

FEATURES

- 3 1/2 digit LCD
- 0.5% basic DCV accuracy
- 1.3% basic ACV accuracy
- 1.0% basic DCA accuracy
- 1.5% basic ACA accuracy
- 0.75% basic OHM accuracy
- Continuity and diode test
- 500V dual-fuse protection
- Auto power-off
- Beep Guard™ warning system
- Water resistant rating IP64
- 1.5m (5 feet) dropproof
- Protective holster with tilt stand
- IEC 1010-1 CAT.III 600V/ CAT.II 1000V
- One set of 1:1 probe

RS PRO Digital Multimeters -IDM91E Handheld Digital Multimeter

RS Stock No.: 123-3244



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

RS PRO IDM91E Rugged Industrial Digital Multimeter

RS PRO IDM91E digital multimeter (DMM) designed for harsh environments. This handheld DMM is a tool which can measure capacitance, voltage, electrical current and resistance with diode and continuity check. The rugged body guarantees drop proof resistance from up to 1.5 m. The multimeter is also waterproof with a rating of IP54. Featuring fuse protection on both 200 mA and 10 A current ranges and a specially designed beep guard system. That system provides a constant beep warning if the test leads put in the current jacks and select an incorrect function.

General Specifications

Model Number (p)	IDM91E
Multimeter Type	Handheld
Functions Measured	AC Current, AC Voltage, Continuity, DC Current, DC Voltage, Diode Test, Resistance
True RMS	NO
Display Type	LCD
Digit Resolution	3 1/2 digit LCD
Operating Temperature (Min to Max)	0°C to +50°C
Storage Temperature (Min to Max)	-20°C~60°C
Diode Test	Yes
Continuity Test	Yes
Auto power off	Yes , Approx. 30 minutes after last operation

Measurement

Type	Absolute Maximum Measurement	Resolution	Best Accuracy
DC Current	10A dc	0.1µA	±1% + 1 Digits
AC Current	10A ac	0.1µA	±2.5% + 3 Digits
Resistance	20MΩ	100mΩ	±0.75% + 1 Digits
DC Voltage	600V dc	0.1mV dc	±0.5% + 1 Digits
AC Voltage	600V ac	0.1mV ac	±1.25% + 4 Digits

Electrical Specifications

Battery Type	IEC 6F22, NEDA 1604, 9V
Battery life	300 h
Safety Category Voltage	600V

Mechanical Specifications

Dimensions	95 x 50 x 192mm
Width	50mm
Length	95mm
Height	192mm
Weight	550 (With Holster)g

Protection Category

Safety Category Level	CAT III
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Approvals

Compliance/Certifications	IEC
Declarations	RoHS Certificate of Compliance

Similar Products

Stock No.	Brand	Product Name	Multimeter Type	Functions Measured	Digit Resolution
124-2010	RS PRO	IDM505 Handheld Digital Multimeter With RSCAL calibration	Handheld	AC Current, AC Voltage, Capacitance, Continuity, DC Current, DC Voltage, Diode, Duty Cycle, Frequency, Resistance, Temperature	
161-1629	RS PRO	Handheld Digital Multimeter	Handheld	AC Current, AC Voltage, Capacitance, DC Current, DC Voltage, Frequency, Resistance	

[Physical Dimensions / Connection Diagram / Accessories Included](#)

Specifications: (All at 23°C ±5°C, ≤80% R.H.)

DC Voltage

Range	Resolution	Accuracy	Over Voltage Protection
200mV	100µV	±(0.5%+1dgt)	600V DC/AC rms
2.00V	1mV		
20.0V	10mV		
200V	100mV		
600V	1V		

Input Impedance: 10MΩ

AC Voltage

Range	Resolution	Accuracy	Over Voltage Protection
200mV	100µV	±(1.25%+4dgt) 40Hz~500Hz	600V DC/AC rms
2.00V	1mV		
20.0V	10mV		
200V	100mV		
600V	1V		

Input Impedance: 10MΩ// < 100pF

Conversion Type: Average sensing RMS indicating

DC Current

Range	Resolution	Accuracy	Voltage Burden
200µA	0.1µA	±(1%+1dgt)	600mV max
2.00mA	1µA		
20.0mA	10µA		
200mA	100µA	±(2%+3dgt)	900mV max
10A	10mA		

20A for 30 seconds

Overload Protection: 1A/415V fast blow fuses for mA, µA input

10A/415V fast blow fuses for 10A input

AC Current

Range	Resolution	Accuracy	Voltage Burden
200 μ A	0.1 μ A	$\pm(1.5\%+3\text{dgt})$ 40Hz~500HZ	600mV max
2.00mA	1 μ A		
20.0mA	10 μ A		
200mA	100 μ A		
10A	10mA	$\pm(2.5\%+3\text{dgt})$ 40Hz~500HZ	900mV max

Overload Protection: 1A/415V fast blow fuses for mA, μ A input

10A/415V fast blow fuses for 10A input

Resistance

Range	Resolution	Accuracy	Max Test Current	Max Open Circuit Voltage
200 Ω	0.1 Ω	$\pm(0.75\% + 4\text{dgt})$	2.5mA	3.2V
2K Ω	1 Ω	$\pm(0.75\% + 1\text{dgt})$	200 μ A	0.5V
20K Ω	10 Ω		40 μ A	
200K Ω	100 Ω		4 μ A	
2M Ω	1K Ω		400nA	
20M Ω	10K Ω	$\pm(1.5\% + 5\text{dgt})$	40nA	

Overload Protection: 500 V DC/AC rms

Diode & Continuity


Continuity Beeper: <50 Ω , 2KHz tone buzzer

Test Current: 1.5mA max

Overload Protection: 500 V DC/AC rms

Open Circuit Voltage: 3.2V max

General

Sampling Rate:	2.5 times/sec
Overload Indication:	"1" or "-1"
Low Battery Indication:	
Auto Power Off:	Approx. 30 minutes after last operation
Operating Temperature:	0°C~30°C(≤80% R.H.), 30°C~40°C(≤75% R.H.), 40°C~50°C(≤45% R.H.)
Storage Temperature:	-20°C~60°C
Temperature Coefficient:	0.15×(spec. Acc'y)/°C <18°C, >28°C
Safety:	IEC 61010-1: CAT.III 300V, CAT.II 600V
Power Requirement:	Single 9V battery (NEDA 1604 or IEC 6F22)
Battery Life:	300 hours(Alkaline)
Size:	84mm(W)×175mm(L)×31mm(H), without holster 95mm(W)×192mm(L)×50mm(H), with holster
Weight:	550g(Including holster)
Accessories:	Battery (installed), Test Leads and User Manual