



ENGLISH

Datasheet

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RS PRO S3 Digital Multimeter



Feature:

- Solar PV Application
- 6,000 counts digital and 60 segments analog display
- Large white LED backlight display
- True RMS measurements on ACV/ACA
- 0.5% DCV accuracy
- 10A ACA / DCA
- Capacitance Measurement
- Frequency measurements on ACV/ACA
- Diode Test
- °C/°F Temperature Function
- High Frequency Rejection
- Data Logging / Manual Save up to 4000 records
- Bluetooth connection with RS PRO connect APP
- Auto Ranging
- Smart Hold
- Min/Max Hold
- Relative Function
- Auto Power Off (can be disabled)
- High Energy Fuse
- Battery Capacity indication in segments
- Included Holster with Probe Holder, Tilt Stand and Magnetic sticker
- CAT IV 600V/ CATIII 1000V Safety Standards
- 2000VDC measurement for Photovoltaic output
- Optional designated PV Test Leads

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

DC Voltage

Range	Resolution	Accuracy
6.000V	0.001V	±(0.5%+2D)
60.00V	0.01V	
600.0V	0.1V	
1000V	1V	

Input Impedance: 10MΩ

Overload Protection: AC/DC 1000V

DC mV

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

Input Impedance: 10MΩ

Overload Protection: AC/DC 1000V

AC Voltage

Range	Resolution	Accuracy
600.0mV	0.1mV	±(1.0%+5D)
6.000V	0.001V	±(1.0%+3D)
60.00V	0.01V	
600.0V	0.1V	
1000V	1V	

Frequency Response: 45Hz to 500Hz

Input Impedance: 10MΩ // less than 100pF

Overload Protection: AC/DC 1000V

PV DC Voltage

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

Input Impedance: 10MΩ

Overload Protection: AC/DC 1000V

PV AC Voltage

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

Frequency Response: 45Hz to 500Hz

Input Impedance: 10MΩ

Overload Protection: AC/DC 1000V

DC Current

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

Maximum 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.

Overload Protection: Fuse AC/DC 11A

AC Current

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

Maximum 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: 45Hz to 500Hz

Overload Protection: Fuse AC/DC 11A

HFR (High Frequency Rejection)

- Available for ACV only.
- Add ± 4% to specified accuracy of each function and each range for 45Hz to 200Hz.
- Accuracy is unspecified for > 200Hz.

Cut-off Frequency (-3dB): 800Hz

Frequency

Range	Resolution	Accuracy
100.00Hz	0.01Hz	±(0.1%+2D)
1000.0Hz	0.1Hz	
10.000kHz	0.001kHz	
100.00kHz	0.01kHz	

ACV Minimum Sensitivity: > 5V for 1Hz ~ 10kHz
> 20V for 10kHz ~ 50kHz
unspecified for > 50kHz

ACA Minimum Sensitivity: > 0.6A

Overload Protection: AC/DC 1000V or 11A

Resistance

Range	Resolution	Accuracy
600.0Ω	0.1Ω	±(0.9%+5D)
6.000kΩ	0.001kΩ	±(0.9%+2D)
60.00kΩ	0.01kΩ	
600.0kΩ	0.1kΩ	
6.000MΩ	0.001MΩ	
40.00MΩ	0.01MΩ	±(1.5%+5D)

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

Overload Protection: AC/DC 1000V

Continuity

Range	Resolution	Accuracy
600.0Ω	0.1Ω	±(0.9%+5D)

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 maybe sound or off either.

Continuity Indicator: 2.7kHz Tone Buzzer

Response Time of Buzzer: < 100msec

Overload Protection: AC/DC 1000V

Diode

Range	Resolution	Accuracy
1.500V	0.001V	$\pm(0.9\%+5D)$

Open Circuit Voltage: Approx. 1.8V

Overload Protection: AC/DC 1000V

Capacitance

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

Overload Protection: AC/DC 1000V

Temperature

Range	Resolution	Accuracy
-40.0°C ~ 400.0°C	0.1°C	$\pm(1.0\%+20D)$
-40.0°F ~ 752.0°F	0.1°F	$\pm(1.0\%+36D)$

- 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

VoltSeek

Voltage Range of High Sensitivity: 80V ~ 1000V (At the top edge of the meter)

Voltage Range of High Sensitivity: 160V ~ 1000V (At the top edge of the meter)

General

Sampling Rate:	3 times/sec
Overload Indication:	"OL" or "-OL"
Low Battery Indication:	
Auto Power Off:	Approx. 20 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:	0.1×(spec. Acc'y)/°C <18°C, >28°C
Safety:	IEC / EN 61010-1, IEC / EN 61010-2-033:CAT IV 600V/CAT III 1000V, EN61326-1
Power Requirement:	Two 1.5V Alkaline type AA batteries
Battery Life:	300 hours(Alkaline)
Size:	82mm(W)×165mm(L)×46mm(H)
Weight:	430g with battery
Accessories:	Battery (installed), Test Leads, Protective Holster, Temperature Probe and User Manual