True RMS
Digital Multimeter Series

DMM-8301 **DMM-8301S**

Commercial Electric™



Your ideal trouble-shooting tools in daily use.

The Commercial Electric Manual-ranging Multimeter DMM-8301S and Auto-ranging Multimeter DMM-8301 are True RMS Multimeter made to perfectly troubleshoot and repair electrical and electronic systems, combined with its reliability and accuracy. All Commercial Electric are multimeter are with True RMS technology. It is designed for providing accurate AC voltage and current readings in complex electrical environment which is full of non-sinusoidal signals harmonics and variable speed drives. With True RMS technology, the Commercial Electric mutlimeter provides reliable measurements over and over again.

EASE TO USE, RELIABILITY AND ACCURACY

Commercial Electric DMM-8301 and DMM-8301S multimeter is with rugged and robust housing for durable use. It is also with strong meter stand, allows you free your hand and convenient to read the measuring data during measurement . It is your ideal meter on trouble shooting for everyday use.

ACCURACY WITH TRUE RMS TECHNOLOGY

Provides accurate voltage and current data when measuring complex AC signals.

CONVENIENT TEMPERATURE MEASUREMENTS AT YOUR FINGERTIPS (DMM-8301S ONLY)

Built-in temperature measurement function conveniently allows youto take temperature measuring without carrying separate instruments.



Commercial Electric™

Product Layout



DMM-8301 **DMM-8301S**

PRODUCT SPECIFICATIONS

DMM-8301

Function	Measuring Range	Resolution	Accuracy
DC VOLTAGE SPECIFICATIONS	200.0mV	0.1mV	±(0.5% of rdg + 5 digits)
	2.000V	1mV	
	20.00V	0.01V	
	200.0V	0.1V	
	600V	1V	±(0.8% of rdg + 5 digits)
	Overload Protection: 200mV range: 250V DC Maximum Input Range: 600V DC		
AC VOLTAGE SPECIFICATIONS	200.0V	0.1V	±(1.0% of rdg + 10 digits)
	600V	1V	±(1.2% of rdg + 10 digits)
	Overload Protection: 600V RMS AC Frequency Range: 40 - 400Hz (sine), 50/60Hz (all wave); All AC voltage ranges are specified from 5% of range to 100% of range.		
DC CURRENT SPECIFICATIONS	2.000mA	1μA	±(1.0% of rdg + 5 digits)
	20.00mA	10μA	
	200.0mA	100μA	
	10A	10mA	±(2.0% of rdg + 10 digits)
	Overload Protection: F: 10A/ 600V, F: 200mA/ 600V. Maximum Input: μA/mA setting: 200mA DC 10A setting: 10A DC (30 sec max with reduced accuracy). For measurements greater than 2A, the continuous time cannot be more than 2 minutes. Disconnect the current and wait 10 minutes before making another measurement.		
RESISTANCE SPECIFICATIONS	200.0Ω	0.1Ω	±(0.8% of rdg + 3 digits)
	2.000kΩ	1Ω	
	20.00kΩ	0.01kΩ	
	200.0kΩ	0.1kΩ	
	2MΩ	0.01MΩ	±(1.0% of rdg + 3 digits)
	Overload Protection: 250V DC or 250V RMS AC		
BATTERY VOLTAGE SPECIFICATIONS	1.5V	0.001V	100Ω
	9V	0.01V	450Ω
	12	0.01V	120Ω
	Overload Protection: F: 200mA/ 600V		
DIODE AND CIRCUIT ON - OFF SPECIFICATIONS	⊣◀	Displays the approximate diode positive voltage.	
	•))	When the on-resistance is smaller than (50±30)Ω, the built-in buzzer sounds.	
	☐ Overload Protection: 250V DC or 250V RMS AC		

DMM-8301S

Function	Measuring Range	Resolution	Accuracy
DC VOLTAGE SPECIFICATIONS	400.0mV	0.1mV	±(0.5% of rdg + 5 digits)
	4.000V	0.001V	
	40.00V	0.01V	
	400.0V	0.1 V	±(0.8% of rdg + 3 digits)
	600V	1V	±(1.0% of rdg + 3 digits)
	Input Impedance: 10MΩ Frequency: 50 to 60Hz Maximum Input Voltage: 600V DC		
AC VOLTAGE SPECIFICATIONS	4.000V	0.001V	±(1.0% of rdg + 3 digits)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	±(1.2% of rdg + 5 digits)
	Input Impedance: 10MΩ Frequency Range: 40 - 400Hz (sine), 50/ 60Hz (all wave). All AC voltage ranges are specified from 5% of range to 100% of range. Maximum Input Voltage: 600V AC RMS		

INCLUDES

- Meter
- Test Leads
- 2 x AAA 1.5V Batteries
- K-Type Temperature Probe (DMM-8301A only)
- User Manual

WARRANTY

12-month

Intertek CAT III 600V

Questions, problems, missing parts? Before returning to the store, call Commercial Electric Customer Service
8 a.m. - 7 p.m., EST, Monday - Friday, 9 a.m. - 6 p.m., EST, Saturday
1-877-527-0313
HOMEDEPOT.COM
Specifications subject to change without notice.

