



PROVA 6830A + PROVA 6802

Power and Harmonics Analyzer (1000A)

CE CAT III 600V

Features:

- **Power Analysis** for 3P4W, 3P3W, 1P2W, 1P3W
- **True RMS** value (V_{123} and I_{123})
- Active Power (W, KW, MW, GW)
- Apparent and Reactive Power (KVA, KVAR)
- Power Factor (**PF**), Phase Angle (Φ)
- **Energy** (WH, KWH, KVARH, PFH)
- **AC Current (0.4A to 1000A)** and **Voltage** measurement: True RMS, Auto Range.
- Capable of analyzing IT standby power consumption to the maximum demand of a factory
- Display of **35 Parameters** in One Screen (3P4W)
- Programmable **CT** (1 to 600) and **PT** (1 to 3000) Ratios
- Display of Overlapped Voltage and Current Waveform
- Average Demand (**AD** in W, KW, MW)
- Maximum Demand (**MD** in KW, MW, KVA, MVA) with Programmable Period
- **Harmonic Analysis** to the 99th Order
- Display of **50 Harmonics** in one Screen with Waveform
- Display of **Waveform** with Peak Values (1024 Samples / Period)
- Analysis of Total Harmonic Distortion (**THD-F**)
- Graphic **Phasor Diagram** with 3 Phase System Parameters
- Capture **28 Transient Events** (Time + Cycles) with Programmable Threshold (%)
- **DIP**, **SWELL**, and **OUTAGE** are included in transient events.
- 3 Phase Voltage or Current Unbalance Ratio (**VUR**, **IUR**)
- 3 Phase Voltage or Current Unbalance Factor (**d0%**, **d2%**)
- Calculated **Unbalanced Current** through Neutral Line (In)
- **512K Memory** with Programmable Interval (Sampling time from 2 to 3000 seconds, **17,000 records** for 3P4W system)
- Output of Waveform, Power Parameters and Harmonics at Command
- Large Dot Matrix **LCD** Display with **Backlight**
- **Software** to work with PC via Optical Isolated RS-232C to USB Interface
- Built-in timer and calendar for data logging

Electrical Specifications: (23°C±5°C)

AC Watt

| Range (0 to 1000A) | Resolution | Accuracy of Readings |
|--------------------|------------|----------------------|
| 5.0 – 999.9 W | 0.1W | ±1% ± 0.8W |
| 1.000 – 9.999 KW | 0.001 KW | ±1% ± 8W |
| 10.00 – 99.99 KW | 0.01 KW | ±1% ± 80W |
| 100.0 – 999.9 KW | 0.1 KW | ±1% ± 0.8KW |
| 1000 – 9999 KW | 1 KW | ±1% ± 8KW |
| 0.000 – 9.999MW | 0.001MW | ±1% ± 80KW |

Range of CT (Current Transformer) Ratio: 1 to 600

AC Apparent Power (VA, from 0.000 VA to 9999 KVA): $VA = V \text{ r.m.s.} \times A \text{ r.m.s}$

AC Reactive Power (VAR, from 0.000 VAR to 9999 KVAR): $VAR = \sqrt{(VA^2 - W^2)}$

AC Active Energy (mWH, WH, or KWH, from 0mWH to 999,999KWH):

WH = W * Time (in hours)

AC Current (Auto range, TRMS, Overload Protection AC 2000A)

| Range | Resolution | Accuracy of Readings |
|----------------|--------------|----------------------|
| 10.00A | 0.001A/0.01A | – |
| 5A - 100.0A | 0.01A/0.1A | ±0.5% ± 0.5A |
| 50A – 1000.0 A | 0.1A/1 A | ±0.5% ± 5A |

AC Voltage (Auto range, TRMS, Overload Protection AC 800V)

| Range | Resolution | Accuracy of Readings |
|-------------------------------------|------------|----------------------|
| 20.0 V – 500.0 V (Phase to Neutral) | 0.1 V | ±0.5% ± 5dpts |
| 20.0 V – 600.0 V (Phase to Phase) | | |

Range of VT (Voltage Transformer) Ratio: 1 to 3000

Harmonics of AC Voltage in Percentage

| Range | Resolution | Accuracy |
|-----------------------|------------|-----------------------|
| 1 – 20 th | 0.1% | ±2% |
| 21 – 49 th | | ±4% of reading ± 2.0% |
| 50 – 99 th | | ±6% of reading ± 2.0% |

