

BS3608

3 3/4 Digits Auto Range Multimeter with Frequency, Capacitance, Duty Cycle and Temperature Measurement

Features:

- 3 3/4 Digits LCD Display
- DC Voltage 400mV to 600V
- AC Voltage 400mV to 600V
- DC Current 400 μ A to 20A
- AC Current 400 μ A to 20A
- Resistance 400 Ω to 40M Ω
- Capacitance 50nF to 100 μ F
- Frequency 5Hz to 1MHz
- Duty Cycle 20% to 80%
- Temperature Measurement
-40°F to 1832°F)
- Diode Test
- Continuity Test
- Relative Measurement
- Low Battery Warning
- Auto Power Off
- Data Hold
- Conform to IEC1010/EN61010-1, CE-EMC & LVD CATII 600V



General Specifications

Display	: 3 3/4 digits LCD with max. reading of 3999.
Polarity	: Automatic, (-) negative polarity indication.
Zero adjustment	: Automatic.
Over range indication	: Only the MSD "OL" is displayed.
Power	: Single, standard 9 volt battery NEDA 1604, JIS 006P, IEC6F22.
Dimension	: 94 (W) x 205 (H) x 62 (D) mm.
Weight	: Approx. 620 g (including battery).

Electrical Specification

Accuracies are $\pm(\%$ of reading + number of least significant digits) at $23^{\circ}\text{C}\pm 5^{\circ}\text{C}$, less than 75%RH

DC Voltage Measurement

Range	Resolution	Accuracy	Input Impedance	Overload Protection
400mV	0.1mV	$\pm(1.0\% + 2)$	10M Ω	600V DC/AC rms
4V	0.001V	$\pm(0.8\% + 1)$		
40V	0.01V			
400V	0.1V			
600V	1V			

AC Voltage Measurement

Range	Resolution	Accuracy	Frequency Range	Input Impedance	Overload Protection
400mV*	0.1mV	$\pm(2.0\% + 5)$	40-400Hz	10M Ω	600V DC/AC rms
4V	0.001V	$\pm(1.2\% + 3)$			
40V	0.01V				
400V	0.1V				
600V	1V				

*AC 400mV only available in manual mode.

DC Current Measurement

Range**	Resolution	Accuracy	Voltage Drop	Overload Protection
400uA	0.1uA	$\pm(1.0\% + 2)$	400mV	Fast 400mA/250V Fused
4000uA	1uA			
40mA	0.01mA			
400mA	0.1mA			
4A	0.001A	$\pm(1.2\% + 5)$	200mV	Fast 10A/250V Fused
10A	0.01A	$\pm(1.5\% + 5)$		


AC Current Measurement

Range**	Resolution	Accuracy	Voltage Drop	Frequency Range	Overload Protection
400uA	0.1uA	$\pm(1.2\% + 5)$	400mV	40-400Hz	Fast 400mA/250V Fused
4000uA	1uA				
40mA	0.01mA				
400mA	0.1mA				
4A	0.001A	$\pm(1.5\% + 5)$			
20A	0.01A	$\pm(2.0\% + 5)$	200mV		Fast 10A/250V Fused


Resistance Measurement

Range	Resolution	Accuracy	Max Open Circuit Voltage	Overload Protection
400 Ω	0.1 Ω	$\pm(1.0\% + 2)$	<700mV	250V DC/AC rms<30sec
4k Ω	0.001k Ω			
40k Ω	0.01k Ω			
400k Ω	0.1k Ω			
4M Ω	0.001M Ω			
40M Ω	0.01M Ω	$\pm(2.0\% + 5)$		

Diode Test

Range	Forward Voltage Drop	Test Current	Max Open Circuit Voltage	Overload Protection
	0 – 1.000V	Approx. 0.6mA	1.5V	250V DC/AC rms <30sec

Continuity Test

Range	Sound Level	Test Current	Max Open Circuit Voltage	Overload Protection
	Approx $\leq 100\Omega \pm 30\Omega$ resistance value	Approx. 1mA	Approx.2.8V	250V DC/AC rms <30sec



Capacitance Measurement

Range	Resolution	Accuracy	Overload Protection
50nF	0.01nF	$\pm(3.0\% + 5)$	250V DC/AC rms <30sec
500nF	0.1nF		
5uF	0.001uF		
50uF	0.01uF		
100uF	0.1uF(15sec)	$\pm(3.5\% + 5)$	

Test Frequency: Approx 20kHz

Frequency Measurement

Range	Resolution	Min Input Volt.	Accuracy	Overload Protection
5Hz	0.001Hz	$\geq 1V_{p-p}$	$\pm(1.5\% + 5)$	250V DC/AC rms <30sec
50Hz	0.01Hz			
500Hz	0.1Hz			
5kHz	0.001kHz			
50kHz	0.01kHz			
500kHz	0.1kHz	$\geq 2V_{p-p}$		
1MHz	0.001MkHz	$\geq 12V_{p-p}$		

Duty Cycle Measurement

Range	Resolution	Accuracy	Overload Protection
20%-80%	0.1%	$\pm(3.5\% + 5)$	250V DC/AC rms <30sec

Minimum input voltage: 400mV



Temperature Measurement

Degree Celsius (°C)

Range	Resolution	Accuracy	Overload Protection
-40°C -400°C	1°C	±(0.75 % + 5)	Fuse 400mA/250V
400°C -1000°C		±(2.0% + 5)	

Degree Fahrenheit (°F)

Range	Resolution	Accuracy	Overload Protection
-40°F -500°F	1°F	±(1.0% + 4)	Fuse 400mA/250V
501°F -1000°F		±(5.0% + 5)	
1001°F -1832°F		±(6.0% + 5)	



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