjusted from 25 to 200 ppm (alarm is preset to 25 ppm)
- Extended-use electrochemical sensor
- Choose from 3 calibration points: 0 (preset), 100, and 500 ppm
- Backlit display feature for easy viewing in dimly lit areas
- Auto power off after 15 minutes

VPC300 Video Particle Counter with Built-in Camera

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

- Measure and display 6 channels of particle sizes (down to 0.3 µm), air temperature, humidity, dew point and wet bulb
- 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
- Selectable sample time and count data, as well as programmable delay
- Stores up to 5000 records and 20 minutes of video

VPC260 6-Channel Particle Counter

Monitor workplace environmental health and air quality, with up to 6 channels of particle sizes plus air temperature, relative humidity, dew point, and wet bulb

- Measure up to 6 channels of particle sizes (down to 0.3 µm)
- Display air temperature, humidity, dew point, or wet bulb
- Selectable sample time, count data, and programmable delay
- Disable Auto Power Off for continuous recording
- Export data in CSV format to a PC via USB cable for easy reporting and documentation

VFM200 VOC/ Formaldehyde Meter

Measure concentrations of VOCs (Volatile Organic Compound), Formaldehyde, and more in real-time for improved indoor air quality

- Backlit LCD displays Total VOC and HCHO (formaldehyde) concentrations simultaneously
- Built-in fast response, high accuracy fuel cell Formaldehyde sensor
- Two selectable units of measure (ppm, mg/m3)
- Adjustable audible and visible high/low alarms
- Auto Power Off

IAQ320 Indoor Air Quality Monitor

Accurately measure particulate matter, CO_2, IAQ health index, air temperature, and relative humidity so you can maintain a healthy work environment

- Easily read air quality values from a distance on the 10-inch LED display
- Program data sampling rate with high/low limits
- Coupled with visual and audible alarm indicators
- Clearly see the condition of PM2.5 and CO_2 with tri-color safe/warning/alarm display
- Store up to 12,000 records that can easily be exported in CSV format for reporting and documentation needs

250W-Series Environmental Meters

Extech helps you expand your problem-solving capabilities, whether you're inspecting HVAC systems, checking outdoor UV conditions, or measuring energy from the electromagnetic/electrical fields of appliances and power lines. These environmental meters all communicate seamlessly with the new ExView® App over a Bluetooth® connection. This app can help you capture data, displays trends, sets alarms, and can create and send reports, allowing you to easily share important insights on equipment and building health.

RH250W Hygro-Thermometer

Simultaneously monitor relative humidity and temperature from a mobile device

This compact hygro-thermometer with Bluetooth® connectivity allows building and maintenance professionals to send air relative humidity and air temperature data directly to a mobile device running the ExView app. They can also use the app to program alarms, set data recording, share files, and create reports.

LT250W Light Meter

Monitor light intensity data from a mobile device

This meter can measure light intensity up to 100,000 Lux (10,000 Fc) with a measuring rate of 0.5 sec. A Bluetooth° connection allows building and maintenance professionals to set up data recording and program high/low audible alarms through the ExView app, then view and share results on a mobile device.

RPM250W Laser Tachometer

Monitor state of rotational equipment from a mobile device

This compact laser tachometer allows maintenance professionals to take revolutions per minute (RPM) measurements from up to 500 mm (1.64 ft) using its laser-guided non-contact measurement feature. View data on the bright, backlit LCD or view and share data directly from a mobile device using the free ExView app.

AN250W Anemometer

Monitor air velocity and temperature data from a mobile device

Measure air velocity and temperature simultaneously, then record Max/Avg readings with this compact airflow meter. A Bluetooth connection allows you to set up data recording and program high/low audible alarms through the ExView app, then view and share results on a mobile device.

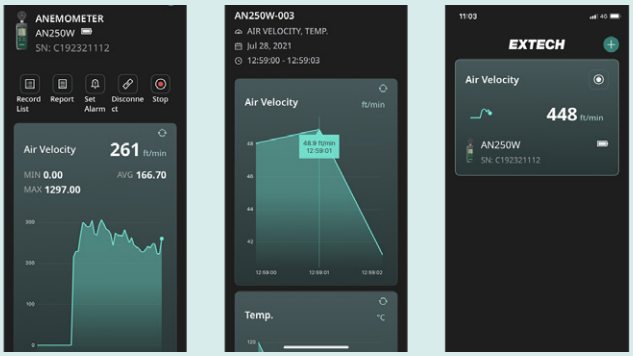
SL250W Sound Meter

Monitor sound level data from a mobile device

This compact sound meter allows building and maintenance professionals to measure sound levels from 30 to 130 dB with 'A' weighted frequency for human hearing, then record max/min readings. Transmit sound level data directly to the ExView app on a mobile device, for viewing, sharing, and reporting.

Extech ExView® App

Monitor environmental conditions safely from up to eight compatible Extech meters with the ExView app. By connecting via Bluetooth® to your smart device, you can view key readings, remotely and in real time, then easily share them with your team. The app allows you to save data for further analysis, create graphs, and produce custom PDF reports to share with customers.



