DIGITAL MULTIMETER GUIDE

FIND THE RIGHT SOLUTION

FLIR®

DIGITAL MULTIMETERS
WITH IGM™

Troubleshoot easier with the unique combination of onboard thermal imaging and traditional Digital Multimeter test functions.

FLIR is proud to offer a high-quality line of digital multimeters for every need, whether it's for an industrial application or a DIY project.

Our selection of digital multimeters now includes options with built-in thermal imaging – we call it IGM™ (Infrared Guided Measurement). FLIR tools enhanced with IGM give you the power to quickly identify the precise location of potential problems. IGM also helps you to identify failing components early so you can work faster, work smarter, and move on to the next job.

DM284/285

INDUSTRIAL IMAGING MULTIMETERS WITH IGM™

Laser pinpoints exact hot spot locations

160 x 120 resolution thermal imager for non-contact temperature measurement

Non-contact voltage measurement

View thermal and electrical measurements simultaneously

Test-lead holder

Color display with wide viewing angle

IGM button activates thermal imaging

Intuitive menu system

Save up to 10 sets of 40K scalar measurements or 100 images

Send readings via METERLiNK® to compatible FLIR infrared cameras to embed data into live or saved thermal images

Fully loaded measurement features for high- and low-voltage applications

Bright LED worklight

IP54 splashproof

LoZ mode prevents false readings

Replace batteries without any tools

All-in-one digital multimeters and thermal imagers for fast inspections of industrial-electrical, mechanical, HVAC/R, and electronic systems.

KEY FEATURES

- Safely scan for issues with the built-in 160 x 120 FLIR thermal imager

- Operate easily with an intuitive menu system and a built-in worklight

- Troubleshoot complex high- and low-voltage applications with full-featured multimeter

DM285 UNIQUE FEATURES

- Connect wirelessly to FLIR Tools® or the new FLIR InSite™ workflow management app

- Save electrical parameter data and thermal images with onboard data storage

- See readings clearly on the TFT display with a wide viewing angle

DM166

IMAGING TRMS MULTIMETER WITH IGM™

Non-contact voltage measurement

Laser pinpoints exact hot spot locations

80 x 60 thermal imager to quickly scan for overheating components

Full color LCD display

IGM button activates thermal imaging

Rich DMM features for both high- and low-voltage applications

3 m drop-tested durability

Replace batteries without any tools

The most affordable multimeter with built-in thermal imaging – a must-have tool for commercial electricians as well as automation, electronics, and HVAC/R technicians.

KEY FEATURES

- Safely scan for issues with the built-in 80 x 60 FLIR thermal imager

- Troubleshoot complex high- and low-voltage applications with full-featured multimeter

- Carefully measure voltage with integrated non-contact voltage detection

- Remove high-frequency noise that affects readings with VFD mode

Bright LED worklight

Non-contact voltage measurement

Intuitive user-interface

Store up to 40K measurements with datalogging mode

3 m drop-tested durability

LoZ prevents false readings

Fully loaded measurement features for high- and low-voltage applications

DM90/91

TRMS MULTIMETERS WITH TYPE-K TEMPERATURE

Affordable, safe, and reliable multimeters for a wide range of electrical, electronic, and HVAC/R systems.

KEY FEATURES

- Diagnose complex systems with high- and low-voltage measurement capabilities

- Assess temperatures up to 400°C (752°F) with Type-K thermocouple

- Work safely with built-in, non-contact AC voltage

- User-friendly design with an intuitive interface and enhanced ergonomics

- Work longer with flexible battery options, powerful LED worklights, and rugged, drop-tested design

DM91 UNIQUE FEATURES

- Detect and document intermittent trends using the datalogging mode with on-board storage of 40k measurements

- Connect to FLIR infrared cameras or to mobile devices via Bluetooth® METERLiNK® to embed data into live or saved thermal images

- Wirelessly connect to FLIR Tools™ or the FLIR InSite™ workflow management application, for efficient troubleshooting and streamlined inspections

Advanced variable frequency drive filtering

Bright LED worklight

LoZ prevents false readings

Store/recall 99 readings

IP54 splashproof

3 m drop-tested durability

Bluetooth connectivity for wireless data transfer*

Send readings via METERLiNK to compatible FLIR infrared cameras to embed data into live or saved thermal images*

*DM93 model only

DM92/93

TRMS INDUSTRIAL MULTIMETERS

World-class digital multimeters with advanced variable frequency drive filtering that accurately analyze non-sinusoidal waveforms and noisy signals.

