

## FEATURES

- 3 1/2 digit 0.8" large scale LCD 0.5 % basic DCV accuracy
- 0.5 % basic DCV accuracy
- 1.0 % basic DCA accuracy
- 1.5 % basic ACA accuracy
- 0.75% basic OHM accuracy
- 1.0 % FREQUENCY accuracy
- 2.0 % CAPACITANCE accuracy
- CONTINUITY and DIODE Test
- 600V protection in non-current ranges
- 500V dual fuses protection
- Auto Power Shut Off
- 1.5 m drop proof
- Protective Holster with tilt stand
- IEC 1010-1 standard CAT. II 600V

# RS PRO Digital Multimeters-IDM93N Handheld Digital Multimeter

RS Stock No.: 123-3245



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 IDM93N Rugged Industrial Digital Multimeter

RS Pro IDM93N digital multimeter designed for harsh environments. This is a handheld device which can measure capacitance, voltage, electrical current and resistance with diode and continuity check. This meter has an LCD display where the measurement readouts can be viewed. The rugged body guarantees drop proof resistance from up to 1.5 m. Featuring fuse protection on both 200 mA and 10 A current ranges.

### General Specifications

<b>Model Number (p)</b>	<b>IDM93N</b>
<b>Multimeter Type</b>	<b>Handheld</b>
<b>Functions Measured</b>	<b>AC Current, AC Voltage, Capacitance, DC Current, DC Voltage, Frequency, Resistance,</b>
<b>True RMS</b>	<b>NO</b>
<b>Display Type</b>	<b>LCD</b>
<b>Digit Resolution</b>	<b>3 1/2 digit 0.8" large scale LCD</b>
<b>Operating Temperature (Min to Max)</b>	<b>0°C to +50°C</b>
<b>Storage Temperature (Min to Max)</b>	<b>-20°C to 60°C, with battery removed from meter.</b>
<b>Diode Test</b>	<b>Yes</b>
<b>Continuity Test</b>	<b>Yes</b>
<b>Auto power off</b>	<b>Yes , Approx. 30 minutes after last operation</b>
<b>Accuracy</b>	<b>23°C ± 5°C, less than 75% R.H</b>
<b>Insulation</b>	<b>Protection Class II</b>

### 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	±0.8% + 1 Digits
DC Voltage	600V dc	0.1mV dc	±0.5% + 1 Digits
AC Voltage	600V ac	0.1mV ac	±1.3% + 4 Digits
Capacitance	200µF	1pF	±2% + 4 Digits
Frequency	200kHz		±1.5 %

## Electrical Specifications

Battery Type	AAA 1.5V x 2, AM4, IEC LR03, IEC6F22, NEDA 1604, 9V
Battery life	150 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 II
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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	±(1.3%+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

**Conversion Type:** Average sensing RMS indicating

## AC Current

Range	Resolution	Accuracy	Voltage Burden
200µA	0.1µA	±(1.5%+3dgt) 40Hz~500Hz	600mV max
2.00mA	1µA		
20.0mA	10µA		
200mA	100µA	±(2.5%+7dgt) 40Hz~500Hz	900mV max
10A	10mA		

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

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

## Resistance

Range	Resolution	Accuracy	Max Test Current	Max Open Circuit Voltage
200Ω	0.1Ω	±(0.8% + 4dgt)	2.5mA	3.2V
2KΩ	1Ω	±(0.8% + 1dgt)	200µA	0.5V
20KΩ	10Ω		40µA	
200KΩ	100Ω		4µA	
2MΩ	1KΩ		400nA	
20MΩ	10KΩ	±(1.5% + 5dgt)	40nA	

**Overload Protection:** 600V DC/AC max

## Diode & Continuity

**Continuity Beeper:** <50Ω, 2KHz tone buzzer

**Test Current:** 1.5mA max

**Overload Protection:** 600 V DC/AC rms

**Open Circuit Voltage:** 3.2V max

## Frequency


Range	Resolution	Accuracy 5V rms Max	Sensitivity	Min Input Frequency
2KHz	1Hz	±(1%+3dgt)	200mV rms min	20Hz
20KHz	10Hz			200Hz
200KHz	100Hz			20KHz

**Overload Protection:** 600V DC/AC rms

## Capacitance

Range	Resolution	Accuracy	Test Frequency
2nF	1pF	±(1.9%+5dgt)	40Hz
20nF	10pF		
200nF	100pF		
2µF	1pF		
20µF	10pF		
200µF	100pF		

## General

<b>Sampling Rate:</b>	2times/sec
<b>Overload Indication:</b>	"1" or "-1"
<b>Low Battery Indication:</b>	
<b>Auto Power Off:</b>	Approx. 30 minutes after last operation
<b>Operating Temperature:</b>	0°C~30°C(≤80% R.H.), 30°C~40°C(≤75% R.H.), 40°C~50°C(≤45% R.H.)
<b>Storage Temperature:</b>	-20°C~60°C
<b>Temperature Coefficient:</b>	0.15×(spec. Acc'y)/°C <18°C, >28°C
<b>Safety:</b>	IEC 61010-1: CAT.II 600V/CAT.III 300V
<b>Power Requirement:</b>	Two 1.5V Alkaline type AAA batteries
<b>Battery Life:</b>	150 hours(Alkaline)
<b>Size:</b>	84mm(W)×175mm(L)×31mm(H), without holster 95mm(W)×192mm(L)×50mm(H), with holster
<b>Weight:</b>	550g(Including holster)
<b>Accessories:</b>	Battery (installed), Test Leads and User Manual