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DMM-8301S

Function	Measuring Range	Resolution	Accuracy
DC CURRENT SPECIFICATIONS	400.0μA	0.1μA	±(1.0% of rdg + 5 digits)
	4000μA	1μA	
	40.00mA	0.01mA	
	400.0mA	0.1mA	
	4.000A	0.001A	±(2.0% of rdg + 5 digits)
	10.00A	0.01A	
	Overload Protection: F: 10A/ 600V, F: 400mA/ 600V. Maximum Input: μA/mA setting: 400mA DC 10A setting: 10A DC (30 sec. max with reduced accuracy) When measured current is greater than 2A, the continuous measurement time cannot be more than 2 minutes. Disconnect the current and wait 10 minutes before you take another measurement.		
AC CURRENT SPECIFICATIONS	400.0μA	0.1μA	±(1.0% of rdg + 5 digits)
	4000μA	1μA	
	40.00mA	0.01mA	
	400.0mA	0.1mA	
	4.000A	0.001A	±(2.0% of rdg + 10 digits)
	10.00A	0.01A	
	Overload Protection: F: 10A / 600V, F: 400mA / 600V Frequency Range: 40 - 400Hz (sine), 50/ 60Hz (all wave). All AC current ranges are specified from 5% of range to 100% of range. Maximum Input: μA/mA setting: 400mA AC RMS 10A setting: 10A AC RMS (30 sec max with reduced accuracy) For measurements greater than 2A, the continuous measurement time cannot be more than 2 minutes. Disconnect the current and wait 10 minutes before making another measurement.		
RESISTANCE SPECIFICATIONS	400.0Ω	0.1Ω	±(1.2% of rdg + 5 digits)
	4.000kΩ	0.001kΩ	
	40.00kΩ	0.01kΩ	
	400.0kΩ	0.1kΩ	
	4.000MΩ	0.001MΩ	
	40.00MΩ	0.01MΩ	±(2.0% of rdg + 10 digits)
	50.00MΩ	0.1MΩ	±(2.8% of rdg + 10 digits)
	Overload Protection: 250V AC RMS or 250V DC		
CAPACITANCE SPECIFICATIONS	40.00nF	0.01nF	±(3.5% of rdg + 10 digits)
	400.0nF	0.1nF	±(3.0% of rdg + 5 digits)
	4.000μF	0.001μF	
	40.00μF	0.01μF	
	400.0μF	0.1μF	±(3.5% of rdg + 5 digits)
	4.000mF	0.001mF	
	Overload Protection: 250V AC RMS or 250V DC		
FREQUENCY SPECIFICATIONS - THROUGH GRADE HZ/DUTY CYCLE	9.999Hz	0.001Hz	±(1.0% of rdg + 5 digits)
	99.99Hz	0.01Hz	
	999.9Hz	0.1Hz	
	9.999kHz	0.001kHz	
	50.00kMHz	0.01kHz	
	Overload Protection: 250V AC RMS or 250V DC Input Voltage Range: ≥3V AC RMS (Input voltage increases when the frequency to be measured increases)		
DIODE SPECIFICATIONS	3.3V	0.001V	Display forward voltage drop of diode
	Overload Protection: 250V AC RMS or 250V DC		
DUTY CYCLE SPECIFICATIONS	0.1% - 99.9%	0.1%	±(1.2% of reading + 2 digits)
	THROUGH GRADE HZ/DUTY: Frequency Response: 5 to 10.0kHz Input Voltage Range: > 2V AC RMS (Input voltage increases when the frequency to be measured increases) Maximum Input Voltage: 250V AC RMS		
DIODE SPECIFICATIONS	3.2V	0.001V	Display forward voltage drop of diode
	Overload Protection: 250V AC RMS or 250V DC		
AUDIBLE CONTINUITY SPECIFICATIONS	•))	When the on-resistance is smaller than 50Ω, the built-in buzzer sounds. The open circuit voltage is approximately 1V.	
	Overload Protection: 250V AC RMS or 250V DC		
TEMPERATURE SPECIFICATIONS	-40°F to 10°F	1°F	±(1.2% of rdg + 7 digits)
	11°F to 1832°F	1°F	±(1.2% of rdg + 6 digits)
	-40°C to -12°C	1°C	±(1.2% of rdg + 4 digits)
	-11°C to 1000°C	1°C	±(1.2% of rdg + 3 digits)
	Overload Protection: 250V DC or 250 V AC RMS		

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