MO55 Combination Pin/ Pinless Moisture Meter

Takes quick pin or pinless moisture measurements and displays easy-to-understand icons to indicate moisture levels

- Ideal for detecting moisture on floors, tiles, and under carpets
- Non-invasive pinless meter measures to a max depth of 25 mm (1 in)
- Direct pin moisture measurement uses 10 mm (~0.4 in) pins
- Programmable High/Low audible alert; beeps faster as moisture levels increase

- Display icons indicate low, medium, or high moisture content
- Compact and efficient, with a built-in battery level check and measurement verification test

MO290 Pinless Moisture Psychrometers + IR Thermometer

8-in-1 Meter measures for moisture in wood and other building materials with virtually no surface damage

- Designed with an IR circuit to measure non-contact surface temperature; 8:1 distance to spot ratio with 0.95 fixed emissivity
- Remote pin probe (MO290-P included) allows for contact moisture readings (cable length is 0.9 m/3 ft)
- Easy to read, large dual display with automatic backlight feature
- Simultaneously displays moisture value of wood or material being tested along with air temperature, IR temperature, or humidity
- Pinless measurement depth to 19 mm (0.75 in) below the surface

RHT30 USB Humidity/ Temperature Datalogger

Easy-to-use datalogger stores thousands of humidity and temperature readings with date/time stamp

- Built-in NTC thermistor and capacitive humidity sensor
- 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

HT30 Heat Stress WBGT Meter

Wet bulb globe temperature meter for measuring heat stress index, temperature, humidity, and radiant heat

- Monitor effects of direct solar radiation (Black Globe Temperature, or TG)
- Measure Air Temperature (TA) plus Relative Humidity (RH)
- In/Out Function displays the WBGT value with or without direct sun exposure
- Built-in RS-232 interface with optional Windows® compatible software

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

RH390

RH600 Dew Point Meter

Accurately measure and datalog dew point levels in compressed air systems

- Precisely measure dew point as low as -50°C (-58°F) under ambient pressure up to 20 bar
- Dry probe sensor quickly after contact with moisture using sensor purge/purification feature
- Measure low humidity (RH <5%) with high accuracy (±0.025%)
- Log and transfer up to 32,000 data sets to a computer (in CSV format) using USB cable
- Program high/low set points for temperature, relative humidity, and dew point with visual and audible alarms

445580 Humidity/ Temperature Pen

Compact, digital hygro-thermometer, intended for field use

- Dual LCD display shows temperature, humidity, and advanced function indication
- Built-in sensors simultaneously measure temperature (°C/°F) and relative humidity
- Max/Min memory functions
- Built-in self-calibration utility with optional RH calibration bottles
- Data Hold for freezing the LCD display status

42280A Temperature and Humidity Datalogger

Continuously monitor temperature and humidity to obtain ideal storage conditions in laboratories or cleanrooms

- Easy-to-read LCD screen displays humidity, temperature, date, and time
- Stores up to 24,000 recorded data sets with date and time stamp
- Audible and visible alarms help maintain optimal environmental conditions
- Generates PDF reports with trending graphs, and exports data to Microsoft® Excel spreadsheets when plugged into a PC
- Add time-stamped markers, while logging to record events in your reports (max 8 markers)

445703/445715 Big Digit Hygro-Thermometers

Extra-large LCD with 2.5 cm (1 in) numbers allows for easy humidity and temperature monitoring from anywhere in the room

- Memory with reset function stores max and min readings
- Accurately monitor temperatures to 60°C (140°F) and humidity from 10-99%
- Measure humidity and temperature with extendable probe on 45.7 cm (18 in) cable (445715)
- °C/°F switchable units of measure and low battery indication

445715

445814/445815 Hygro-Thermometer Humidity Alert with Dew Point

Featuring audible and visual alarms for humidity levels that exceed set limits, plus storage/recall for max and min measurements

- Large, easy-to-read triple LCD displays % Relative Humidity, Temperature and Dew Point
- %RH audible and visual alarms, with adjustable set points, alert when humidity exceeds set limit
- Probe clips onto meter or extends on 45.7 cm (18 in) cable (445815 only)
- Max/Min with Reset function
- Rear calibration adjustment pot for humidity and temperature
- (445815 only; available with NIST certification and optional Calibration Standards)

445815

RH550 Humidity/Temperature Chart Recorder with Touchscreen

Simultaneously track humidity, temperature, and dew point with numerical and graphical display

- View recorded alarm values by date sorting or by temperature and humidity values
- Record MIN/MAX measurement values and recall saved data files with History Mode
- Capture up to 20,000 data points and store on Internal 16 GB memory or export in CSV format
- Audible and visual alarm with Hi/Low set points
- Large 17.8 cm (7 in) color LCD with display zoom feature, touchscreen menu, and screen capture capability with finger swipe

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

HDV700-Series High-Performance Videoscope Kits

5 probe options, from semi-rigid 4.9 mm probes to 4-way articulating 6 mm probes

- Gain access to difficult-to-see components without disassembling equipment
- Capture both still images and videos and view on bright 5-in touchscreen
- Immerse IP67-rated camera probes in water at a depth up to 1 m (3.2 ft) for 30 minutes max

HDV710

BR450W-D Wireless Video Borescope

1280 × 720 HD resolution dual borescope with 5.5 mm camera on a 1.5 m (5 ft) probe, monitored from ExView app

- Gesture for zoom in/out, image rotation, and LED brightness control
- Identify, document, and share with side-by-side view, snapshots, and video / audio recording
- Versatile, rugged, lightweight, and reliable with IP67 probe rating
- Long lasting 5-hour battery operation

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

STW515 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 5 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

EC400 Waterproof ExStik® II Conductivity/TDS/Salinity Meter

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 bar graph 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 meter and Conductivity cell, protective sensor cap, sample cup with cap, four CR2032 button batteries, and 1.2 m (48 in) neck strap. *Order Conductivity standards separately*
- IP57 rating

EC510 Waterproof ExStik® II Kit

Combination flat-surface pH electrode with auto-ranging 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 bar graph 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

DO600 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

DO700 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

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