KEY FEATURES

- View voltage and frequency together with dual display

- Eliminate ghost voltage error readings with low impedance (LoZ) mode

- See readings clearly with the display backlight

- Illuminate dimly lit areas with the powerful LED worklight

- Durable double-molded construction: IP54 rating, 3 m drop-tested

- Large, easy-to-read digits, backlit display, and analog bar graph

DM93 UNIQUE FEATURES

- Integrated Bluetooth technology connects to the FLIR Tools Mobile app on compatible mobile devices

- Send readings via Bluetooth® METERLiNK® to compatible FLIR infrared cameras to embed data into live or saved thermal images

- Data record captures electrical measurements and provides wireless data transfer

Non-contact voltage measurement

Easy-to-navigate on-screen menu system

Bright backlight

2 m drop-tested durability

Non-contact voltage measurement

Easy-to-navigate on-screen menu system

Bright backlight

View frequency

Easy-access buttons for one-handed operation

LoZ mode prevents false readings

2 m drop-tested durability

DM62/66

TRMS DIGITAL MULTIMETERS FOR ELECTRICAL AND FIELD SERVICE

Meters of exceptional value that provide rich features, precise measurements, and quality construction for commercial electricians, automation field service professionals, electronics repair technicians, and even do-it-yourselfers.

KEY FEATURES

- Measure both AC/DC voltage and current
- Safely check voltage with non-contact voltage detection
- Operate the meter with one hand, thanks to compact design and easy-access buttons

DM66 UNIQUE FEATURES

- Low impedance mode (LoZ) to prevents ghost voltage from delivering false readings
- Measure frequency, diode, and capacitance
- Measure temperature up to 400°C (752°F) with Type-K thermocouple

DM64

HVAC TRMS DIGITAL MULTIMETER WITH TEMPERATURE

Provides an unmatched feature set and high-quality measurements at an affordable price – perfect for professionals who install, inspect, and maintain HVAC/R systems.

KEY FEATURES

- Assess temperatures up to 400°C (752°F) with Type-K thermocouple

- Test flame sensors with microamps feature

- Readily and precisely identify live wires with probe-contact voltage detection

- Work quickly and comfortably thanks to user-friendly design, intuitive interface, and enhanced ergonomics

- Easily identify deviations from normal conditions by comparing new readings to stored data

- Navigate the meter's on-screen menu system easily

- Swap batteries easily from the "no tool" battery compartment

Bright backlight

Easy-to-navigate on-screen menu system

View frequency

Temperature measurement

Easy-access buttons for one-handed operation

LoZ mode prevents false readings

Test flame sensors with microamps measurement

IM75

INSULATION & DMM COMBO WITH METERLINK®

A premier handheld insulation tester and advanced multifunction digital multimeter for installation, troubleshooting, and maintenance professionals.

KEY FEATURES

- Multiple ranges of resistance insulation test levels available: 50 V, 100 V, 250 V, 500 V, 1000 V

- Send readings via METERLiNK to compatible FLIR infrared cameras to embed data into live or saved thermal images

- Insulation modes: Polarization Index, Dialectric Absorption, and Earth Bond Resistance

- Bright LED worklights to illuminate test areas and targets

- Multi-color LED display with compare mode makes pass/fail determinations easy

- Durable double-molded construction: IP54 rating, 3 m drop-tested

Store/recall 99 readings

Specialty insulation modes including: Polarization Index, Dielectric Absorption, and Earth Bond Resistance.

