CLAMP METER GUIDE
FIND THE RIGHT SOLUTION

CLAMP METERS
WITH IGM™

Use the power of thermal imaging to catch failing components early, and pinpoint the source of problems for further testing and investigation.
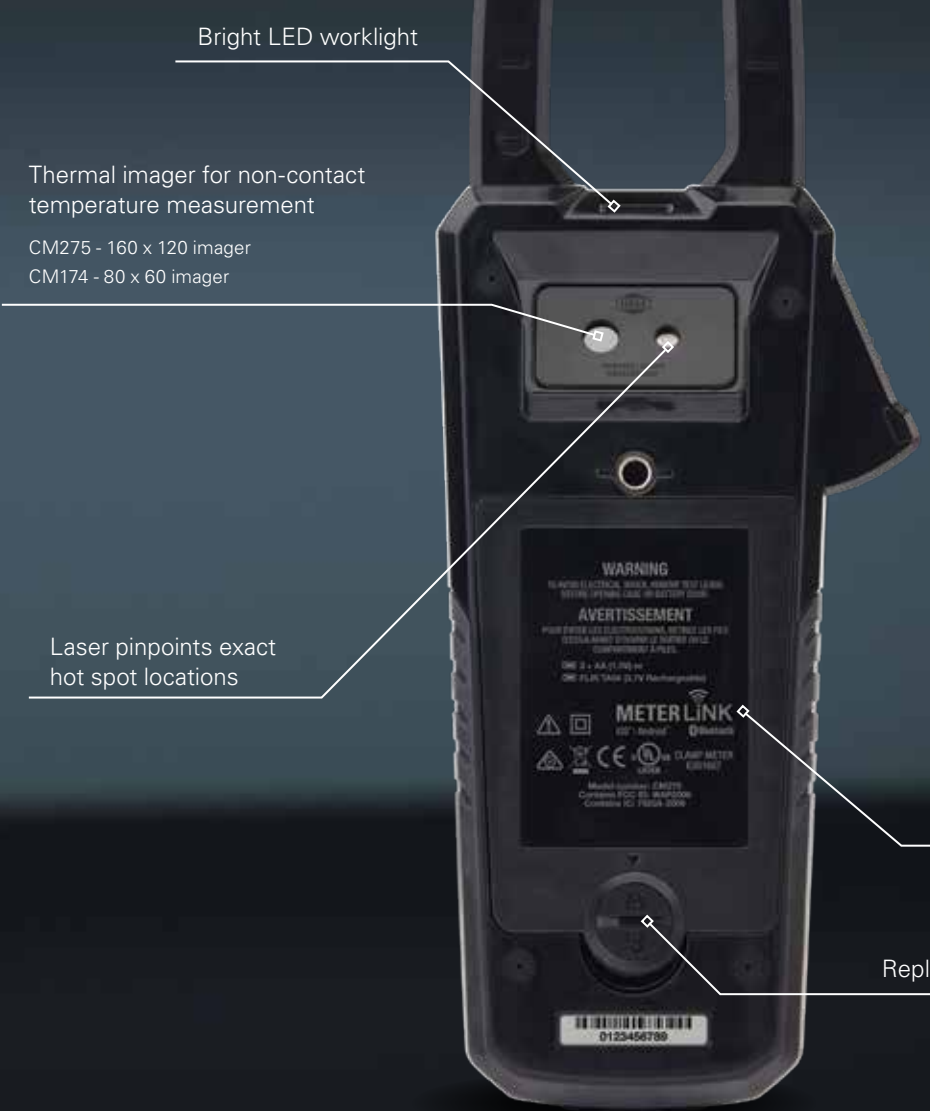
FLIR is proud to offer a high-quality line of professional and industrial clamp meters. Whether you are a commercial, industrial, or residential electrician, or HVAC professional, FLIR clamp meters will help you maximize safety and efficiency.

Our selection now includes options with built-in thermal imaging – we call it IGM   (Infrared Guided Measurement). FLIR clamp meters enhanced with IGM provide a fast, reliable way to identify hot spots and overloaded circuits from a safe distance.

