

# PROVA<sup>®</sup>

## PROVA 803 Digital Multi-Meter



### Electrical Specifications: (23°C±5°C)

**The following accuracy is specified for one single channel (channel 1 or channel 2). If dual channels are used at the same time, additional % of accuracy should be added to the listed accuracy.** Please refer to the supplemental dual channels specification. The following accuracy is also specified for the ZEROED (relative) value. The accuracy is given as ±% of reading ± number of least significant digits.

#### DC Voltage: (Input Impedance: 10MΩ)

Range	Resolution	Accuracy	Overload Protection
60.000mV	0.001mV	±0.2%±9dgts	DC 1000V
600.00mV	0.01mV	±0.1%±6dgts	DC 1000V
6.0000V	0.0001V	±0.1%±6dgts	DC 1000V
60.000V	0.001V	±0.1%±6dgts	DC 1000V
600.00V	0.01V	±0.1%±6dgts	DC 1000V
1000.0V	0.1V	±0.1%±6dgts	DC 1000V

#### AC Voltage:

Range (ACV)	Resolution	Accuracy (50/ 60Hz)	Accuracy (45Hz – 1KHz)
60.000mV	0.001mV	±0.2%±40dgts	±0.6%±40dgts
600.00mV	0.01mV	±0.2%±40dgts	±0.6%±40dgts
6.0000V	0.0001V	±0.2%±40dgts	±0.6%±40dgts
60.000V	0.001V	±0.2%±40dgts	±0.6%±40dgts
600.00V	0.01V	±0.2%±40dgts	±1.5%±40dgts
1000.0V (0-400V)	0.1V	±0.2%±40dgts	±4%±60dgts
1000.0V (400-1000V)	0.1V	±0.2%±40dgts	<b>(45Hz – 400Hz) ±4%±60dgts</b>

Range (ACV)	Accuracy (20Hz - 45Hz)	Accuracy (1KHz– 10KHz)
60.000mV	±1.6%±50dgts	±4%±40dgts
600.00mV	±1.6%±50dgts	±2%±40dgts
6.0000V	±1.6%±50dgts	±2%±40dgts
60.000V	±1.6%±50dgts	±2%±40dgts
600.00V (0-400V)	±1.6%±50dgts	±5%±40dgts
600.00V (400-600V)	±1.6%±50dgts	Not Specified
1000.0V (0-400V)	±1.6%±50dgts	±4%±80dgts
1000.0V (400-1000V)	±1.6%±50dgts	Not Specified

**DC Current:**

Range	Resolution	Accuracy
600.00μA	0.01μA	±0.4%±20dgts
6000.0μA	0.1μA	±0.2%±20dgts
60.000mA	0.001mA	±0.4%±20dgts
600.00mA	0.01mA	±0.2%±20dgts
1.0000A	0.0001A	±0.2%±20dgts
10.000A	0.001A	±0.6%±20dgts

**AC Current:**

Range (ACA)	Resolution	Accuracy (50/60Hz)	Accuracy (45Hz – 1KHz)
600.00μA	0.01μA	±0.6%±40dgts	±0.8%±40dgts
6000.0μA	0.1μA	±0.6%±40dgts	±0.8%±40dgts
60.000mA	0.001mA	±0.6%±40dgts	±0.8%±40dgts
600.00mA	0.01mA	±0.6%±40dgts	±0.8%±40dgts
1.0000A	0.0001A	±0.6%±40dgts	±0.8%±40dgts
10.000A	0.001A	±0.9%±40dgts	±0.9%±40dgts

Range (ACA)	Accuracy (20Hz - 45Hz)	Accuracy (1KHz – 10KHz)
600.00μA	±2%±20dgts	±4%±20dgts
6000.0μA	±2%±20dgts	±4%±20dgts
60.000mA	±2%±20dgts	±0.9%±20dgts
600.00mA	±2%±20dgts	±0.9%±20dgts
1.0000A	±2%±20dgts	±2.5%±20dgts
10.000A	±3.9%±20dgts	±2.5%±20dgts

**Supplemental Dual Channels Specification (DC – 400Hz):**

The following accuracy should be added to all the listed accuracy if dual channels measurements are performed.

	ACV (Ch2)	DCV (Ch2)	ACA (Ch2)	DCA (Ch2)
<b>ACV (Ch1)</b>	±2% ± (V1 – V2) * 200 PPM (Ch1, Ch2)	±0.9% ± (V1 – V2) * 20 PPM (Ch1, Ch2)	±0.2μA / V (μA, Ch2) ±2μA / V (mA, Ch2) ±0.4mA / V (A, Ch2) ±4mV / A (mV, Ch1) ±9mV / A (V, Ch1)	±0.5% (Ch1, Ch2)
<b>DCV (Ch1)</b>	±0.9% ± (V1 – V2) * 20 PPM (Ch1, Ch2)	±0.5% (Ch1, Ch2)	±0.5% (Ch1, Ch2)	±0.5% (Ch1, Ch2)

The result of (V1-V2) \* PPM is of volts.

