### **PROVA A7**

# **AC/DC TRMS Clamp Meter**

#### CE

# IEC 61010 CAT III 600V CAT IV 300V

#### **Features:**

- High resolution AC/DC 10 mA current measurement (<40A range).
- AC/DC current measurement: 40A/ 400A.
- AC/DC voltage measurement: 4V/ 40V/ 400V/ 1000V.
- True RMS measurement of AC current and voltage.
- Resistance, Continuity, Capacitance and Temperature (°C or °F) measurement.
- Auto and full ranges: V, A, Resistance, Capacitance and Temperature.
- One Touch Zero for DCA adjustment.
- 25mm large jaw diameter.
- AC/DC current accuracy ±1%±3dgts (<100A).
- AC/DC voltage accuracy ±0.5%±2dgts.
- Resistance accuracy  $\pm 0.8\% \pm 2 dgts$  ( $40/400/4K/40K/400K/4000K/40M\Omega$ ).
- Capacitance accuracy ±0.8%±3dgt (40n/400n/4u/40u/400u/4m/40mF).
- Temperature (°C, fixed at the factory) best accuracy ±0.5%±0.5°C (-200.0 to 1300°C).
- Temperature (°F, fixed at the factory) best accuracy ±0.5%±0.9°F (-328.0 to 2372°F).
- Auto-power-off function (15 minutes).
- Continuity test.
- Backlight.
- Maximum, minimum, and hold functions.
- 600V overload protection for ohm measurement.
- Ideal for works in crowded switch box or cable areas.

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

# **DC Current** (auto-range, accuracy is % of reading ± digits, conductor is placed at the center of jaws, zero reading before measurement)

Range (A)	Resolution	Accuracy	Overload Protection
0.00 - 40.00	10mA	±1.0%±3dgts	
40.0 – 100.0		±1.0%±3ugis	
100.0 – 150.0		±1.5%±3dgts	DC 500A
150.0 – 200.0	100mA	±2.2%±3dgts	DC 300A
200.0 – 300.0		±4.0%±3dgts	
300.0 – 400.0		±7.0%±3dgts	

# **AC Current** (auto-range, true RMS, crest factor $\leq 3$ , accuracy is % of reading $\pm$ digits, conductor is placed at the center of jaws)

Range (A)	Resolution	Accuracy		Overload
		50/60 Hz	40 - 400Hz	Protection
0.00 - 40.00	10mA	±1.0%±3dgts	14 F0/ 12 deste	
40.0 – 100.0		±1.0%±3ugis	±1.5%±3dgts	
100.0 – 150.0		±1.5%±3dgts	±2.0%±3dgts	AC 500A
150.0 – 200.0	100mA	±2.2%±3dgts	±2.5%±3dgts	AC 300A
200.0 – 300.0		±4.0%±3dgts	±4.0%±3dgts	
300.0 – 400.0		±8.0%±3dgts	±8.5%±3dgts	

#### **DC Voltage** (auto-range, accuracy is % of reading $\pm$ digits, input impedance 10M $\Omega$ )

Range (V)	Resolution	Accuracy	O.L. Protection
0.000 - 4.000	0.001V		
4.00 - 40.00	0.01V	±0 5% ±2data	DC 1000V
40.0 - 400.0	0.1V	±0.5%±2dgts	DC 1000V
400 – 1000	1V		

# **AC Voltage** (auto-range, true RMS, crest factor $\leq$ 3, accuracy is % of reading $\pm$ digits, input impedance 10 M $\Omega$ )

Range (V)	Resolution	Accuracy		Overload
		50/60 Hz 40 - 1KHz		Protection
0.000 - 4.000	0.001V			
4.00 - 40.00	0.01V	10 E0/ 12data	10 00/ 13 data	AC 1000V
40.0 - 400.0	0.1V	±0.5%±2dgts	±0.8%±3dgts	AC 1000V
400 - 1000	1V			