CM174/275

INDUSTRIAL IMAGING CLAMP METERS WITH IGM

Non-contact voltage detection

Bright LED worklight

Thermal imager for non-contact temperature measurement

CM275 - 160 x 120 imager
CM174 - 80 x 60 imager

Full color IPS LCD display

IGM button activates thermal imaging

Laser pinpoints exact hot spot locations

Intuitive menu system

The CM275 provides METERLiNK® communication with mobile devices and compatible FLIR cameras

Store up to 10K scalar measurements or 100 images

Replace batteries without any tools

Work faster, safer, and more efficiently with the unique combination of onboard thermal imaging and a wide range of electrical measurement features.
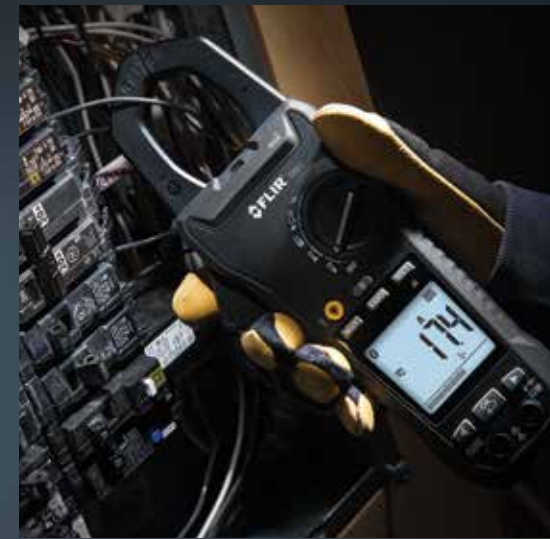
KEY FEATURES

- Scan entire targets for electrical issues with up to 160 x 120 thermal resolution

- Pinpoint exact hot spot locations with laser or crosshairs

- Use advanced electrical features including VFD mode, True RMS, and LoZ

- Expand measurement capabilities to 3000 A AC with FLIR Flex Clamp accessories (TA72/TA74)

CM275 UNIQUE FEATURES

- Store electrical measurements and thermal images internally for later review

- Streamline documentation and sharing by connecting wirelessly to FLIR Tools® or the FLIR InSite™ workflow management application

Non-contact voltage detection

Bright LED worklight

Advanced power and harmonics measurements

METERLiNK communication with mobile devices and compatible FLIR cameras

Bright backlit display

Intuitive navigation

2 m drop-tested durability

1000A current measurements

Bright LED worklight

Advanced power and harmonics measurements

Bright backlit display

3 m drop-tested durability

CM82/83/85

TRUE RMS POWER CLAMP METERS

These industrial-grade clamp meters offer advanced power analysis and variable frequency drive (VFD) filtering functions for superior accuracy and reliable performance.

KEY FEATURES

- Get the most accurate readings on VFD-controlled equipment with VFD mode

- Conduct system-level performance analysis with advanced power efficiency and harmonics measurements

- Capture fast AC Current spikes during appliance start-up with inrush mode

- Ensure that the motor and power source are in alignment with phase rotation testing

CM83 and CM85 UNIQUE FEATURES

- Remote viewing on smartphones and tablets via Bluetooth®

- Wirelessly embed readings into thermal images on compatible FLIR cameras with METERLiNK

1000A current
measurements

Built-in IR thermometer
for non-contact
temperature measurements

Bright LED worklight

METERLiNK
communication with
mobile devices and
compatible FLIR cameras

AC/DC measurements

CM78

1000 A CLAMP METER
WITH IR THERMOMETER

A safe and capable combination tool
that is ideal for the electrician who
works on high-powered equipment
and temperature systems.

KEY FEATURES

- Take fast, non-contact measurements
  on panels, conduits, and motors with the
  integrated IR thermometer

- Overcome poor lighting conditions with the
  powerful LED lamps that can serve as a
  primary worklight

- Connect the meter to your compatible
  smartphones and tablets via Bluetooth and
  FLIR Tools Mobile

- View and share data from a mobile device
  via Bluetooth

- METERLiNK technology wirelessly
  integrates electrical readings onto your
  infrared images taken with METERLiNK-
  enabled FLIR thermal cameras

CM72/74

COMMERCIAL CLAMP METERS

Made with a narrow jaw and high-powered LED worklights, the CM72 and CM74 make it easier to take measurements in dark, crowded panels and cabinets.

