

## Product Datasheet - Technical Specifications



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# FLIR DM91: Industrial TRMS Multimeter with Datalogging and Wireless Connectivity

## P/N: DM91

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### Website

<http://www.flir.com>

### Customer support

<http://support.flir.com>

### Disclaimer

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Part number	DM91
Part name	Industrial TRMS Multimeter with Datalogging and Wireless Connectivity
<p>The FLIR DM91 is an affordable, safe, and reliable digital multimeter for a wide range of electrical and electronic system applications. With its durable design, intuitive user interface, and comprehensive features covering high- and low-voltage applications, the FLIR DM91 is uniquely positioned to help you troubleshoot electrical, electronic, and HVAC/R systems. The FLIR DM91 also has Bluetooth technology, so you can connect via METERLiNK to compatible FLIR infrared cameras, or to mobile devices running the FLIR Tools app.</p>	
<p>Fast and effective troubleshooting:</p> <ul style="list-style-type: none"> <li>• Rich feature set ensures safe and accurate operation.</li> <li>• Diagnose complex systems with high- and low-voltage measurement capabilities.</li> <li>• Measure true RMS, LoZ, and VFD, as well as microamp and milliamp current.</li> <li>• Assess temperatures up to 400°C with the type K thermocouple.</li> <li>• Work safely with the built-in, non-contact AC voltage detector.</li> </ul>	
<p>Work efficiently:</p> <ul style="list-style-type: none"> <li>• Designed and built to make your job easier.</li> <li>• Set up and start working fast owing to an intuitive user interface and enhanced ergonomics.</li> <li>• Work longer with flexible battery options, powerful LED worklights, and a rugged, drop-tested design.</li> <li>• Record results with datalogging and storage of up to 40 000 scalar measurements.</li> <li>• Rely on the protection of CAT IV—600 V, CAT III—1000 V safety ratings.</li> </ul>	
<p>Document and share results:</p> <ul style="list-style-type: none"> <li>• View and share information wirelessly for an improved workflow.</li> <li>• Send readings via METERLiNK to compatible FLIR infrared cameras to embed data into live or saved thermal images.</li> <li>• Wirelessly connect to FLIR Tools or the FLIR InSite workflow management app for streamlined documentation and information sharing.</li> </ul>	
<b>Static datalogging and storage</b>	
Data storage interval, configurable	1–99 seconds
Readings per memory set	40 000
Maximum number of memory sets	1
<b>Connectivity</b>	
Wireless technology	Bluetooth BLE
Communications protocol	METERLiNK



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<b>Electrical measurement</b>	
Display count	6000
AC/DC V	1000 V AC RMS or 1000 V DC $\pm$ 1%/0.09%
AC/DC mV	600.0 mV $\pm$ 1%/0.5%
VFD AC V	1000 V AC RMS, 45–65 Hz, $\pm$ 1%
AC/DC LoZ V	1000 V AC RMS or 1000 V DC $\pm$ 2.0%
AC/DC A	10.00 A AC RMS or 10.00 A DC $\pm$ 1.5%/1.0%
AC/DC mA range	400.0 mA $\pm$ 1.5%/1.0%
AC/DC $\mu$ A range	4000 $\mu$ A AC RMS or 4000 $\mu$ A DC $\pm$ 1.0%
Frequency counter	100.00 kHz $\pm$ 0.1%
Resistance	6.000 M $\Omega$ $\pm$ 0.9%, 50.00 M $\Omega$ $\pm$ 3.0%
Continuity check threshold	20–200 $\Omega$
Diode test	1.500 V $\pm$ 0.9%
Capacitance	10.00 mF $\pm$ 1.9%
Temperature, type K thermocouple	–40 to 400°C DMM $\pm$ (1.0% + 3°C)/IGM $\pm$ (1.0% + 5°C) (–40 to 752°F DMM $\pm$ (1.0% + 5.4°F)/IGM $\pm$ (1.0% + 9°F))
Measuring rate	3 samples per second
<i>Accuracy is given as <math>\pm</math> (% of reading)</i>	
<b>Meter data</b>	
Category rating	CAT IV—600 V, CAT III—1000 V
IP rating	IP40
Drop test	3 m (9.8 ft.)
Warranty	<a href="https://www.flir.com/testwarranty">https://www.flir.com/testwarranty</a>
Calibration cycle	Once per year, recommended
<b>Certifications</b>	
Certifications	C-UL-US, CE, RCM
Safety standards compliance	IEC 61010-1 CAT IV—600 V, CAT III—1000 V
<b>Power system</b>	
Power requirements	3 $\times$ AA alkaline batteries or optional TA04 lithium polymer rechargeable battery system
Battery life, alkaline batteries	Approximately 180 hours with backlight and worklight off
Battery life, TA04 lithium polymer batteries	Approximately 500 hours with backlight and worklight off
Auto power off	Default: 10 minutes
<b>Environmental data</b>	
Operating ambient temperatures and relative humidity (RH)	–10 to 30°C (14–86°F), <85% RH; 30–40°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 $\times$ (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



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Meter physical data	
Weight	535 g (19.8 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	Polycarbonate/ABS
Color	Gray, black, and blue

Shipping information	
Packaging type	Color box with view of product in clamshell
Packaging contents	DM91 FLIR meter, TA82 premium test leads, TA70 alligator clips, TA60 thermocouple probe with adapter, TA84 test lead holder storage/tripod accessory, 3 x AA alkaline batteries, soft carrying case, English-only quick start guide
Packaging weight	1.2 kg (2.6 lb.)
Packaging dimensions (H x W x L)	32 cm x 14 cm x 11 cm (12.6 in. x 5.5 in. x 4.3 in.)
Carton weight	15 kg (33.0 lb.)
Carton dimensions (H x W x L)	65 cm x 30 cm x 56 cm (25.6 in. x 11.8 in. x 22.0 in.)
Carton quantity	12
EAN-13	0793950370919
UPC-12	793950370919
Country of origin	Taiwan
Tariff Ccode	9030310000

Technical support	
Website	<a href="http://support.flir.com">http://support.flir.com</a>

Included in the box	
DM91 Industrial TRMS Multimeter with Datalogging and Wireless Connectivity	
TA82 Premium Silicone Test Leads	
TA84 Test Lead Storage/Tripod Accessory	
TA60 Thermocouple Adapter with Type K Probe	
TA70 CAT IV Insulated Alligator Probes (Slip On)	
Soft-sided carrying case	

## Supplies & accessories:

- TA04-KIT; Lithium Polymer 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