#### **Continuity** (accuracy is % of reading ± digits, open voltage 0.4V, overload protection AC 600V)

Range (Ω)	Resolution	Accuracy	Beeping
0.0 - 400.0	0.1Ω	±0.8%±2dgts	<30.0Ω

#### **Resistance** ( $\Omega$ ) (auto-range, open voltage 0.4V, accuracy is % of reading $\pm$ digits)

Range (Ω)	Resolution ( $\Omega$ )	Accuracy	Overload Protection
0.00 - 40.00 <sup>1</sup>	0.01		
40.0 - 400.0	0.1		
400 - 4000	1		
4.00K - 40.00K	0.01K	±0.8%±2dgts	AC 600V
40.0K - 400.0K	0.1K		
400K - 4000K	1K		
4.00M - 40.00M	0.01M		

<sup>&</sup>lt;sup>1</sup> When the resistance is <  $20\Omega$  at  $40.00\Omega$  range, to obtain listed accuracy users must short the test leads and zero the value before measurement. However, when the zero button is pressed the meter will be locked at 40.00 range, and the resistance values >  $40\Omega$  will be displayed as OL.

**Capacitance**<sup>1</sup> (auto-range, accuracy is % of reading ± digits and thin film capacitor or better is used)

Range (F)	Resolution (F)	Accuracy	Overload Protection
1.000n - 4.000n <sup>2</sup>	0.001n	±1.5%±3dgts	
4.00n - 40.00n	0.01n		
40.0n - 400.0n	0.1n		
0.400u - 4.000u	0.001u		AC 600V
4.00u - 40.00u	0.01u	±0.8%±3dgts	AC 600V
40.0u - 400.0u	0.1u		
0.400m - 4.000m	0.001m		
4.00m - 40.00m <sup>3</sup>	0.01m		

<sup>&</sup>lt;sup>1</sup> There is less than 0.030nF residual reading left on the LCD in the 4nF range.

The smaller the capacitance value, the shorter the measurement time.

**Temperature**<sup>1</sup> (auto-range, K-Type thermocouples,  $^{\circ}\mathbb{C}$  or  $^{\circ}\mathbb{F}$  is fixed at the factory, accuracy is  $^{\circ}$  of reading  $^{\pm}$  digits)

Range	Resolution	Accuracy	Overload Protection
-200.0 to -100.0℃	0.1℃	±1.5%±0.2℃	
-100.0 to 400.0℃	0.1℃	±0.5%±0.5℃	
400 to 1000℃	1℃	±0.5%±2℃	
1000 to 1300℃	1℃	±0.8%±2℃	AC 600V
-328.0 to -148.0°F	0.1°F	±1.5%±0.4°F	AC 600 V
-148.0 to 999.9°F	0.1°F	±0.5%±0.9°F	
1000 to 1832°F	1°F	<b>±0.5%±4</b> °F	
1832 to 2372°F	1°F	<b>±0.8%±4</b> °F	

<sup>&</sup>lt;sup>1</sup> The accuracy of K type thermocouple is not included in the listed accuracy.

<sup>&</sup>lt;sup>2</sup> In the 4nF range, the length of test leads must be less than 10 cm (including test prod or alligator clip) to obtain the listed accuracy.

<sup>&</sup>lt;sup>3</sup> Maximum measuring time of 40mF would take around 13 seconds.

### **General Specifications:**

#### **Indoor Use**

Conductor Size: 0.98" / 25mm max. (approx.)

Battery Type: two 1.5V LR03 AA Size

Display: 3 3/4 LCD with 20 seg. bargraph

Range Selection: Auto
Overload Indication: OL

Power Consumption: 22mA (approx., without backlight)

Low battery Indication:

Sampling Time: 3 times/sec. (display)

30 times/sec.. (bargraph)

Auto-power-off: 15 minutes

Operating Temperature: -10°C to 50°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: 190mm (L) x 66mm (W) x 36mm (H)

7.5" (L) x 2.6" (W) x 1.45" (H)

Weight: 220g (battery included)

Accessories: Carrying bag x 1

Users manual x 1 1.5V battery x 2 Test leads x 1 set

K-type thermocouples x 1

Adapter (K-type thermocouples) x 1

### PROVA INSTRUMENTS INC.

Add: 6F-2, No. 129, Lane 235, Pao-Chiao Road, Shin-Tien District,

New Taipei City 23145, TAIWAN

E-mail: prova@ms3.hinet.net Website: www.prova.com.tw