KEY FEATURES

- Easily access wiring in crowded panels and cabinets with the narrow clamp jaw

- Carry the light, compact meter in your back pocket

- Overcome poor lighting conditions with the dual bright high-powered LED worklights

- View readings clearly on the large-digit, backlit LCD display

- Reduce slippage with the rubberized double molded hand grips

CM74 UNIQUE FEATURES

- Advanced electrical features including: True RMS, LoZ, VFD Mode, Inrush, Smart Diode with Disable

Narrow clamp jaw for easier access

Large backlit display

Dual bright LED worklights

AC/DC current measurements

Includes True RMS, LoZ, VFD Mode, Inrush, and Smart Diode

CM55/57

FLEXIBLE CLAMP METERS

18-inch flexible coil clamp

10-inch flexible coil clamp

Bright LED worklights

Bright LED worklights

Backlit display

Backlit display

METERLiNK communication with mobile devices and compatible FLIR cameras

METERLiNK communication with mobile devices and compatible FLIR cameras

3 m drop-tested durability

3 m drop-tested durability

Take measurements in tight or awkward spots with these narrow and flexible coil clamps. With Bluetooth communication for remote viewing and data transfer to iOS and Android devices via the FLIR Tools Mobile App, analyze and share data fast right from the jobsite.

KEY FEATURES

- Snake the coil around obstacles with ease, even in deep, crowded cabinets
- Take multiple conductor measurements with True RMS AC Current up to 3,000 Amps
- Pinpoint equipment start-up problems with the inrush current function
- Illuminate dark cabinets with the built-in dual LED worklights

CHOOSE YOUR FLEXIBLE COIL LENGTH

- CM55 – 10 in (25.4 cm) for easy maneuverability and compact convenience
- CM57 – 18 in (45.72 cm) for larger and multiple conductor measurements, double-wrap requirements, and deeper access

CM42/44/46

PROFESSIONAL 400A TRUE RMS CLAMP METER FAMILY WITH ACCU-TIP™

Non-contact voltage detection

Accu-Tip technology for increased accuracy

AC current measurement

AC/DC voltage measurement

Bright backlit display

2 m drop-tested durability

Non-contact voltage detection

Accu-Tip technology for increased accuracy

AC/DC current measurement

AC/DC voltage measurement

Bright backlit display

2 m drop-tested durability

These affordable clamp meters feature Accu-Tip technology, allowing you to take the most accurate amperage measurements on smaller-gauged wires – to a tenth of a digit!

KEY FEATURES

- Accu-Tip enables more accurate amperage measurements on smaller-gauged wires

- Use the large, bright backlit display to help you see readings inside of dark electrical panels

- Carry the durable, lightweight meters in your tool bag everywhere you go

- Determine voltage presence and relative strength of the field with Max/Min/Avg recording, frequency, and electrical field detection

