



PROVA 19

Leakage and Harmonics Tester

CE

CAT II 600V, CAT III 300V

Features:

1. True RMS measurement of V and A.
2. Leakage current measurement at 10 μ A resolution.
3. Non-interrupted AC current harmonic analysis.
4. 1 to 99th order of harmonics analysis (V and A).
5. Total harmonic distortion (%THD-F) and crest factor (CF).
6. Fast peak function (39 μ s for 50 Hz, 33 μ s for 60Hz).
7. Programmable CT ratio from 1 to 250.
8. Max, Min and data hold functions.
9. Auto power off function in 30 minutes.
10. Shielded Jaw immune to external interference

Electrical Specifications: (23 $^{\circ}$ C \pm 5 $^{\circ}$ C)

AC Current

(Auto Range, True RMS, Crest Factor<4, CT=1, Max. peak values 880mADC for mA range, 73.5ADC for A range, Overload Protection AC 600A)

Range	Resolution	Accuracy of Readings (50/60Hz)
0.5 – 60mA	0.01mA	\pm 0.5% \pm 5dgts
60 – 100mA	0.01mA	\pm 0.5% \pm 50dgts
100 – 600 mA	0.1 mA	\pm 0.5% \pm 5dgts
0.05 – 3 A	0.001 A	\pm 0.5% \pm 5dgts
3 – 30 A	0.01 A	\pm 0.5% \pm 5dgts
30 – 50 A	0.01 A	\pm 1.0% \pm 5dgts

Range	Resolution	Accuracy of Readings (45-1KHz)
0.5 – 60mA	0.01mA	±1.5% ± 5dgts
60 – 100mA	0.01mA	±1.5% ± 50dgts
100 – 600 mA	0.1 mA	±1.5% ± 5dgts
0.05 – 3 A	0.001 A	±1.5% ± 5dgts
3 – 30 A	0.01 A	±1.5% ± 5dgts
30 – 50 A	0.01 A	±1.5% ± 5dgts

AC Voltage

(Auto Range, True RMS, Crest Factor<4, Input Impedance 10 MΩ, Max. peak value 860VDC, and Overload Protection AC 800V)

Range	Resolution	Accuracy of Readings (50/60Hz)
5V – 250 V	0.1 V	±0.5% ± 5dgts
250 V – 600 V	0.1 V	±0.5% ± 5dgts

Range	Resolution	Accuracy of Readings (45-1KHz)
5V – 250 V	0.1 V	±1.5% ± 5dgts
250 V – 600 V	0.1 V	±1.5% ± 5dgts

Harmonics of AC Voltage in Percentage

(1 to 99th order, minimum voltage at 50 or 60 Hz is greater than AC 80V. If the voltage is 0 at 50 or 60 Hz, all the percentage (%) display is 0.)

Range	Resolution	Accuracy
1 – 10 th	0.1 %	±1% of reading ±1%
11 – 20 th	0.1 %	±5% of reading ±1%
21 – 50 th	0.1 %	±15% of reading ±1%
51 - 99 th	0.1 %	±35% of reading ±1%

Harmonics of AC Voltage in Magnitude

(1 to 99th order, minimum voltage at 50 or 60 Hz is greater than AC 80V)

Range	Resolution	Accuracy
1 – 10 th	0.1 V	±1% of reading ±7dgts
11 – 20 th	0.1 V	±5% of reading ±7dgts
21 – 50 th	0.1 V	±15% of reading ±7dgts
51 - 99 th	0.1 V	±35% of reading ±7dgts

Harmonics of AC Current in Percentage

(1 to 99th order, min. current at 50 or 60 Hz is greater than 100mA for mA range, and greater than 1A for A range. If the current is 0 at 50 or 60 Hz, all the percentage (%) display is 0)

