

DIGITAL MULTIMETER

Model - Solar 1

SPECIFICATIONS

General Specifications

Display : 6000 Counts.

Bluetooth : 4.0

Data Logging : 4000 Data Memory

Over Range Indication : "OL" or "-OL"

Measure : Samples 3 times per second.


Dimensions (WxHxD) : 74mm x 156mm x 44mm

Weight : 250g (including battery)

Fuse Specification : Fast Action AC/DC 11A, 1000V, IR 30kA

Battery Life : 300 hours ALKALINE Battery

Low Battery Indication:

Voltage drops below operating voltage  will flash.

Power Requirement : AA1.5V x 2 batteries

Operating Temperature : -10 ~10°C

10°C ~ 30°C (≤ 80% RH)

30°C ~ 40°C (≤ 75% RH)

40°C ~ 50°C (≤ 45%RH)

Storage Temperature: -20°C to 60°C, 0 to 80%R.H.
(batteries not fitted)

Altitude : 6561.7ft (2000m)

CAT Application field

- The circuits directly connected to Low-voltage installation.
- The building installation.
- The source of the Low-voltage installation.

Safety : EN 61010-1, EN 61010-2-033, for CAT III 1000V,
CAT IV 600V, EN 61326-1

Drop Protection : 4 feet drop to hard wood on concrete floor

Vibration : Random Vibration per MIL-PRF-28800F Class 2

Pollution Degree : 2

Indoor Use

Electrical Specifications

Accuracy is given as \pm (%of reading+counts of least significant digit) at 23°C \pm 5°C, with relative humidity Less than 80%R.H., and is specified for 1 year after calibration.

Temperature Coefficient : 0.1x (Specified accuracy) / °C, <18°C, >28°C

AC Function : ACV and ACA specifications are ac coupled, True RMS The crest factor may be upto 3.0 as 4000 counts. Accuracy is unspecified of Square Wave.

For non-sinusoidal waveforms, 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.

Max. Crest Factor of Input Signal : 3.0 @ 3000 Counts / 2.0 @ 4500 Counts / 1.5 @ 6000 Counts

Frequency Response is specified for sine waveform.

LCD displays 0 counts when the reading <20 counts.



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DC mV

Range	OL Reading	Resolution	Accuracy
600.0mV	660.0mV	0.1mV	±(0.5%+5D)

Input Impedance : 10MΩ

Overload Protection : AC/DC 1000V

DC Voltage

Range	OL Reading	Resolution	Accuracy
6.000V	6.600V	0.001V	±(0.5%+2D)
60.00V	66.00V	0.01V	
600.0V	660.0V	0.1V	
1000V	1100V	1V	

Input Impedance : 10MΩ

Overload Protection : AC/DC 1000V

AC Voltage

Range	OL Reading	Resolution	Accuracy
600.0mV	660.0mV	0.1mV	±(1.0%+5D)
6.000V	6.600V	0.001V	±(1.0% + 3D)
60.00V	66.00V	0.01V	
600.0V	660.0V	0.1V	
1000V	1100V	1V	

Input Impedance : 10MΩ // Less than 100pF

Frequency Response : 45 ~ 500Hz (Sine Wave)

Overload Protection : AC/DC 1000V

PV DC Voltage

Range	OL Reading	Resolution	Accuracy
600.0V	660.0V	0.1V	±(2.0%+5D)
2000V	2200V	1V	

Input Impedance : 10MΩ

Overload Protection : AC/DC 1000V

PV AC Voltage

Range	OL Reading	Resolution	Accuracy
600.0V	660.0V	0.1V	±(2.0%+5D)
1500V	1600V	1V	

Input Impedance : 10MΩ

Frequency Response : 45 ~ 500Hz (Sine Wave)

Overload Protection : AC/DC 1000V

DC Current

Range	OL Reading	Resolution	Accuracy
6.000A	6.600A	0.001A	±(1.0%+3D)
10.00A	20.00A	0.01A	

Minimum Measurement Time

>5A for max. 3 minutes with at least 20 minutes rest time.

