

MI 2892 PowerMaster

Class A
Power Quality Analyser

NEW
PowerMaster



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 $\cos \phi$.

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).

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

AC/DC

5
Phase (L-N): $50 \div 1000 V_{RMS}$
Line (L-L): $50 \div 1730 V_{RMS}$
10% \div 150% of nominal voltage
IEC 61000-4-30 Class A, $\pm 0.1\%$ of nominal voltage,
5.120 kSamples per sec @ 50/60 Hz, sync with mains freq.
40 \div 70 Hz ± 10 mHz

Current inputs

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

AC/DC

4
 $3 \div 6000 A_{RMS} \pm 1.5\%$ of m.v.
 $50 m \div 1200 A_{RMS} \pm 0.5\%$ of m.v.

Functions

Power (P, Q, S, cos ϕ , PF...)
Energy
Harmonics (DC \div 50th)
Interharmonics (1 \div 50th)
Flicker
Mains signalling
Unbalance
Temperature
Dips, Swell
Interrupts

Measuring range

Depends on voltage and selected clamps
Depends on voltage and selected clamps
0 \div 20% of nom. voltage
0 \div 20% of nom. voltage
0.2 \div 10
0 \div 15% of nom. voltage
Voltage: 0 \div 5%
Current: 0 \div 17%
-10 \div 85 °C
10 \div 150% of nom. voltage
0 \div 10% of nom. voltage

Accuracy

IEC 61557-12 Class 1
Active: IEC 62053-21 Class 1
Reactive: IEC 62053-23 Class 2
IEC 61000-4-7 Class 1
IEC 61000-4-7 Class 1
IEC 61000-4-15 Class F3
IEC 61000-4-30 Class A
 ± 0.5 °C
 ± 0.2 % of nominal voltage
 ± 1 cycle
 ± 1 cycle

Recorders

Memory 8GB microSD, up to 32GB supported

General recorder

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

Waveform recorder

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

Transient recorder

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

General

Display 4.3 inch color TFT (480 x 272)
Communication USB, Ethernet, RS-232
Time synchronisation GPS receiver (A 1355)
Power supply 110 \div 240 Vac or 6 x NiMH rechargeable batteries, size AA
Overvoltage category CAT IV / 600 V or CAT III / 1000 V
Weight 1 kg
Dimensions 230 x 140 x 80 mm

Ordering information:

Standard set

Part No. MI 2892



- 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
- 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
	A 1020	Small soft carrying bag
	A 1033	Current clamp 1000 A / 1 V
	A 1037	Current transformer 5 A / 1 V
	A 1039	Connection cable for current clamp
	A 1069	Mini current clamp 100 A / 1 V
	A 1122	Mini current clamp 5 A / 1 V
	A 1179	3-phase flexible current clamp 2000/200/20 A / 1 V
	A 1257	3-phase flexible current clamp 3000/300/30 A / 1 V
	A 1281	Current clamp 1000 / 100 / 5 A / 1 V
	A 1287	1-phase flexible current clamp 3000 / 30 / 30 A / 1 V
	A 1458	SanDisk microSD card reader
	A 1355	GPS reciver
	S 2014	Safety fuse adapter, 3 pcs
	S 2015	Safety flat clamp, 4 pcs



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