

## AC Clamp-On Power Harmonics & Leakage Tester

CE



## **Features**

- True RMS value (V and A)
- Leakage Current Measurement at 10µA Resolution
- Harmonic Analysis (V and A) to the 99th Order
- Better Understanding of High Frequency Harmonic Analysis (up to 5/6 KHz)
- Non-interrupted Harmonic Analysis
- Analysis of Total Harmonic Distortion (%THD-F)
- Analysis of Crest Factor (C.F.)
- Fast Peak Function (33μs for 60Hz & 39μs for 50Hz)
- Programmable CT Ratio (1 to 250)
- W, KW, HP, VA, KVA, VAR, KVAR
- PF, Phase Angle (Φ)
- Energy (mWH, WH, KWH)
- Analysis of Standby Power Consumption
- Balanced 3 Phase Power Quality
- Balanced 3 Phase Sequence
- Max., Min. & Data Hold Function
- Active Power in HP

## **General Specifications**

Jaw Opening : Cable Dia 30mm

(approx.)

**Battery Type** : 1.5V SUM-3 x 2 **Display** : 4+2+2 digits LCD

Auto-Power-Off: 30 minutesLCD update rate: 2 times / sec.Operating Temperature: -10°C to 50°CStorage Temperature: -20°C to 60°COption: Alligator clips

**Power Consumption** : 10mA (approx.) **No. of Samples/Period** : 512 (V & A), 256 (W)

Operating Humidity : < 85% relative : < 75% relative

Weight : 210gms Including Battery (approx.)

**Dimension** : 210 x 72 x 36 mm **Accessories** :Test Leads, Carry Bag,

Users Manual, Batteries (installed)

## **Specifications** $(23^{\circ}\text{C} \pm 5^{\circ}\text{C})$

| Harmonics of AC Current in % & Magnitude (1 - 99th order) |                 |                                  |                         |                                  |
|---|-----------------|----------------------------------|-------------------------|----------------------------------|
| Range   | Resolution in % | Accuracy in %                    | Resolution in Magnitude | Accuracy in Magnitude            |
| 1 - 10th  |                 | $\pm 0.7\%$ of reading $\pm 1\%$ |                         | $\pm$ 1% of reading $\pm$ 2mA    |
| 1 - 1001  |                 | ±0.7 % Offeating ± 1 %           |                         | $\pm$ 1% of reading $\pm$ 0.3A   |
| 11 - 20th   |                 | + 20/ of reading + 10/           | 0.01mA                  | ±7% of reading ±2mA              |
| 11-2011   | 0.1 %           | $\pm 2\%$ of reading $\pm 1\%$   | 0.1mA                   | $\pm$ 7% of reading $\pm$ 0.3A   |
| 21 - 50th (A range)                                       |                 | ±5% of reading ±1%               | 0.001A                  | ±15% of reading ±0.3A            |
| 21 - 50th (mA range)                                      |                 | ± 10% of reading ± 1%            | 0.01A                   | $\pm 15\%$ of reading $\pm 3$ mA |
| 51 - 99th   | 5.1 00th        | ±35% of reading ±1%              |                         | ±35% of reading ±3mA             |
| 31 - 39111  |                 | ± 33 % Offedding ± 1 %           |                         | $\pm 35\%$ of reading $\pm 0.3A$ |

| Harmonics of AC Voltage in % & Magnitude (1 - 99th order) |                 |                      |                         |                                     |
|---|-----------------|----------------------|-------------------------|-------------------------------------|
| Range   | Resolution in % | Accuracy in %        | Resolution in Magnitude | Accuracy in Magnitude               |
| 1 - 10th  |                 | ±0.7% of reading ±1% |                         | $\pm 0.7\%$ of reading $\pm 7$ dgts |
| 11 - 20th   | 0.1 %           | ±2% of reading ±1%   | 0.1V                    | ±2% of reading ±7 dgts              |
| 21 - 50th   |                 | ±5% of reading ±1%   | 0.10                    | ± 5% of reading ± 7 dgts            |
| 51 - 99th   |                 | ±35% of reading ±1%  |                         | ± 35% of reading ± 7 dgts           |

| AC Watt (50 or 60Hz, PF 0.6 to 1. CT = 1, Accuracy of Readings) |            |                        |                              |
|---|------------|------------------------|------------------------------|
| Range   | Resolution | Accuracy (0 - 60A)     | <b>Accuracy</b> (60 - 100A)  |
| 0.050 - 9.999W  | 0.001W     | $\pm 2\% \pm 0.025W$   |                              |
| 10.00 - 99.99W  | 0.01W      | ±2% ± 0.25W            |                              |
| 100.0 - 999.9W  | 0.1W       | ±2% ± 2.5W             |                              |
| 1.000 - 9.999KW   | 0.001KW    | $\pm 2\% \pm 0.025$ KW | $\pm 2\%$ of VA $\pm 5$ dgts |
| 10.00 - 99.99KW   | 0.01KW     | ±2% ± 0.25KW           |                              |
| 100.0 - 999.9KW   | 0.1KW      | ±2% ± 2.5KW            |                              |
| 1000 - 9999KW   | 1KW        | ±2% ± 25KW             |                              |

| AC Current (50 or 60Hz, True RMS) |             |                                 |  |  |
|-----------------------------------|-------------|---------------------------------|--|--|
| Range                             | Resolution  | Accuracy                        |  |  |
| 00.50 - 60.00mA                   | 0.01mA      | ±0.5% ± 5 dgts                  |  |  |
| 60.00 - 100.0mA                   | 0.01/0.1mA  | $\pm 0.5\% \pm 50 \text{ dgts}$ |  |  |
| 100.0 - 600.0mA                   | 0.1mA       |                                 |  |  |
| 0.050 - 3.000A                    | 0.001A      | $\pm 0.5\% \pm 5 \text{ dgts}$  |  |  |
| 3.000 - 30.00A                    | 0.001/0.01A |                                 |  |  |
| 30.00 - 90.00A                    | 0.01A       | ± 1.0% ± 5 dgts                 |  |  |

| AC Voltage (50 or 60Hz, True RMS) |            |                                |  |
|-----------------------------------|------------|--------------------------------|--|
| Range                             | Resolution | Accuracy                       |  |
| 5 - 250V                          | 0.1 V      | . O E0/ . E dat                |  |
| 250 - 600V                        | 0.1 V      | $\pm 0.5\% \pm 5 \mathrm{dgt}$ |  |

| Power Factor & Phase Angle |            |          |  |
|----------------------------|------------|----------|--|
| Range                      | Resolution | Accuracy |  |
| 0.000 - 1.000              | 0.001      | ±0.04    |  |
| -180°to180° & 0°to360°     | 0.1°       | +2°      |  |

| <b>Total Harmonic Distortion</b> (THD-F, 1 - 50th order) |            |                        |  |
|--|------------|------------------------|--|
| Range  | Resolution | Accuracy               |  |
| 0.0 - 20.0%  | 0.1%       | ± 2%                   |  |
| 20.0 - 100%  | 0.1%       | ± 3% of reading ± 5%   |  |
| 100 - 999.9%   | 0.1%       | ± 10% of reading ± 10% |  |

| Crest Factor (C.F., Accuracy of Readings) |            |               |  |
|---|------------|---------------|--|
| Range                                     | Resolution | Accuracy      |  |
| 1.00 - 99.99                              | 0.01       | ± 5% ± 30 dgt |  |