>10A for max. 30 seconds with at least 10 minutes rest time.

Frequency Response : 45-500Hz (Sine Wave)

Overload Protection : Fuse AC/DC 11A

AC Current

Range	OL Reading	Resolution	Accuracy
6.000A	6.600A	0.001A	±(1.5%+3D)
10.00A	20.00A	0.01A	

Minimum Measurement Time

>5A for max. 3 minutes with at least 20 minutes rest time.

>10A for max. 30 seconds with at least 10 minutes rest time.

Frequency Response : 45-500Hz (Sine Wave)

Overload Protection : Fuse AC/DC 11A

Resistance

Range	OL Reading	Resolution	Accuracy
600.0Ω	660.0Ω	0.1Ω	±(0.9%+5D)
6.000kΩ	6.600kΩ	0.001kΩ	±(0.9%+2D)
60.00kΩ	66.00kΩ	0.00kΩ	±(0.9%+2D)
600.0kΩ	660.0kΩ	0.1kΩ	±(0.9%+2D)
6.000MΩ	6.600MΩ	0.001MΩ	±(0.9%+2D)
40.00MΩ*	44.00MΩ	0.01MΩ	±(1.5%+5D)

* There a little rolling less than ±50 digits when measuring >10.00MΩ.

Overload Protection : AC/DC 1000V

Continuity

Built-in buzzer sounds when measured resistance is less than 20Ω and sounds off when measured resistance is more than 200Ω, Between 20Ω to 200Ω the buzzer may sound or off either.

Continuity Indicator : 2.7K Tone Buzzer

Response Time of Buzzer : <50μsec.

Overload Protection : AC/DC 1000V

Diode

Range	OL Reading	Resolution	Accuracy
1.500V	1.500V	0.001V	±(0.9%+2D)

Open Circuit Voltage : Approx.1.8V

Overload Protection : AC/DC 1000V

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Capacitance

Range	OL Reading	Resolution	Accuracy
1.000 μ F	1.100 μ F	0.001 μ F	$\pm(1.9\%+5D)$
10.00 μ F	11.00 μ F	0.01 μ F	
100.0 μ F	110.0 μ F	0.1 μ F	$\pm(1.9\%+2D)$
1.000mF	1.100mF	0.001mF	
10.00mF	11.00mF	0.01mF	

Overload Protection : AC/DC 1000V

Frequency

Range	OL Reading	Resolution	Accuracy
100.00Hz	100.00Hz	0.01Hz	$\pm(0.1\%+2D)$
1000.0Hz	1000.0Hz	0.1Hz	
10.000kHz	10.000kHz	0.001kHz	
100.00kHz	100.00kHz	0.01kHz	

Minimum Sensitivity : >5V (for ACV 1Hz-10kHz)
>20.0V (for ACV 10kHz-50kHz)

unspecified (for ACV 50kHz-100kHz) >0.6A (for ACA)

Minimum Frequency :1Hz

Overload Protection : AC/DC 1000V or Fuse AC/DC 11A

VoltSeek

Voltage Range of High Sensitivity :

80V -1000V (At the top edge of the Meter)

Voltage Range of Low Sensitivity :

160V-1000V (At the top edge of the Meter)

Temperature

Range	OL Reading	Resolution	Accuracy
- 40.0°C to 400.0°C	440.0°C	0.1°C	$\pm(1\%+20D)$
-40.0°F to 752.0°F	824.0°F	0.1°F	$\pm(1\%+36D)$

Accuracy is available with backlight off. The heat of backlight may deviate the measurement. The accuracy does not include the accuracy of the thermocouple probe.

Accuracy specification assumes surrounding temperature stable to $\pm 1^\circ\text{C}$. For surrounding temperature changes of $\pm 2^\circ\text{C}$, rated accuracy applies after 2 hours.

Overload Protection : AC/DC 1000V