CM44 and CM46 UNIQUE FEATURES

- CM44 performs capacitance, microAmp DC current, and temperature measurements

- CM46 performs AC+DC voltage measurements and clamp-on DC current measurements

TECHNICAL SPECIFICATIONS

Specs	Residential/Commercial			Commercial/Industrial				Industrial					
Model	FLIR CM42	FLIR CM44	FLIR CM46	FLIR CM72	FLIR CM74	FLIR CM174	FLIR CM275	FLIR CM78	FLIR CM82	FLIR CM83	FLIR CM85	FLIR CM55	FLIR CM57
IGM Resolution	—	—	—	—	—	80 x 60	160 x 120	IR Thermometer	—	—	—	—	—
IGM Temperature Range	—	—	—	—	—	-10°C to 150°C (14°F to 302°F)	-10°C to 150°C (14°F to 302°F)	-20°C to 270°C (-4°F to 518°F)	—	—	—	—	—
Display Counts/Type	6000/Backlit LCD	6000/Backlit LCD	6000/Backlit LCD	6000/Backlit LCD	6000/Backlit LCD	6000/2 in Color TFT	6000/2.4 in Color TFT	4000/Backlit LCD	10000/Backlit LCD	10000/Backlit LCD	10000/Backlit LCD	3000/Backlit LCD	3000/Backlit LCD
Jaw Opening	1.2 in (30 mm)	1.2 in (30 mm)	1.2 in (30 mm)	1.38 in (35 mm)	1.38 in (35 mm)	1.38 in (35 mm)	1.38 in (35 mm)	1.70 in (42 mm)	1.45 in (37 mm)	1.45 in (37 mm)	1.77 in (45 mm)	10 in (25 cm) Flex Coil	18 in (45 cm) Flex Coil
AC / DC Voltage	600 V	600 V	600 V	600 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	—	—
VFD AC Voltage	600 V	600 V	600 V	—	1000 V	•	•	—	•	•	•	—	—
LoZ AC/DC Voltage	—	—	—	•	•	•	•	—	—	—	—	—	—
AC Current	400 A	400 A	400 A	600 A	600 A	600 A	600 A	1000 A	600 A	600 A	1000 A	3000 A	3000 A
DC Current	—	—	400 A	—	600 A	600 A	600 A	1000 A	600 A	600 A	1000 A	—	—
VFD AC Current	—	—	—	600 A	600 A	600 A	600 A	—	—	—	—	—	—
Inrush AC Current	—	•	•	—	•	•	•	—	•	•	•	•	•
Resistance	60.00 kΩ	60.00 kΩ	60.00 kΩ	6.00 kΩ	6.00 kΩ	6.00 kΩ	6.00 kΩ	40.00 MΩ	100 kΩ	100 kΩ	100 kΩ	—	—
Capacitance	—	2500 µF	2500 µF	1000 µF	1000 µF	1000 µF	1000 µF	4000 µF	4000 µF	4000 µF	4000 µF	—	—
Frequency	1.00 kHz	1.00 kHz	1.00 kHz	60.00 kHz	60.00 kHz	60.00 kHz	60.00 kHz	4.00 kHz	10.00 kHz	10.00 kHz	10.00 kHz	—	—
Temperature	—	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	—	—	—	—	-20°C to 760°C (-4°F to 1400°F)	—	—	—	—	—
Min/Max/Average	•	•	•	Min/Max	Min/Max	Min/Max	Min/Max	•	•	•	•	—	—
Peak	—	•	•	—	—	—	—	•	•	•	•	—	—
Power/Power Factor	—	—	—	—	—	—	—	—	600 kW/0.0 to 1.0	600 kW/0.0 to 1.0	1000 kW/0.0 to 1.0	—	—
Harmonics/Total Harmonic Distortion (THD)	—	—	—	—	—	—	—	—	1 to 25/0 to 99.9	1 to 25/0 to 99.9	1 to 25/0 to 99.9	—	—
Phase Rotation	—	—	—	—	—	—	—	—	•	•	•	—	—
Non-Contact Voltage Detector (NCV)	•	•	•	—	—	—	—	—	•	•	•	—	—
Worklights	—	—	—	•	•	•	•	•	•	•	•	•	•
Data Storage	—	—	—	—	—	—	10 files (40k readings each), 100 images	—	—	—	—	2000 readings	2000 readings
Bluetooth/METERLiNK®	—	—	—	—	—	—	•	•	—	•	•	•	•
Safety Category	CAT IV-300V CAT III-600V	CAT IV-300V CAT III-600V	CAT IV-300V CAT III-600V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V	CAT IV-600V CAT III-1000V

COMPLETE YOUR
TOOLBAG

FLIR has a full line of products to make your job easier, including thermal cameras, voltage detectors, digital multimeters, and IR thermometers.

Check out all that FLIR has to offer at www.flir.com

ACCESSORIES

FLIR has all the right accessories to help you maximize your benefits from your clamp meters, including:

TA80 CAT IV Test Leads
1000 Volt, 10 A test probes with gold-plated tips for professional precision

TA55 Line Splitter
Provides easy and safe measurements of current and voltage from two or three wire outlets

TA52 Magnetic Mount
Designed for the FLIR CM174, CM74, and CM72 clamp meters, the low profile TA52 firmly attaches to the meter's tripod mount and stores easily

TA42 Belt Clip
Designed for use with the FLIR CM174, CM74, and CM72 clamp meters, the low-profile clip securely attaches to the meter's tripod mount

TA10-F Case
Compatible with FLIR DM9x, TA7x, and CM5x meters

TA11 Case
Compatible with FLIR CM78 and FLIR CM8x meters

TA15 Universal Soft Sided Case
Recommended for use with any FLIR clamp meter and the FLIR Universal Flex current probe accessory (TA7x)

$FLIR® | The World's Sixth Sense®