



TELEDYNE  
FLIR

TEST & MEASUREMENT



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Emitec Group  
#1 in Test & Measurement, worldwide

TF-102

# DIGITAL MULTIMETER GUIDE

FIND THE RIGHT SOLUTION



FLIR DM166

+73.9 °F  
0.002 V

MODE Hz °C HOLD  
°F

RANGE APO MIN/MAX

REL

ε

OFF  
V V mv Ω  
μA mA  
A mA

μA mA

Ω V

A

COM

CAT IV 300V  
CAT III 600V  
600mA MAX  
10A MAX

# DIGITAL MULTIMETERS WITH IGM™



Easily troubleshoot electrical issues with the unique combination of onboard thermal imaging and traditional Digital Multimeter test functions.

Teledyne FLIR is proud to offer a high-quality line of digital multimeters to meet the needs of professional inspectors, whether they're working in an industrial or commercial setting.

These rugged multimeters exceed expectations with innovative features like build-in thermal imaging—we call it Infrared Guided Measurement, or IGM—that can guide you to the source of electrical faults.

Integrated flashlights, laser pointers, and features such as connection via Bluetooth® METERLiNK® to FLIR infrared cameras and mobile devices ensure you have the tools on hand to work quickly and efficiently.

View thermal and electrical measurements simultaneously

Non-contact voltage measurement

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

Color display with wide viewing angle

IGM button activates thermal imaging

Test-lead holder

Intuitive menu system

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

Bright LED worklight

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

IP54 splashproof

LoZ mode prevents false readings



FLIR DM285  
66.2°C  
206.5 V  
59.99 Hz  
78.3  
25.5

MODE  
OK  
RANGE

OFF  
V  
V  
mV  
μV  
mA  
A  
LoZ

A  
mA  
COM  
LoZ V  
mV Ω  
μA

CAT IV 600V  
CAT III 1000V  
10A MAX  
400mA MAX

WARNING  
TO AVOID ELECTRICAL SHOCK,  
REMOVE TEST LEADS BEFORE  
OPENING CASE OR BATTERY DOOR.  
AVERTISSEMENT  
POUR ÉVITER LES ÉLECTROCUTIONS,  
RETIREZ LES FLS D'ESSAI AVANT  
D'OUVRIR LE BOÎTIER OU LE  
COMPARTIMENT À PILES.  
3 x AA (1.5V) or  
FLIR TA04  
(3.7V Rechargeable)  
F81 11A 1KV FAST  
F82 400mA 1KV FAST  
METER LINK  
iOS | Android | Bluetooth  
CE UL US LISTED  
MULTIMETER  
E201607  
Model number: DM285  
Contains FCC ID: WAP2006  
Contains IC: 7522A-2006

# DM285

INDUSTRIAL IMAGING MULTIMETERS WITH IGM™

Laser pinpoints exact hot spot locations



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

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 × 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
- Connect wirelessly to the FLIR Tools® Mobile app
- Save electrical parameter data and thermal images with onboard data storage
- See readings clearly on the TFT display with a wide viewing angle

Non-contact voltage measurement

80 x 60 thermal imager to quickly scan for overheating components

Full color LCD display

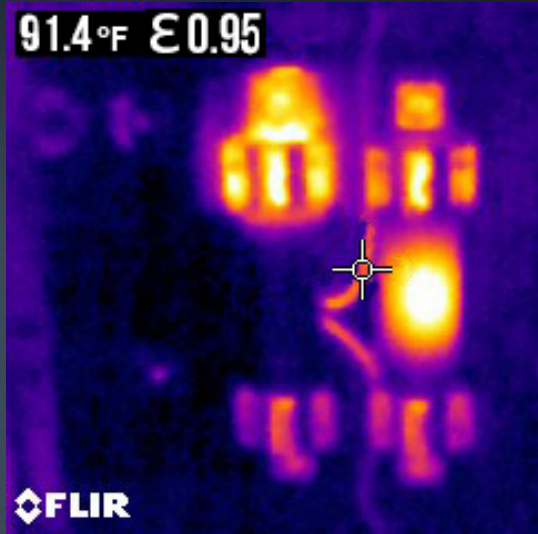
IGM button activates thermal imaging

3 m drop-tested durability

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



Laser pinpoints exact hot spot locations



# DM166

IMAGING TRMS MULTIMETER WITH IGM™



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 × 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



Store/recall 99 readings

Advanced variable frequency drive filtering

Bright LED worklight

LoZ prevents false readings

Removable test lead holder

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

Built-in back stand



# DM93

TRMS INDUSTRIAL MULTIMETER



World-class digital multimeter 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
- Illuminate dimly lit areas with the powerful LED worklight
- Durable double-molded construction: IP54 rating, 3 m drop-tested
- 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

LoZ mode prevents false readings

Easy-access buttons for one-handed operation

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 DIYers.

## 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 prevent 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



# 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, Dielectric 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



# TECHNICAL SPECIFICATIONS



MARKET	GENERAL PURPOSE	PROFESSIONAL			INDUSTRIAL		INSULATION
Model	FLIR DM62	FLIR DM64	FLIR DM66	FLIR DM166	FLIR DM285	FLIR DM93	FLIR IM75
IGM Resolution	—	—	—	80 × 60	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)	—	—
Display Counts/Type	6,000/Backlit LCD	6,000/Backlit LCD	6,000/Backlit LCD	6,000/2.4" TFT	6,000/2.8" TFT	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%	±0.05%	±0.1%
True RMS AC/DC Voltage	600 V	600 V	600 V	600 V	1,000 V	1,000 V	1,000 V
True RMS AC/DC Current	10 A	10 A	10 A	10 A	10 A	10 A	—
AC/DC $\mu$ A Current	•	•	•	•	•	—	—
Resistance	60 M $\Omega$	60 M $\Omega$	60 M $\Omega$	60 M $\Omega$	50 M $\Omega$	40 M $\Omega$	Insulation: 20 G $\Omega$ Earth Bond: 40 k $\Omega$
Capacitance	—	10 mF	10 mF	10 mF	10 mF	40 mF	10 mF
Frequency	—	50 kHz	50 kHz	50 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)	-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	IP40/3 m	IP54/3 m	IP54/3 m
Non-Contact Voltage Detection (NCV)	•	•	•	•	•	—	—
Worklights	—	—	—	—	•	•	•
Data Storage	—	—	—	—	10 Sets (40,000 readings each) and 100 images	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

# COMPLETE YOUR TOOLBAG



Teledyne 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 we have to offer at [www.flir.com/professional-tools](http://www.flir.com/professional-tools)

# ACCESSORIES

Teledyne 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 our entire range of multimeter-compatible accessories at [www.flir.com/dmm-accessories](http://www.flir.com/dmm-accessories)



For more information contact: [Sales@TeledyneFLIR.com](mailto:Sales@TeledyneFLIR.com) or to find your local support number, visit: [flir.com/contactsupport](http://flir.com/contactsupport)

[www.teledyneflir.com](http://www.teledyneflir.com)  
NASDAQ: TDY

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