

P/N: DM284

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Part number	DM284										
Part name	Imaging Multimeter with IGM										
<p>The FLIR DM284 is an industrial-grade imaging multimeter built for durability to ensure longevity in rugged environments. The thermal imaging function helps pinpoint electrical problems associated with, for example, electrical panels, electrical connectors, and wires, and speeds up troubleshooting by visually guiding the user to the precise location without making contact with the target equipment. With an embedded high-resolution (160 × 120) FLIR thermal imager, it is the first digital multimeter (DMM) suitable for electronics troubleshooting using FLIR'S Infrared Guided Measurement (IGM) technology. Electronic components frequently overheat before running to failure: IGM saves time by presenting a thermal image of the target under test, making potential problem components visible on the DMM display. Findings can be confirmed and analyzed using a complete set of built- in functions (diode testing, continuity testing, micro-amp measurement, etc.) necessary to perform basic electronics testing.</p>											
<p>Pinpoint problems quickly and safely with IGM:</p> <ul style="list-style-type: none"> • See exactly where to measure with the 160 × 120 resolution FLIR thermal imager. • All-in-one tool—carry just one device and always have access to thermal imaging. • Scan panels or cabinets for hazards using IGM without direct contact. • Troubleshoot challenging problems with ease: 18 function DMM including VFD mode, true RMS, LoZ and NCV. • Thermocouple input. • View thermal and electrical thermocouple measurements simultaneously, with a temperature differential option. 											
<p>Design and functionality vital to professionals:</p> <ul style="list-style-type: none"> • Built-in worklights and a laser pointer help you to access difficult locations with lighting issues and to pinpoint the location of the problem in the thermal image. • Simple user interface and various thermal color palettes to choose from: Iron, Rainbow, Gray scale. • Durable and drop tested to 3 m (9.8 ft.). 											
<p>Functions:</p> <p>IGM, DC voltage, AC voltage, DC current (including μA), AC current (including μA), resistance, type K thermocouple contact temperature, capacitance, frequency, diode, continuity.</p>											
<p>Features: minimum, maximum, average, auto power off, hold, relative, peak hold.</p>											
<table border="1"> <tr> <td>Thermal imaging</td> <td></td> </tr> <tr> <td>Detector type</td> <td>FLIR Lepton; micro-bolometer focal plane array (FPA)</td> </tr> <tr> <td>IR imaging resolution (H × V)</td> <td>160 × 120 pixels</td> </tr> <tr> <td>IR imaging field of view (H × V)</td> <td>50.0°</td> </tr> <tr> <td>IR imaging spectral response</td> <td>8–14 μm</td> </tr> </table>		Thermal imaging		Detector type	FLIR Lepton; micro-bolometer focal plane array (FPA)	IR imaging resolution (H × V)	160 × 120 pixels	IR imaging field of view (H × V)	50.0°	IR imaging spectral response	8–14 μm
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Thermal imaging	
Thermal sensitivity	150 mK
IR image capture frequency	9 Hz
IR image color palettes	Rainbow, Iron, Gray scale
Laser pointer type	Class I (red)
Laser pointer power	<0.4 mW
IR temperature measurement range	-10 to 150°C (14 to 302°F)
Over- and under-range indication	OL
Temperature reading stabilization	Dashes are displayed for approximately 30 seconds as the temperature reading stabilizes
IR temperature resolution	0.1°C (0.1°F)
IR temperature accuracy	±3°C (5.4°F) or ± 3% of the reading (whichever is greater) for >25°C (77°F), ±5°C -10°C to 25°C (14°F to 77°F)
Distance-to-spot (D:S) ratio	30:1
Emissivity adjustment	0.95 maximum, 4 presets plus a custom setting (0.10–0.99)
Targeting	Displayed cross-hairs pinpoint the center of the measurement spot
Hold	Image with measurement

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 ± (0.1% + 2D) • 1000.0 Hz ± (0.1% + 2D) • 10.000 kHz ± (0.1% + 2D) • 100.00 kHz ± (0.1% + 2D)
Resistance	<ul style="list-style-type: none"> • 600.0 Ω ± (0.9% + 5D) • 6.000 kΩ ± (0.9% + 2D) • 60.00 kΩ ± (0.9% + 2D) • 600.0 kΩ ± (0.9% + 2D) • 6.000 MΩ ± (0.9% + 2D) • 50.00 MΩ ± (3.0% + 5D)
Continuity check	600.0 Ω ± (0.9% + 5D)
Diode test	1.500 ± (0.9% + 2D)
Capacitance	<ul style="list-style-type: none"> • 1000 nF ± (1.9% + 5D) • 10.00 μF ± (1.9% + 2 digits) • 100.0 μF ± (0.9% + 2 digits) • 1.000 mF ± (0.9% + 2 digits) • 10.00 mF ± (0.9% + 2 digits) • 40.00 mF ± (2.0% + 20 digits)
Temperature, type K thermocouple	<ul style="list-style-type: none"> • -40 to 752.0°F DMM ± (1.0% + 5.4°F)/ IGM ± (1.0% + 9°F) • -40 to 400°C DMM ± (1.0% + 3°C)/ IGM ± (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	3M



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Meter data	
Warranty	10-10 limited warranty
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 × 1.5 V AAA alkaline batteries. Or optional TA04 rechargeable lithium polymer rechargeable battery system
Battery life, alkaline batteries	Approximately 5 hours DMM or 2 hours IGM
Battery life, lithium polymer batteries	Approximately 30 hours DMM or 10 hours IGM
Auto power off	Default: 20 minutes
Environmental data	
Operating ambient temperatures and relative humidity (RH)	–10 to 30°C (14 to 86°F), <85% RH 30 to 40°C (86 to 104°F), <75% RH 40 to 50°C (104 to 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 × (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 × W × H)	200 mm × 95 mm × 49 mm (7.9 in. × 3.7 in. × 1.9 in.)
Material	PC/ABS
Color	Gray, black, and blue
Shipping information	
Packaging type	Color box with a view of the product in the clamshell
Packaging contents	DM284 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 (33 lb.)
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	0793950372845
UPC-12	793950372845



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Shipping information	
Country of origin	Taiwan
Tariff Code	9030310000

Accessories	
DM284 Imaging True RMS Industrial Multimeter with IGM	
TA72 Universal Flex Current Probe Accessory 25 cm (10 in.)	
TA74 Universal Flex Current Probe Accessory 45 cm (18 in.)	
TA04-KIT Lithium Polymer Rechargeable Battery Kit	
TA15 Soft Sided Carrying case	
TA52 Magnet Mount	
TA50 Magnetic Hanging Strap	
TA42 Belt Clip	
TA82 Premium Silicone Test Leads	
TA84 Test Lead Storage/Tripod Accessory	
TA10 Protective case for FLIR DMMs	
TA10-F Protective case for FLIR DMM's and TA7X	
TA70 CAT IV Insulated Alligator Probes (Slip On)	
TA60 Thermocouple Adapter with Type K Probe	

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