Harmonics of AC Voltage in Magnitude

| Range | Resolution | Accuracy |
|-----------------------|------------|-----------------------|
| 1 – 20 th | 0.1V | ±2% ± 0.5V |
| 21 – 49 th | | ±4% of reading ± 0.5V |
| 50 – 99 th | | ±6% of reading ± 0.5V |

Harmonics of AC Current in Percentage

| Range | Resolution | Accuracy |
|-----------------------|------------|-----------------------|
| 1 – 20 th | 0.1 % | ±2% |
| 21 – 49 th | | ±4% of reading ± 2.0% |
| 50 – 99 th | | ±6% of reading ± 2.0% |

Harmonics of AC Current in Magnitude

| Range | Resolution | Accuracy |
|-----------------------|------------|----------------------|
| 1 – 20 th | 0.1A | ±2% of reading ±0.4A |
| 21 – 49 th | | ±4% of reading ±0.4A |
| 50 – 99 th | | ±6% of reading ±0.4A |

Power Factor (PF)

| Range | Resolution | Accuracy |
|-------------|------------|----------|
| 0.00 – 1.00 | 0.01 | ± 0.04 |

Phase Angle (Φ)

| Range | Resolution | Accuracy |
|---------------|------------|----------|
| -180° to 180° | 0.1° | ± 1° |

Peak Value of ACV (peak value > 20V) or ACA (peak value > 20A), VT=1

| Range | Sampling Time | Accuracy of Reading |
|-------|---------------|---------------------|
| 50 Hz | 19μs | ± 5% ± 30 digits |
| 60 Hz | 16μs | |

Crest Factor (C.F.) of ACV (peak value >20V)

or ACA (peak value > 20A), VT=1

| Range | Resolution | Accuracy of Readings |
|--------------|------------|----------------------|
| 1.00 – 99.99 | 0.01 | ± 5% ± 30 digits |

Frequency in AUTO mode

| Range | Resolution | Accuracy |
|------------|------------|----------|
| 45 – 65 Hz | 0.1Hz | ± 0.1Hz |


Total Harmonic Distortion (THD-F)

| Range | Resolution | Accuracy |
|---------------|------------|-----------------------|
| 0.0 – 20% | 0.1% | ± 2% |
| 20 – 100% | | ± 6% of reading ± 1% |
| 100 – 999.9 % | | ± 10% of reading ± 1% |

General Specifications: Indoors Use

PROVA 6830A Analyzer

| | |
|---------------------|---|
| Battery Type: | 1.5V SUM-3 x 8 |
| External DC Input: | Use only power supply adapter Model PHAPSA |
| Display: | Dot Matrix LCD (240x128) with backlight |
| LCD Update Rate: | 1 time / second |
| Power Consumption: | 140mA (approx.) |
| No. Of Samples: | 1024 samples / period |
| Data Logging Files: | 85 |

| | |
|-------------------------|--|
| Max. File Capacity: | 17474 records (3P4W, 3P3W) 26210 records (1P3W) 52420 records (1P2W) 4096 records (50 Harmonics / record) |
| Sampling Time: | 2 to 3000 seconds for data logging |
| Low battery Indication: |  |
| Overload Indication: | OL |
| Operating Temperature: | -10°C to 50°C |
| Operating Humidity: | less than 85% relative |
| Storage Temperature: | -20°C to 60°C |
| Storage Humidity: | less than 75% relative |
| Dimension: | 257 (L) x 155 (W) x 57 (H) mm 10.1" (L) x 6.1" (W) x 2.3" (H) |
| Weight: | 1160g (Batteries included) |
| Accessories: | Probes (model 6802) x 3 Test leads (3 meter long) x 4 Alligator clips x 4 Carrying bag x 1 Users manual x 1 Batteries 1.5V x 8 AC power adapter x 1 Software CD x 1 Software users manual x 1 USB to RS232 cable x 1 |

[PROVA 6802 Current Probes](#)

| | |
|------------------|---|
| Conductor Size: | 55mm (approx.), 64 x 24mm (bus bar) |
| Cable Length: | 3000mm |
| Range Selection: | Manual (10A, 100A, 1000A) |
| Battery: | powered by power analyzer |
| Dimension: | 244mm (L) x 97mm (W) x 46mm (H) 9.6" (L) x 3.8" (W) x 1.8" (H) |
| Weight: | 600g |

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