

Data sheet

IDM 66RT

Multimeter

Feature:

- 6000 count large scale digital display
- Auto detect AC/DC on Voltage and Ampere
- Autoranging 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)
- 10Amp 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:

- Accuracy is \pm (% reading + number of digits)
- Ambient temperature: 23°C \pm 5°C (< 80% RH)

DC Voltage:

Range	Resolution	Accuracy
60.00mV	0.01mV	$\pm(0.5\% \text{ reading} + 10 \text{ digits})$
600.0mV	0.1mV	$\pm(0.5\% \text{ reading} + 2 \text{ digits})$
6.000V	0.001V	
60.00V	0.01V	
600.0V	0.1V	
1000V	1V	

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

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



AC Voltage:

Range	Resolution	Accuracy (Sine Wave)
60.00mV	0.01mV	±(1.2% reading + 5 digits)
600.0mV	0.1mV	
6.000V	0.001V	±(1.0% reading + 5 digits)
60.00V	0.01V	
600.0V	0.1V	
1000V	1V	

LCD displays 0 counts when the reading < 20 counts (60.00mV range only)

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

Input Impedance: 3.5MΩ for 600.0mV & 60.00mV Range, 12MΩ // less than 100pF for others

Frequency Response: 45 ~ 500Hz (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: 1000V AC/DC for Voltage, 600V for mV

DC Current:

Range	Resolution	Accuracy
6.000A	0.001A	±(1.0% reading + 2 digits)
10.00A	0.01A	

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

Overload Protection: AC/DC 11A

AC Current:

Range	Resolution	Accuracy (Sine Wave)
6.000A*	0.001A	±(1.5% reading + 5 digits)
10.00A	0.01A	

LCD displays 0 counts when the reading < 20 counts (6.000A range)

LCD displays 0 counts when the reading < 10 counts (10.00A range)

Frequency Response: 45 ~ 500Hz (Sine Wave)

Maximum measurement time: 5 minutes at 10A 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 11A

Resistance:

Range	Resolution	Accuracy
600.0Ω	0.1Ω	±(0.8% reading + 5 digits)
6.000kΩ	0.001kΩ	±(0.8% reading + 2 digits)
60.00kΩ	0.01kΩ	
600.0kΩ	0.1kΩ	
6.000MΩ	0.001MΩ	
40.00MΩ *	0.01MΩ	±(2.0% reading + 3 digits)

*There is a little rolling less then ±50 digits when measuring > 10.00 MΩ

Open Circuit Voltage: Approx. 1V for 600.0Ω & 600.0kΩ range

Approx. 1.7V for others

Overload Protection: AC/DC 600V

Continuity:

Range	Resolution	Accuracy
600.0Ω	0.1Ω	±(0.8% reading + 5 digits)

Open Circuit Voltage: Approx. 1.0V

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

Continuity Indicator: 2KHz Tone Buzzer

Overload Protection: AC/DC 600V

Diode:

Range	Resolution	Accuracy
1.500V	0.001V	±(1.0% reading + 3 digits)

Open Circuit Voltage: Approx. 1.8V

Max. Short Current: Approx. 400 μ A

Overload Protection: AC/DC 600V

Capacitance:

Range	Resolution	Accuracy
10.00nF	0.01nF	±(1.9% reading + 8 digits)
100.0nF	0.1nF	
1000nF	1nF	
10.00μF	0.01μF	
100.0μF	0.1μF	
1000μF	1μF	
10.00mF	0.01mF	

Response Time: Approx. 7 sec. when measuring 10.00mF. Approx. 1 sec. when measuring 100uF

Overload Protection: AC/DC 600V

Frequency Counter:

Range	Resolution	Accuracy
6000Hz	1Hz	±(0.1% reading + 2 digits)
60.00kHz	0.01kHz	
100.0kHz	0.1kHz	

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

Minimum Frequency: 1Hz

Overload Protection: AC/DC 600V

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 600V

Peak Hold

Specified accuracy ± 200 digits.


Response Time of DC signal: 50ms

Response Time of AC signal: 250μs

VoltSense

Voltage Range: 80V ~ 1000V (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 1.5V x 2
Battery Life: (Alkaline)	300 hours
Size:	74mm(W) x 156mm(L) x 44mm(D)
Weight:	Approx. 250g (with battery)
Accessories:	Battery (installed), Test Leads, Temp. Probe, and User Manual