V1: the voltage reading in volts of channel 1

V2: the voltage reading in volts of channel 2

PPM: parts per million, Ch1: Channel 1, Ch2: Channel2

**Resistance: ( $\Omega$ )**

Range	Resolution	Accuracy	Overload Protection
999.99 $\Omega$	0.01 $\Omega$	$\pm 0.25\% \pm 9$ dgts	AC 1000V
9.9999K $\Omega$	0.0001K $\Omega$	$\pm 0.25\% \pm 6$ dgts	AC 1000V
99.999K $\Omega$	0.001K $\Omega$	$\pm 0.25\% \pm 6$ dgts	AC 1000V
999.99K $\Omega$	0.01K $\Omega$	$\pm 0.25\% \pm 6$ dgts	AC 1000V
9.9999M $\Omega$	0.0001M $\Omega$	$\pm 0.3\% \pm 9$ dgts	AC 1000V
40.000M $\Omega$	0.001M $\Omega$	$\pm 1.5\% \pm 9$ dgts	AC 1000V

**Continuity: (•), open voltage 3V approx.)**

Range	Resolution	Beeper	Overload Protection
999.99 $\Omega$	0.01 $\Omega$	< 40 $\Omega$ approx.	AC 1000V

**Capacitance: (⇄, auto range, and for film capacitor or better)**

Range	Resolution	Accuracy
60.00nF	0.01nF	$\pm 1.2\% \pm 8$ dgts
600.0nF	0.1nF	$\pm 2.5\% \pm 8$ dgts
6.000 $\mu$ F	0.001 $\mu$ F	$\pm 2.5\% \pm 8$ dgts
60.00 $\mu$ F	0.01 $\mu$ F	$\pm 3.0\% \pm 8$ dgts
490.0 $\mu$ F	0.1 $\mu$ F	$\pm 5.0\% \pm 8$ dgts

**Capacitance: (⇄, manual range, and for film capacitor or better)**

Range	Resolution	Accuracy
99.99nF	0.01nF	$\pm 1.2\% \pm 8$ dgts
999.9nF	0.1nF	$\pm 2.5\% \pm 8$ dgts
9.999 $\mu$ F	1 $\mu$ F	$\pm 2.5\% \pm 8$ dgts
99.99 $\mu$ F	0.01 $\mu$ F	$\pm 3.0\% \pm 8$ dgts
999.9 $\mu$ F	0.1 $\mu$ F	$\pm 5.0\% \pm 8$ dgts

**Diode Test: (open voltage 3V approx., overload protection AC 1000V)**

Range	Resolution	Accuracy	Short Circuit Current
3.0000V	0.0001V	$\pm 2\% \pm 5$ dgts	0.8 mA typical

**Frequency: (TTL)**

Range (Auto)	Resolution	Accuracy	Overload Protection
1.000Hz – 2MHz	0.0001Hz–0.0001MHz	$\pm 0.005\% \pm 4$ dgts	AC 1000V

**Duty Cycle: (% , TTL, 1Hz – 600KHz)**

Range	Resolution	Accuracy	Overload Protection
0.001% - 9.999%	0.001%	$\pm 30$ d/KHz $\pm 30$ dgts	AC 1000V
10.00% – 100.00%	0.01%	$\pm 3$ d/KHz $\pm 3$ dgts	AC 1000V

**Frequency: (AC sine wave)**

Range	Resolution	Accuracy	Overload Protection
1.0000Hz– 200KHz	0.0001Hz–100Hz	$\pm 0.02\% \pm 4$ dgts	AC 1000V

**Duty Cycle: (% , Sine Wave)**

Range	Resolution	Accuracy	Overload Protection
0.001% – 100.00%	0.001% – 0.01%	Not specified	AC 1000V

## General Specifications:

Battery Type:	9V
Fuse:	Fast 20A/1000V (A terminal) Fast 1A/1000V(mA / $\mu$ A terminal)
Display:	5 + 5 digits LCD with 30 segments bar graph
Range Selection:	auto and manual
Sampling Time:	ACV, ACA: 2 times/sec (Approx.) DCV, DCA: 4 times/sec (Approx.)
Overload Indication:	OL
Power Consumption:	4 mA(approx.)
Low battery Indication:	<input type="checkbox"/> B
Operating Temperature:	-10°C to 40°C
Operating Humidity:	less than 85% relative
Altitude:	up to 2000M
Storage Temperature:	-20°C to 60°C
Storage Humidity:	less than 75% relative
Dimension:	207mm(L) x 101mm (W) x 47mm (H) 8.15" (L) x 4" (W) x 1.85" (H)
Weight:	430g / 15.2oz (battery included)
Accessories:	Users manual x 1 9V battery x 1 USB to RS-232 cable x 1 Software CD x 1 Software manual x 1

# PROVA<sup>®</sup>

## PROVA INSTRUMENTS INC.

Add: 6F-2, #129, Lane 235, Pao-Chiao Road,  
Shin-Tien, Taipei Hsien 231, Taiwan

Tel: 886-2-89191255

Fax: 886-2-89191489