3 m drop-tested durability

IP54 splashproof

Bluetooth® connectivity for wireless data transfer

Send readings via METERLiNK to compatible FLIR infrared cameras to embed data into live or saved thermal images

TECHNICAL SPECIFICATIONS

MARKET	GENERAL PURPOSE	PROFESSIONAL			INDUSTRIAL						INSULATION
Model	FLIR DM62	FLIR DM64	FLIR DM66	FLIR DM166	FLIR DM90	FLIR DM91	FLIR DM284	FLIR DM285	FLIR DM92	FLIR DM93	FLIR IM75
IGM Resolution	—	—	—	80 × 60	—	—	160 × 120	160 × 120	—	—	—
IGM Temperature Range	—	—	—	-10°C to 150°C (14°F to 302°F)	—	—	-10°C to 150°C (14°F to 302°F)	-10°C to 150°C (14°F to 302°F)	—	—	—
Display Counts/Type	6,000/Backlit LCD	6,000/Backlit LCD	6,000/Backlit LCD	6,000/2.4" TFT	6,000/Backlit LCD	6,000/Backlit LCD	6,000/2.8" TFT	6,000/2.8" TFT	40,000/Backlit LCD	40,000/Backlit LCD	4,000/40,000/Backlit LCD
Bar Graph	—	—	—	—	•	•	•	•	•	•	•
Basic Accuracy (DCV)	±0.4%	±0.4%	±0.4%	±0.5%	±0.09%	±0.09%	±0.09%	±0.09%	±0.05%	±0.05%	±0.1%
True RMS AC/DC Voltage	600 V	600 V	600 V	600 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V
True RMS AC/DC Current	10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	—
AC/DC µA Current	•	•	•	•	•	•	•	•	—	—	—
Resistance	60 MΩ	60 MΩ	60 MΩ	60 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	40 MΩ	40 MΩ	Insulation: 20 GΩ Earth Bond: 40 kΩ
Capacitance	—	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	40 mF	40 mF	10 mF
Frequency	—	50 kHz	50 kHz	50 kHz	100 kHz	100 kHz	100 kHz	100 kHz	100 kHz	100 kHz	40 kHz
Temperature	—	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	-40°C to 400°C (-40°F to 752°F)	-200°C to 1200°C (-328°F to 2192°F)	-200°C to 1200°C (-328°F to 2192°F)	—
Data Hold	•	•	•	•	•	•	•	•	•	•	•
Relative	•	•	•	•	•	•	•	•	•	•	—
Min/Max/Average	•	•	•	•	•	•	•	•	•	•	—
LoZ Mode	—	•	•	—	•	•	•	•	•	•	—
Peak	—	—	—	—	•	•	•	•	•	•	—
Low Pass Filter/VFD	•	•	•	•	•	•	•	•	•	•	•
Ingress Protection (IP)/Drop Proof	IP40/2 m	IP40/2 m	IP40/2 m	IP40/3 m	IP54/3 m	IP40/3 m	IP54/3 m	IP40/3 m	IP54/3 m	IP54/3 m	IP54/3 m
Non-Contact Voltage Detection (NCV)	•	•	•	•	•	•	•	•	—	—	—
Worklights	—	—	—	—	•	•	•	•	•	•	•
Data Storage	—	—	—	—	—	40,000 readings	—	10 Sets (40,000 readings each) and 100 images	Store/Recall 99 readings	Store/Recall 99 readings	Store/Recall 99 readings
Bluetooth/METERLiNK®	—	—	—	—	—	•	—	•	—	•	•
Safety Category	CAT III-600 V CAT IV-300 V	CAT III-600 V CAT IV-300 V	CAT III-600 V CAT IV-300 V	CAT III-600 V CAT IV-300 V	CAT III-1000 V CAT IV-600 V	CAT III-1000 V CAT IV-600 V	CAT III-1000 V CAT IV-600 V	CAT III-1000 V CAT IV-600 V	CAT III-1000 V CAT IV-600 V	CAT III-1000 V CAT IV-600 V	CAT III-1000 V CAT IV-600 V

COMPLETE YOUR TOOLBAG

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

Check out all that FLIR has to offer at www.flir.com/professional-tools

ACCESSORIES

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

- Test leads
- Thermocouple probes
- Rechargeable battery kits for select meters
- Protective cases
- Flex current probe accessories

Check out all of FLIR's multimeter-compatible accessories at www.flir.com/dmm-accessories

◆FLIR® | The World's Sixth Sense®