

Product Datasheet - Technical Specifications



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IMAGING TRMS MULTIMETER

FLIR DM166™

The FLIR DM166 is the most affordable multimeter with built-in thermal imaging – a must-have tool for commercial electricians, automation, electronics, and HVAC technicians. Featuring Infrared Guided Measurement (IGM™) powered by an 80 x 60 FLIR thermal imager, the DM166 visually guides you to the precise location of temperature anomalies and potential problems faster, more safely, and efficiently. The feature-packed multimeter is an ideal tool for troubleshooting and diagnosing complex issues in both high-voltage and low-voltage applications.



TROUBLESHOOT FASTER

One tool gets the job done

- Quickly scan for overheating components with IGM
- Diagnose faults with broad DMM test functions
- Troubleshoot easier with the unique combination of onboard thermal imaging and traditional DMM test functions



WORK SAFER

Identify energized and potentially faulty equipment from a safe distance

- Safely check for live connections using non-contact temperature measurement
- Carefully measure voltage with integrated non-contact voltage detection
- Work with peace of mind knowing your meter has a CAT III-600V, CAT IV-300V safety rating



DIAGNOSE PROBLEMS MORE EFFICIENTLY

Rich feature set covers both high-voltage and low-voltage applications

- Reliably take 600 V AC/DC voltage measurements and 10 A AC/DC current measurements
- Remove high-frequency noise that affects readings with the Variable Frequency Drive (VFD) measurement function
- Precisely measure resistance up to 60 MΩ, frequency up to 50 KHz, and capacitance up to 10,000 μF

SPECIFICATIONS

Thermal Imaging		DM166	
IR Resolution	80 x 60 pixels (4,800 pixels)		
Thermal Imaging Detector	FLIR Lepton® microbolometer		
Temperature Sensitivity	≤ 150 mK		
Emissivity Settings	4 presets with custom adjustment		
Temperature Accuracy	3°C or 3%		
Temperature Range	14° F to 302°F (-10C to 150° C)		
Field of View	50° x 38°		
Laser Pointer	Yes		
Focus	Fixed		
Thermal Imaging Palette	Iron, Rainbow, Grayscale		
Level & Span	Auto		
Measurements			
True RMS	Yes		
	Range	Basic Accuracy	
AC / DC Volts	600.0 V	±0.7% / 0.5%	
AC / DC mVolt	600.0 mV	±1% / 0.3%	
VFD AC Volts	600.0 V	±1.0%	
AC / DC Amps	10.00 A	±1.0% / 0.7%	
AC / DC mAmps	600.0 mA	±1.0% / 0.7%	
AC / DC μAmps	6000 μA	±1.5% / 1.0%	
Resistance	6.000 MΩ 60.00 MΩ	±0.9% ±1.5%	
Capacitance	2.000 mF 10.00 mF	±2.0% ±5.0%	
Diode Test	3.000 V	±0.9%	
Frequency Counter	50.00 kHz	±0.3%	
Temperature, Type-K Thermocouple	-40°F to 752.0°F -40°C to 400°C	±1.0% + 3°F ±1.0% + 1.5°C	

Additional Measurements		DM166
Continuity Check	30 Ω and 480 Ω	
Measuring rate	5 samples per second	
General Information		
Auto Power Off	Yes	
Display Size	2.4 in TFT screen	
Battery	3 AA batteries; optional TA04 Li-Poly rechargeable battery	
Drop Test	3 m	
IP Rating	IP40	
Safety Category Rating	CAT III-600V, CAT IV-300V	
Size (L x W x H)	190 × 86.4 × 48.3 mm (7.5 × 3.4 × 1.9 in)	
Weight	428.3 g (15.1 oz)	
Warranty	10 year on product and detector	
Box Contents		
	DM166, L91 lithium batteries, silicone test leads, soft carrying case	
Ordering Information		Order #
FLIR DM166 Thermal Imaging TRMS Multimeter with IGM		793950391662

Specifications are subject to change without notice.

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