MI 2892 PowerMaster

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The NEW MI 2892 PowerMaster is a hand-held three phase power quality analyser with a large easy-to-read graphical colour display enabling the user to detect harmonics, phasors and waveforms anomalies in the installation simply by connecting the device. The instrument is designed for a long term recording as well as for troubleshooting power quality problems in three-phase and single-phase power distribution systems. The handy Quick Set buttons makes the instrument more user friendly and are allowing faster data overview for troubleshooting. Advanced PC SW package PowerView3 enables detailed analysis of recorded data, direct reading from the microSD memory card, analysis of long term records and automatic creation of professional test report.

MEASURING FUNCTIONS:

- Voltage: TRMS, peak, crest factor (4-channel); Current: TRMS, peak, crest factor (4-channel); Power (active, reactive, apparent);

- Power measurements fully compliant with IEEE 1459 (active, non active, fundamental, harmonic, load unbalance);
- Unbalance, flicker measurement; •
- Harmonic and interharmonic analysis up to 50th harmonics, THD measurement;
- Energy (active, reactive, generated, consumed); Capturing and recording of power supply events (shutdowns, interruptions, swells, dips); Inrush currents monitoring and recording; Waveform/inrush displaying, snapshot and recording;

- Transients recording;
- Power quality analysis according to EN 50160;
- . Recording up to 7 adjustable alarms;
- Temperature measurement; .
- Power factor cos ø.

KEY FEATURES:

- 4-voltage channels with wide measurement range: 0 ... 1000 Vrms (CAT III / 1000 V);
- 4-current channels with support for automatic clamp recognition and "on instrument" range selection; Automatic Smart Clamp detection and Smart Clamp range selection;
- Sampling frequency on transients recording > 50 kHz; Compliance with power quality standard IEC 61000-4-30 Class A;
- Complete power quality analysis according to EN 50160 including signalling and interharmonics; Support for microSD memory card (8-GB supplied with the instrument) up to 32GB; Color-coded input terminals and terminal labels to suit your application region;

- Intuitive main menu and large icons that makes the equipment very easy to navigate and configure; Powerful PC SW PowerView3 enables downloading, view, analysis of recorded data and professional
- report creation; Flexible clamps (without additional power supply) are included in the standard set;
- Remote communication via Ethernet (GPS clock synchronization optional).
- www.esis.com.au Ph 02 9481 7420 Fax 02 9481 7267 esis.enq@esis.com.au

APPLICATION:

- Power quality assessment and troubleshooting in low and middle voltage electrical systems;
- Checking power correction equipment performance:
- Long-term analysis;
- Predictive maintenance;
- Verification of electrical system capacity before adding loads.

STANDARDS:

Safety: EN 61010-1

EMC: EN 61326

Measurements:

IEC/EN 61000-4-30, Class A; IEC/EN 61557-12; IEC/EN 61000-4-7, Class I; IEC/EN 61000-4-15; EN 50160; IEEE 1448; **IEEE 1459**



Technical specification

Voltage inputs

Number of inputs

Nominal voltage range (L – N)

Measuring range Accuracy Sampling rate Mains frequency range

Current inputs

Number of inputs Measuring range (with A1227 flex clamps) Measuring range (with A1281 iron clamps)

Functions

Power (P, Q, S, cos \u03c6, PF...)

Energy

Harmonics (DC ÷ 50th) Interharmonics (1 ÷ 50th) Flicker Mains signalling

Unbalance

Temperature

Dips, Swell

Interrupts

Recorders Memory

General recorder

Integration period

Recorded signals

Duration

Waveform recorder Duration

Trigger

Transient recorder

Sampling rate Duration Trigger

General

Display Communication Time synchronisation Power supply Overvoltage category Weight Dimensions

AC/DC

5

Phase (L-N): 50 \div 1000 V $_{\text{RMS}}$ Line (L-L): 50 ÷ 1730 V_{RMS} 10% ÷ 150% of nominal voltage IEC 61000-4-30 Class A, ±0.1% of nominal voltage, 5.120 kSamples per sec @ 50/60 Hz, sync with mains freq. 40 ÷ 70 Hz ±10 mHz

AC/DC 4

3 ÷ 6000 ARMS ±1.5% of m.v.

50 m ÷ 1200 A_{RMS} ±0.5% of m.v.

Measuring range

Depends on voltage and selected clamps Depends on voltage and selected clamps 0 ÷ 20% of nom. voltage 0 ÷ 20% of nom. voltage $0.2 \div 10$ 0 ÷ 15% of nom. voltage

Voltage: 0 ÷ 5% Current: 0 ÷ 17% -10 ÷ 85 °C 10 ÷ 150% of nom. voltage

1s ... 1h

> 1000 (voltages, currents, harmonics, power...) Minimal, maximal and average value per interval - Voltage events - Custom alarms > 1 year (depends on size of SD card)

Up to 20 seconds of voltage and current waveform Manual, Voltage Events, Custom Alarms, voltage or current level (inrush)

> 50ksamples/sec Up to 50 cycles of voltage and current waveform Manual, voltage envelope or level

4.3 inch color TFT (480 x 272) USB, Ethernet, RS-232 GPS receiver (A 1355) 110 \div 240 Vac or 6 x NiMh rechargable batteries, size AA CAT IV / 600 V or CAT III / 1000 V 1 kg 230 x 140 x 80 mm



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Ordering information:



Instrument PowerMaster

- 1-phase flexible current clamps 3000 / 300 / 30 A . (A 1227), 4 pcs
- Test probe, (brown, black, grey, green, blue), 5 pcs •
- Crocodile clip, (brown, black, grey, green, blue), 5 pcs Voltage measurement lead, (brown, black, grey,
- green, blue), 5 pcs
- Temperature probe
- microSD memory card 8.0GB •
- PC SW PowerView3 •
- RS232, USB and Ethernet patch cable ٠
- ٠
- Power supply adapter 1.2 V NiMH rechargeable battery, 6 pcs •
- Soft carrying bag
- Instruction manual
- Calibration certificate

Optional accessories:

| Photo | Order No. | Acc. description |
|-----------------|-----------|---|
| Ì | A 1020 | Small soft carrying bag |
| St. | A 1033 | Current clamp 1000 A /1 V |
| | A 1037 | Current transformer 5 A/1 V |
| | A 1039 | Connection cable for current clamp |
| 2 | A 1069 | Mini current clamp 100 A / 1 V |
| | A 1122 | Mini current clamp 5 A / 1 V |
| B &** | A 1179 | 3-phase flexible current clamp 2000/200/20 A / 1 V |
| 8 2" | A 1257 | 3-phase flexible current clamp 3000/300/30 A / 1 V |
| St. | A 1281 | Current clamp 1000 / 100 / 5 A / 1V |
| 00 | A 1287 | 1-phase flexible current clamp 3000 / 30 / 30 A/1V |
| H | A 1458 | SanDisk microSD card reader |
| • | A 1355 | GPS reciver |
| | S 2014 | Safety fuse adapter, 3 pcs |
| | S 2015 | Safety flat clamp, 4 pcs |

Note! Photographs in this catalogue may slightly differ from the instruments at the time of delivery. Subject to technical change without notice.

Reactive: IEC 62053-23 Class 2 IEC 61000-4-7 Class 1 IEC 61000-4-7 Class 1 IEC 61000-4-15 Class F3

Accuracy

IEC 61557-12 Class 1

Active: IEC 62053-21 Class 1

IEC 61000-4-30 Class A ±0.5 °C ±0.2 % of nominal voltage ±1 cycle

0 ÷ 10% of nom. voltage ±1 cycle

8GB microSD, up to 32GB supported