

Class S Power Quality Analyser

MI 2885 Master Q4

NEW



The MI 2885 Master Q4 is an ideal troubleshooting tool. The recorders are designed to automatically record all important data and waveforms of voltage events like Dips and Swells. In addition the user can set 7 optional triggers for capturing waveforms of selected quantities. 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 handy Quick Set buttons makes the instrument more user friendly and are allowing faster data overview. 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. 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-channels);
- Current: TRMS, peak, crest factor (4-channels);
- Power (active, reactive, apparent);
- Power measurements fully compliant with IEEE 1459 (active, non active, fundamental, harmonic, load unbalance);
- VFD (variable frequency drives);
- 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;
- Power quality analysis according to EN 50160;
- Recording up to 7 adjustable alarms;
- Temperature measurement;
- Photo-voltaic inverter efficiency measurements;
- 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;
- Compliance with power quality standard IEC 61000-4-30 Class S (0.1%);
- 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 32 GB;
- 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;
- Current clamp auto range selection;
- 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 Euro set;
- Remote communication via Ethernet (GPS clock synchronization - optional).

APPLICATION

- Energy consumption optimization;
- 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

Measurements:

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

Electromagnetic compatibility (EMC):

- EN 61326

TECHNICAL SPECIFICATION

FUNCTION		
Voltage inputs		
Number of inputs	5	
Nominal voltage range (L - N)	Phase (L-N): 50 ... 1000 VRMS Line (L-L): 50 ... 1730 VRMS	
Measuring range	10% ... 150% of nominal voltage	
Accuracy	IEC 61000-4-30 Class S, $\pm 0.1\%$ of nominal voltage.	
Sampling rate	7 kSamples per sec @ 50/60 Hz, sync with mains freq. 1.7 kSamples per sec @ VFD (5 Hz - 110 Hz)	
Mains frequency range	12.2 kSamples per sec @ 400 Hz 42,5 ... 69,0 Hz ± 10 mHz 5 ... 110 Hz ± 10 mHz (VFD) 335,0 ... 465,0 Hz ± 100 mHz	
Current inputs		
Number of inputs	4	
Measuring range (with A 1227 / A 1502 flex clamps)	3 ... 6000 ARMS $\pm 1.5\%$ of m.v.	
Measuring range (with A1281 iron clamps)	50 m ... 1200 ARMS $\pm 0.5\%$ of m.v.	
Functions		
Power (P, Q, S)	Depends on voltage and selected clamps	IEC 61557-12 Class 1
Energy	Depends on voltage and selected clamps	Active: IEC 62053-21 Class 1 Reactive: IEC 62053-23 Class 2 IEC 61000-4-7 Class 1
Harmonics (DC ... 50th) @50/60 Hz	0 ... 20% of nom. voltage	
Harmonics (DC ... 20th) @VFD (5 - 16 Hz)		
Harmonics (DC ... 13th) @VFD (16 - 33 Hz)		
Harmonics (DC ... 5th) @VFD (33 - 110 Hz)		
Interharmonics (1 ... 50th) @ 50/60 Hz	0 ... 20% of nom. voltage	IEC 61000-4-7 Class 1
Interharmonics (1 ... 20th) @VFD (5 - 16 Hz)		
Interharmonics (1 ... 13th) @VFD (16 - 33 Hz)		
Interharmonics (1 ... 5th) @VFD (33 - 110 Hz)		
Flicker	0.2 ... 10	IEC 61000-4-15 Class F3
Mains signalling	0 ... 15% of nom. voltage	IEC 61000-4-30 Class S
Unbalance	Voltage: 0 ... 5% Current: 0 ... 20%	
Temperature	-10 ... 85 °C	± 0.5 °C
Dips, Swell	10 ... 150% of nom. voltage	± 0.2 % of nominal voltage ± 1 cycle
Interrupts	0 ... 10% of nom. voltage	± 1 cycle
Recorders		
Memory	8GB microSD, up to 32GB supported	
General recorder		
Integration period	1s ... 2h	
Recorded signals	> 1000 (voltages, currents, harmonics, power...) 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), Time interval	
General		
Display	4.3 inch color TFT (480 x 272)	
Communication	USB, Ethernet	
Time synchronisation	GPS receiver (A 1355)	
Power supply	110 ... 240 Vac or 6 x NiMH rechargeable batteries, size AA	
Overvoltage category	CAT IV / 600 V or CAT III / 1000 V	
Weight	0,96 kg	
Dimensions	230 x 140 x 80 mm	

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ORDERING INFORMATION



MI 2885 Advanced set (AD)

- Instrument Power Q4
- 1-phase flexible current clamps 3000 / 300 / 30 A (A 1502), 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
- Labels for color coding
- microSD memory card 8.0GB
- microSD card reader
- 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

MI 2885 Euro set (EU)

- With 1-phase flexible current clamps 3000 / 300 / 30 A (A 1227), 4pcs

MI 2885 Standard set (ST)

- Without flexible current clamps

OPTIONAL ACCESSORIES

Photo	Order No.	Acc. description
	A 1033	Current clamp 1000 A / 1 V
	A 1037	Current transformer 5 A / 1 V
	A 1561	Connection cable for current clamp (A 1069)
	A 1069	Mini current clamp 100 A / 1 V
	A 1588	Current clamp 0.5/5/50 A
	A 1281	Current clamp 1000/100/5 A / 1 V
	A 1503	1-phase mini flexible current clamp 6000/600/60 A / 1 V
	A 1458	microSD card reader
	A 1354	Temperature probe
	A 1355	GPS receiver
	S 2014	Safety fuse adapter, 3 pcs
	S 2015	Safety flat clamp, 4 pcs
	A 1391 PQA	AC/DC Current clamp 300/40 A / 1 V
	A 1622	WiFi / 3G modem
	S 2072	USB storage device (for backup of data)