



## INFRARED GUIDED MEASUREMENT (IGM™)

Many industry professionals today rely on test and measurement tools for electrical and mechanical repairs, industrial plant maintenance, HVAC troubleshooting and electronic testing. With the new Infrared Guided Measurement (IGM) technology from FLIR Systems, these jobs will become safer and a lot more productive.

Although many test and measurement products have become indispensable for today's maintenance professional, using a tool to find and pinpoint a problem quickly can be hard. Moisture and electricity problems don't always show up clearly to the naked eye, and therefore, finding the exact location of a moisture problem or electricity problem might require quite some guesswork. Another difficulty with electricity problems is that they can be dangerous when approached closely.

In answer to these problems, FLIR Systems has developed Infrared Guided Measurement (IGM) technology. FLIR IGM™ allows maintenance professionals to identify the precise location of a problem that is invisible to the naked eye. IGM has been designed to save time and keep people safe from potentially dangerous situations.

### WHAT IS IGM?

IGM is the addition of thermal imaging technology to the tried and true test and measurement equipment from FLIR Systems. IGM allows maintenance professionals to work smarter and more efficiently by visually guiding them to temperature problems invisible to the naked eye. This way, IGM allows them to focus on troubleshooting and see which spot may require further testing and investigation.

As such, IGM elevates the industry's favorite test tools to a whole new level, saving professionals valuable time, while giving them the power to show customers where problems are hiding and prove they have been fixed after repairs. IGM makes use of FLIR Lepton®, a revolutionary longwave infrared (LWIR) sensor with a resolution of 80 × 60 active pixels. FLIR's portfolio of IGM featured test



### FLIR MR160 AND MR176 MOISTURE METERS

The FLIR MR160 and MR176 Imaging Moisture Meters locate potential moisture issues visually through a thermal image. The MR160 is the professional's go-to troubleshooting tool that identifies cold spots with the built-in, 80×60-resolution thermal imager to locate areas of moisture. The MR176 provides an advanced solution for professionals who require additional flexibility and more details from their meter readings, including four-color imaging modes, customizable readings, and a field-replaceable temperature/relative humidity sensor.

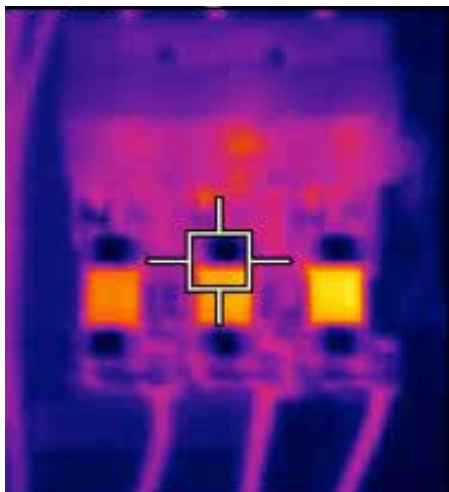
& measurement tools includes IGM moisture meters, clamp meters and spot meters.

## IGM MOISTURE METERS

Moisture meters can capture moisture readings below material surfaces, either in a non-destructive way or with a wired pin probe. These meters can help you uncover hidden moisture in walls, floors or ceilings. FLIR IGM moisture meters can dramatically reduce the time required to assess an area for moisture. They allow users to scan for moisture using thermal imaging and a laser pointer to target the right spot, then they can confirm and quantify the moisture levels with a pin or pinless measurement. Moisture shows up cold on a thermal image and that temperature change is not visible to the naked eye. IGM moisture meters use a convenient thermal imaging color palette called ICE to make cold spots stand out as blue with a black border.

## IGM CLAMP METERS

When facing cluttered wires or scanning complex panels for hazards, a FLIR clamp meter with IGM can help you home in and track down electrical overheating more quickly and safely, without requiring any direct contact with the test object. It allows you to discover the hot spot with the built-in thermal camera, after which you can use the clamp meter to give you verification on readouts. The thermal



FLIR TG167 gives you quality image detail on even small connectors and wires.

## FLIR CM174 CLAMP METER

The CM174 is the world's first all-in-one electrical clamp meter equipped with a built-in thermal imager that visually identifies temperature anomalies before they become a major problem. The CM174 features a narrow jaw and built-in worklights to help you access difficult locations with lighting issues. Advanced electrical features allow you to get all the readings you need to solve problems fast, including True RMS, LoZ, VFD Mode, Inrush, and Smart Diode with Disable.



image verifies findings with advanced contact measurement features and helps you solve the most complex electrical issues. IGM is also vital for post-repair checks to ensure problem areas have been addressed.

## IGM SPOT METERS

IGM spot meters from FLIR bridge the gap between current generation IR thermometers that offer no imaging capability, and FLIR's market-leading thermal cameras. An IR thermometer will give you a non-contact temperature reading, while a thermal imaging device will show you the relative thermal properties of a subject or targeted area in the context of its surroundings. IGM spot meters do both of these things. By leveraging the FLIR Lepton core's revolutionary price, size, and low power consumption, IGM spot meters transform one of the most commonly used measurement tools into a discovery device that gives facility maintenance workers,

## TG165 AND TG167 SPOT THERMAL CAMERAS

Useful for both building and general electrical inspections, the TG165's wide 50-degree field of view makes it possible to frame an entire room's wall in a single image. Designed primarily for indoor electrical inspection, the TG167 will help you easily find unseen hot and cold spots in electrical cabinets or switch boxes from a safe distance. The 25-degree field of view gives you image clarity on small details from a farther distance, including small connectors and wires.



contractors, electricians, HVAC techs, and homeowners greater capability to solve heating and electrical issues quickly and safely.

## BUILD MORE BUSINESS

IGM test and measurement tools from FLIR allow building and industrial professionals to achieve better results, helping them build more business and keep up a more professional image. IGM moisture meters, clamp meters and spot meters not only enable users to find problems faster, more safely, and more accurately, the thermal image also allows them to show and share their results in a much more visually convincing way. They are an investment that will be paid back in no time.

For more information about thermal imaging cameras or about this application, please visit:

[www.flir.com/instruments](http://www.flir.com/instruments)

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