Range	Resolution	Accuracy
1 – 10 th	0.1 %	±1% of reading ±1%
11 – 20 th	0.1 %	±5% of reading ±1%
21 – 50 th	0.1 %	±15% of reading ±1%
51 - 99 th	0.1 %	±35% of reading ±1%

Harmonics of AC Current in Magnitude

(1 to 99th order, min. current at 50 or 60 Hz is greater than 100mA for mA range, and greater than 1A for A range)

Range	Resolution	Accuracy
1 – 10 th	0.01mA / 0.1mA /	reading in mA: $\pm 1\%$ of reading $\pm 2\text{mA}$ reading in A: $\pm 1\%$ of reading $\pm 0.3\text{A}$
11 – 20 th	0.001A / 0.01A	reading in mA: $\pm 7\%$ of reading $\pm 2\text{mA}$ reading in A: $\pm 7\%$ of reading $\pm 0.3\text{A}$
21 – 50 th		reading in mA: $\pm 15\%$ of reading $\pm 3\text{mA}$ reading in A: $\pm 15\%$ of reading $\pm 0.3\text{A}$
51 - 99 th		reading in mA: $\pm 35\%$ of reading $\pm 3\text{mA}$ reading in A: $\pm 35\%$ of reading $\pm 0.3\text{A}$

Total Harmonic Distortion (THD-F with respect to the first (fundamental) harmonics, min. value in the range from 45 to 65Hz is greater than AC 80V, greater than 1A for A range, and greater than 100mA for mA range. Calculation is done over 1 to 50th Harmonics. If the voltage or current is 0 in the range from 45 to 65Hz, all the percentage (%) display is 0)

Range (45~65Hz)	Resolution	Accuracy
0.0 – 10.0 %	0.1%	$\pm 2\%$
10.0 – 40%	0.1%	$\pm 5\%$ of reading $\pm 5\%$
40 – 100%	0.1%	$\pm 10\%$ of reading $\pm 10\%$
100 – 999.9%	0.1%	$\pm 20\%$ of reading

Peak Value of AC Periodic Voltage (peak value > 10V) or AC Periodic Current

(peak value > 10mA for mA range and peak value > 0.5A for A range) **for continuous waveform except for square wave:**

Range	Sampling Time	Accuracy of Reading
50 Hz	39 μs	$\pm 5\% \pm 30$ digits
60 Hz	33 μs	$\pm 5\% \pm 30$ digits

Crest Factor (C.F.) of AC Voltage (peak value > 10V) or AC Current

(peak value > 10mA for mA range and peak value > 0.5A for A range) **for continuous waveform except for square wave:**


Range (45~65Hz)	Resolution	Accuracy of Readings
1.00 – 99.99	0.01	$\pm 5\% \pm 30$ digits

Frequency (Hz)

Range	Resolution	Accuracy of Readings	Allowed Input
mA (45 – 65Hz)	0.1Hz	$\pm 0.5\text{Hz}$	20mA to 1.2A
A (45 – 65Hz)	0.1Hz	$\pm 0.5\text{Hz}$	1A to 100A

Sensitivity: > 20mA for mA range, > 1A for A range, and > 50V

General Specifications:

Conductor Size:	30mm (approx.)
Battery Type:	two 1.5V SUM-3
Display:	4+2+2 digits LCD
Range Selection:	Auto
Overload Indication:	OL
Power Consumption:	10 mA (approx.)
Low battery Indication:	
Auto-Power-Off:	30 minutes after power-on
Update Time:	2 times/second (display)
No. Of Samples per Period	512 (voltage or current) 256 (power)
Temperature Coefficient (<18°C or >28°C):	0.15 x (Specified Accuracy) / °C
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:	210mm (L) x 62mm (W) x 35.6mm (H) 8.3" (L) x 2.5" (W) x 1.4" (H)
Weight:	200g (battery included)
Accessories:	Test leads x 1 pair, Carrying bag x 1, Users manual x 1, Batteries 1.5V x 2
Option:	Alligator clips

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