

Product Datasheet - Technical Specifications



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P/N: DM90

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Website

<http://www.flir.com>

Customer support

<http://support.flir.com>

Disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to exportquestions@flir.com with any questions.



Part number	DM90
Part name	True RMS Industrial Multimeter
<p>The FLIR DM90 is an affordable true RMS digital multimeter with a type-K thermocouple—an ideal tool for electricians, service technicians and HVAC professionals to have on the job. Equipped with rich features, including LoZ, VFD mode, and μA current measurement capability, the FLIR DM90 gives you trusted readings to troubleshoot and repair a wide range of electrical and electronic systems. The FLIR DM90 is shipped fully tested and calibrated, and with proper use will provide years of reliable service.</p>	
<p>Design and functionality vital to professionals:</p> <ul style="list-style-type: none"> • Built-in worklight to help you access difficult locations with lighting issues. • Non-contact voltage detector. • Intuitive and simple-to-operate user interface. • Durable and drop tested to 3 m (9.8 ft.). • IP54 splash-proof rated. • 18 functions, including DC voltage, AC voltage, DC current (including μA), AC current (including μA), resistance, type-K thermocouple contact temperature, capacitance, frequency, diode, continuity. 	
<p>Features: minimum, maximum, average, auto power off, hold, relative, peak hold.</p>	

Electrical measurement	
Maximum voltage	1000 V DC or 1000 V AC RMS
Display count	6000
Frequency counter	<ul style="list-style-type: none"> • 100.00 Hz \pm (0.1% + 2D) • 1000.0 Hz \pm (0.1% + 2D) • 10.000 kHz \pm (0.1% + 2D) • 100.00 kHz \pm (0.1% + 2D)
Resistance	<ul style="list-style-type: none"> • 600.0 Ω \pm (0.9% + 5D) • 6.000 kΩ \pm (0.9% + 2D) • 60.00 kΩ \pm (0.9% + 2D) • 600.0 kΩ \pm (0.9% + 2D) • 6.000 MΩ \pm (0.9% + 2D) • 50.00 MΩ \pm (3.0% + 5D)
Continuity check	600.0 Ω \pm (0.9% + 5D)
Diode test	1.500 \pm (0.9% + 2D)



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Electrical measurement	
Capacitance	<ul style="list-style-type: none">• 1000 nF \pm (1.9% + 5D)• 10.00 μF \pm (1.9% + 2 digits)• 100.0 μF \pm (0.9% + 2 digits)• 1.000 mF \pm (0.9% + 2 digits)• 10.00 mF \pm (0.9% + 2 digits)• 40.00 mF \pm (2.0% + 20 digits)
Temperature, type-K thermocouple	<ul style="list-style-type: none">• -40 to +752.0°F DMM \pm (1.0% + 5.4°F)/ IGM \pm (1.0% + 9°F)• -40 to +400°C DMM \pm (1.0% + 3°C)/ IGM \pm (1.0% + 5°C)
Measuring rate	3 samples per second
Meter data	
Category rating	CAT IV—600 V, CAT III—1000 V
IP rating	IP54
Drop test	3 m (9.8 ft.)
Warranty	https://www.flir.com/testwarranty
Calibration cycle	Once per year, recommended
Certifications	
Certifications	UL, CE, FCC, CB
Safety standards compliance	IEC 61010-1 CAT IV—600 V, CAT III—1000 V
Power system	
Power requirements	4 x 1.5 V AAA alkaline batteries or optional FLIR TA03 lithium polymer rechargeable battery system
Battery life, alkaline batteries	Approximately 110 hours with backlight and worklight off
Battery life, lithium polymer battery (optional)	Approximately 500 hours with backlight and worklight off
Auto power off	Default: 20 minutes
Environmental data	
Operating ambient temperatures and relative humidity (RH)	<ul style="list-style-type: none">• -10 to +30°C (14–86°F), <85% RH• 30 to +40°C (86–104°F), <75% RH• 40–50°C (104–122°F), <45% RH
Storage temperature and RH	-20 to +60°C (-4 to +140°F), 0–80% RH (without batteries)
Temperature coefficient	0.1 x (specified accuracy)/°C, <18°C (64.4°F) , >28°C (82.4°F)
Operating altitude	2000 m (6560 ft.)
Pollution degree	2
EMC	EN61326-1
Shock vibration	Per MIL-PRF-28800F Class 2
Meter physical data	
Weight	536 g (18.9 oz.)
Dimensions (L x W x H)	200 mm x 95 mm x 49 mm (7.9 in. x 3.7 in. x 1.9 in.)
Material	PC/ABS
Color	Gray, black, and blue



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Shipping information	
Packaging type	Color box with view of product in clamshell
Packaging contents	DM90 FLIR meter, TA82 premium test leads, TA70 alligator clips, TA60 thermocouple probe with adapter, TA84 test lead holder storage/tripod accessory, 4 × AAA Energizer batteries, English-only quick start guide
Packaging weight	1.2 kg (2.6 lb.)
Packaging dimensions (H × W × L)	32 cm × 14 cm × 11 cm (12.6 in. × 5.5 in. × 4.3 in.)
Carton weight	15 kg
Carton dimensions (H × W × L)	65 cm × 30 cm × 56 cm (25.6 in. × 11.8 in. × 22.0 in.)
Carton quantity	12
EAN-13	0793950370841
UPC-12	793950370841
Country of origin	Taiwan
Tariff code	9030310000
Technical support	
Website	http://support.flir.com
Accessories (included in the box)	
TA82	Premium Silicone Test Leads
TA84	Test Lead Storage/Tripod Accessory
TA70	CAT IV Insulated Alligator Probes (Slip On)
TA60	Thermocouple Adapter with Type K Probe

Supplies & accessories:

- TA03-KIT; NiMH Rechargeable Battery Kit
- TA10; Protective case for DM9x and IM7x Series
- TA10-F; Protective Case for DM9x and TA72/74 Series
- TA15; Universal Soft Sided Case
- TA16; Pouch for FLIR Multimeters
- TA42; TA42 Belt Clip
- TA50; Magnetic Hanging Strap for DM9x, IM7x Series
- TA52; TA52 Magnetic Meter Mount
- TA60; Thermocouple probe with adapter
- TA70; CAT IV Insulated Alligator Probes
- TA72; Large Universal Flex Current Probe Accessory (25 cm)
- TA74; Large Universal Flex Current Probe Accessory (45 cm)
- TA80; CAT IV Silicone Test Leads