



ENGLISH

Datasheet
Stock No. 123-3253
RS PRO IDM 66RT Digital Multimeter



Feature:

- 6000 count large scale digital display
- Auto detect AC/DC on Voltage and Ampere
- Auto ranging and manual selection
- ACV, DCV, Ohm, Continuity and Diode function
- True RMS reading on AC mode
- 0.5% basic DCV accuracy
- Smart Data Hold
- VoltSense™ feature (None contact voltage detecting)
- 10 A ACA/DCA range
- PEAK Hold/Relative function key
- Frequency measurement
- Capacitor measurement
- Temperature measurement
- Auto Power Off (Disable)
- Beep Guard
- Shock proof from 4 feet drops
- Comfortable Holster with Probe holder and tilt stand
- CAT. III 600V Safety standard

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

- Accuracy is ± (% reading + number of digits)

DC Voltage:

Range	Resolution	Accuracy
60 mV	0.01 mV	±(0.5% reading + 10 digits)
600 mV	0.1 mV	±(0.5% reading + 2 digits)
6 V	0.001 V	
60 V	0.01 V	
600 V	0.1 V	
1000 V	1 V	

Input Impedance: 3.5 MΩ for 600.0 mV & 60.00 mV Range, 12 MΩ for others

Overload Protection: AC/DC 1000 V for Voltage, 600 V for mV

AC Voltage:

Range	Resolution	Accuracy (Sine Wave)
60 mV	0.01 mV	±(1.2% reading + 5 digits)
600 mV	0.1 mV	
6 V	0.001 V	±(1% reading + 5 digits)
60 V	0.01 V	
600 V	0.1 V	
1000 V	1 V	

LCD displays 0 counts when the reading < 20 counts (60 mV range only)

LCD displays 0 counts when the reading < 10 counts (other ranges)

Input Impedance: 3.5 MΩ for 600 mV & 60 mV Range, 12 MΩ // less than 100 pF for others

Frequency Response: 45 - 500 Hz (Sine Wave)

AC Conversion Type: RMS sensing, RMS indication, The crest factor may be up to 3.0 as 4000 counts.

Additional Accuracy by Crest Factor (C.F.): Add 3.0% for C.F. 1.0 - 2.0

Add 5.0% for C.F. 2.0 - 2.5

Add 7.0% for C.F. 2.5 - 3.0

There is a little rolling less than 10 digits in Auto AC & DC Test Mode when measuring AC signal.

Overload Protection: 1000 V AC/DC for Voltage, 600 V for mV

DC Current:

Range	Resolution	Accuracy
6 A	0.001 A	±(1.0% reading + 2 digits)
10 A	0.01 A	

Maximum measurement time: 5 minutes at 10 A with at least 20 minutes rest time

Overload Protection: AC/DC 11 A

AC Current:

Range	Resolution	Accuracy (Sine Wave)
6 A	0.001 A	±(1.5% reading + 5 digits)
10 A	0.01 A	

LCD displays 0 counts when the reading < 20 counts (6 A range)

LCD displays 0 counts when the reading < 10 counts (10 A range)

Frequency Response: 45 – 500 Hz (Sine Wave)

Maximum measurement time: 5 minutes at 10 A with at least 20 minutes rest time

AC Conversion Type: RMS sensing, RMS indication, The crest factor may be up to 3.0 as 4000 counts.

Additional Accuracy by Crest Factor (C.F.): Add 3.0% for C.F. 1.0 - 2.0

Add 5.0% for C.F. 2.0 - 2.5

Add 7.0% for C.F. 2.5 - 3.0

There is a little rolling less than 10 digits in Auto AC & DC Test Mode when measuring AC signal.

Overload Protection: AC/DC 11 A

Resistance:

Range	Resolution	Accuracy
600 Ω	0.1 Ω	±(0.8% reading + 5 digits)
6 kΩ	0.001 kΩ	±(0.8% reading + 2 digits)
60 kΩ	0.01 kΩ	
600 kΩ	0.1 kΩ	
6 MΩ	0.001 MΩ	
40 MΩ	0.01 MΩ	±(2.0% reading + 3 digits)

*There is a little rolling less then ±50 digits when measuring > 10 MΩ

Open Circuit Voltage: Approx. 1 V for 600 Ω & 600 kΩ range

Approx. 1.7 V for others

Overload Protection: AC/DC 600 V

Continuity:

Range	Resolution	Accuracy
600 Ω	0.1 Ω	$\pm(0.8\%$ reading + 5 digits)

Open Circuit Voltage: Approx. 1 V

Continuity: Built-in buzzer sounds when measured resistance is less than 30 Ω and sounds off when measured resistance is more than 200 Ω , Between 30 Ω to 200 Ω the buzzer maybe sound or off either

Continuity Indicator: 2 kHz Tone Buzzer

Overload Protection: AC/DC 600 V

Diode:

Range	Resolution	Accuracy
1.500 V	0.001 V	$\pm(1.0\%$ reading + 3 digits)

Open Circuit Voltage: Approx. 1.8 V

Max. Short Current: Approx. 400 μ A

Overload Protection: AC/DC 600 V

Capacitance:

Range	Resolution	Accuracy
10 nF	0.01 nF	$\pm(1.9\%$ reading + 8 digits)
100 nF	0.1 nF	
1000 nF	1 nF	
10 μ F	0.01 μ F	
100 μ F	0.1 μ F	
1000 μ F	1 μ F	
10 mF	0.01 mF	

Response Time: Approx. 7 sec. when measuring 10 mF. Approx. 1 sec. when measuring 100 μ F

Overload Protection: AC/DC 600 V

Frequency Counter:

Range	Resolution	Accuracy
6000 Hz	1 Hz	$\pm(0.1\%$ reading + 2 digits)
60 kHz	0.01 kHz	
100 kHz	0.1 kHz	

Maximum Sensitivity (Sine Wave, RMS Value): 8 V

Minimum Frequency: 1 Hz

Overload Protection: AC/DC 600 V

Temperature:

Range	Resolution	Accuracy
-40.0°C - 400.0°C	0.1°C	±(1% reading + 10 digits)
-40.0°F - 752.0°F	0.1°F	±(1% reading + 18 digits)

Do not include accuracy of the thermocouple probe.

Accuracy specification assumes surrounding temperature stable to ± 1 °C. For surrounding temperature changes of ± 3 °C, rated accuracy applies after 2 hours.

Overload Protection: AC/DC 600 V

Peak Hold

Specified accuracy ± 200 digits.


Response Time of DC signal: 50 ms

Response Time of AC signal: 250 μ s

VoltSense

Voltage Range: 80 V – 1000 V (At the top of the meter)

General

Sampling Rate:	3 times/sec
Overload Indication:	"OL" or "-OL"
Low Battery Indication:	
Auto Power Off:	Approx. 10 minutes after last operation
Operating Temperature:	-10 °C - 30 °C ($\leq 80\%$ RH) 30 °C - 40 °C ($\leq 75\%$ RH) 40 °C - 50 °C ($\leq 45\%$ RH)
Storage Temperature:	-20°C to 60°C, 0% RH to 80% RH (batteries not fitted)
Temperature Coefficient:	0.15 x (Specified accuracy) / °C, < 18°C, > 28°C .
Safety:	IEC 61010-1: CAT.III 600V
Power Requirement:	IEC LR03, AM4 or AAA size 1.5 V x 2
Battery Life: (Alkaline)	300 hours
Size:	74 mm (W) x 156 mm (L) x 44 mm (D)
Weight:	Approx. 250 g (with battery)
Accessories:	Battery (installed), Test Leads, Temp. Probe, and User Manual