

**BS1803****SilkyCase™****4000 Counts Auto Range Multimeter with Capacitance and Frequency Measurement**

## Features:

- 4000 Counts LCD display
- DC Voltage 400mV to 600V
- AC Voltage 400mV to 600V
- DC Current 400 $\mu$ A to 10A
- AC Current 400 $\mu$ A to 10A
- Resistance 400 $\Omega$  to 30M $\Omega$
- Capacitance 50nF to 100 $\mu$ F
- Frequency 5Hz to 1MHz
- Duty Cycle 20% to 80%
- Add-on clamp function – with BS64 (optional)
- Continuity/ Diode test
- Relative Measurement
- LED Backlight
- Low Battery Warning
- Auto Power Off
- Data Hold
- CAT III 600V CE-EMC & LVD (Pending)

**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	: 80 (W) x 150 (H) x 40 (D) mm.
Weight	: Approx. 320 g (including battery).

### Electrical Specification

Accuracies are  $\pm$ (% of reading + number of least significant digits) at 23°C±5°C, less than 75%RH

#### DC Voltage Measurement

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

#### AC Voltage Measurement

Range	Resolution	Accuracy	Input Impedance	Overload Protection
400mV	0.1mV	$\pm$ (1.0% Read. +5dgt)	10M $\Omega$	600V DC/AC rms
4V	0.001V			
40V	0.01V			
400V	0.1V			
600V	1V	$\pm$ (1.2% Read. +2dgt)		

**Frequency range: 40-400Hz**

#### DC Current Measurement

Range	Resolution	Accuracy	Voltage drop	Overload Protection
400 $\mu$ A	0.1 $\mu$ A	$\pm$ (1.0% Read. + 5dgt)	400mV	Fast 400mA/250V Fuse
4000 $\mu$ A	1 $\mu$ A			
40mA	0.01mA	$\pm$ (1.5% Read. + 5dgt)		
400mA	0.1mA			
10A	0.01A			Fast 10A/250V Fuse

**AC Current Measurement**

Range	Resolution	Accuracy	Voltage drop	Overload Protection
400 $\mu$ A	0.1 $\mu$ A	$\pm(2.0\%$ Read. + 5dgt)	400mV	Fast 400mA/250V Fuse
4000 $\mu$ A	1 $\mu$ A			
40mA	0.01mA	$\pm(2.5\%$ Read. + 5dgt)		
400mA	0.1mA			
10A	0.01A			Fast 10A/250V Fuse

**Frequency range: 40-400Hz****Resistance Measurement**

Range	Resolution	Accuracy	Open circuit voltage	Overload Protection
400 $\Omega$	0.1 $\Omega$	$\pm(0.8\%$ Read. + 2dgt)	Approx. 1.5V	250V DC/AC rms <30 sec.
4k $\Omega$	0.001k $\Omega$			
40k $\Omega$	0.01k $\Omega$			
400k $\Omega$	0.1k $\Omega$			
4M $\Omega$	0.001M $\Omega$			
30M $\Omega$	0.01M $\Omega$	$\pm(2.0\%$ Read. + 2dgt)		

**Diode Test**

Range	Accuracy	Open circuit voltage	Overload Protection
$\blacktriangleright$	Approx. 1mA	Approx. 1.5V	250V DC/AC rms <30 sec.

**Continuity Test**

Range		Open circuit voltage	Overload Protection
$\bullet)))$	Buzzer sounds when resistance value < 140 $\pm$ 30 $\Omega$	Approx. 0.6V	250V DC/AC rms <30 sec.

**Capacitance Measurement**

Range	Resolution	Accuracy	Overload Protection
50nF	0.01nF	±(2.0% Read. + 5dgt)	250V DC/AC rms <30 sec.
500nF	0.1nF		
5µF	0.001µF		
50µF	0.01µF	±(2.5% Read. + 5dgt)	
100µF	0.1µF	±(4.0% Read. + 10dgt)	

Test Frequency: Approx .20kHz

**Frequency Measurement**

Range	Resolution	Accuracy	Min. Input Voltage	Overload Protection
5Hz	0.001Hz	±(1.0% Read. + 2dgt)	1Vp-p	250V DC/AC rms <30 sec.
50Hz	0.01Hz			
500Hz	0.1Hz			
5kHz	0.001kHz		2Vp-p	
50kHz	0.01kHz		8Vp-p	
500kHz	0.1kHz		20Vp-p	
1MHz	0.001MHz			

**Duty Cycle Measurement**

Range	Resolution	Accuracy	Overload Protection
20 – 80%	0.1%	±(3.5% Read. + 5dgt)	250V DC/AC rms <30 sec.

**Clamp Technical Characteristic (Optional BS64 Add-on Clamp)**

Range	Output	Accuracy	Overload Protection
400A	1mV/A	±(1.5% Read. + 0.5A) Vpp= 600mV	250V DC/AC rms <30 sec.

**Frequency range: 50-60Hz**



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