

Metrel MI 2892

MI 2892 Power Master Power Quality Analyzer

Model: MI 2892 | Brand: Metrel



The Metrel MI 2892 Power Master Power Quality Analyzer, shown from the front, featuring its color display and control buttons.

1. INTRODUCTION AND OVERVIEW

The Metrel MI 2892 Power Master is a sophisticated hand-held three-phase power quality analyzer designed for comprehensive analysis of electrical installations. It features a large, easy-to-read graphical color display that allows users to quickly identify harmonics, phasors, and waveform anomalies.

This instrument is suitable for both long-term recording and troubleshooting power quality issues in three-phase and single-phase power distribution systems. Its user-friendly interface, including handy Quick Set buttons, facilitates faster data overview and efficient troubleshooting. The accompanying PC software, PowerView3, provides detailed analysis of recorded data, direct reading from the microSD memory card, and enables the creation of professional

test reports.

2. INCLUDED EQUIPMENT

The standard set of the MI 2892 Power Master includes the following components:

- Instrument Power Master unit
- Test probes (brown, black, grey, green, blue), 5 pieces
- Crocodile clips (brown, black, grey, green, blue), 5 pieces
- Voltage measurement leads (brown, black, grey, green, blue), 5 pieces
- Labels for color coding
- Temperature probe
- microSD memory card 8.0GB
- microSD card reader
- PC SW PowerView3 software
- RS232, USB, and Ethernet patch cables
- Power supply adapter
- 1.2 V NiMH rechargeable batteries, 6 pieces
- Professional protective waterproof carrying case
- Instruction manual (this document)
- Calibration certificate



The Metrel MI 2892 Power Master kit, showing the main unit, various test leads, probes, clips, power adapter, and accessories neatly organized within its protective carrying case.

3. KEY FEATURES AND CAPABILITIES

The MI 2892 Power Master offers a comprehensive set of features for detailed power quality analysis:

- **Voltage Measurement:** TRMS, peak, crest factor (4-channel).
- **Current Measurement:** TRMS, peak, crest factor (4-channel).
- **Power Analysis:** Active, reactive, apparent power measurements fully compliant with IEEE 1459 (active, non-active, fundamental, harmonic, load unbalance) and classic (vector or arithmetic) methods.
- **VFD (Variable Frequency Drives) Analysis:** Includes unbalance and flicker measurement.
- **Harmonic Analysis:** Harmonic and interharmonic analysis up to 50th harmonics, including THD

measurement.

- **Energy Measurement:** Active, reactive, generated, and consumed energy.
- **Event Recording:** Capturing and recording of power supply events such as shutdowns, interruptions, swells, and dips.
- **Inrush Current Monitoring:** Inrush currents monitoring and recording, with waveform/inrush displaying, snapshot, and recording capabilities.
- **Transient Recording:** Transients recording with a sampling frequency of 49 kSamples/sec.
- **Compliance:** Full compliance with power quality standard IEC 61000-4-30 Class A. Complete power quality analysis according to EN 50160, including signalling and interharmonics.
- **Memory:** Support for microSD memory card (8GB supplied) up to 32GB.
- **Input Channels:** 4-voltage channels with a wide measurement range (0 ... 1000 Vrms, CAT III / 1000 V) and 4-current channels with automatic clamp recognition and on-instrument range selection.
- **Smart Clamp Detection:** Automatic Smart Clamp detection and Smart Clamp range selection.

Class A Power Quality Analyser MI 2892 Power Master

Power Quality Analyser



The MI 2892 Power Master 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-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) and classic (vector or arithmetic) method;
- 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;
- Transients recording;
- Power quality analysis according to EN 50160, IEEE 519;
- Recording up to 7 adjustable alarms;
- Temperature measurement;
- Power factor, $\text{tg } \phi$.

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 49 kSamples/sec;
- 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;
- 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 and Advanced 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 A;
- IEC/EN 61557-12;
- IEC/EN 61000-4-7, Class I;
- IEC/EN 61000-4-15;
- EN 50160;
- IEEE 1448;
- IEEE 1459;
- IEEE 519

Electromagnetic compatibility (EMC):

- EN 61326

www.metrel.si



A technical overview sheet for the Metrel MI 2892 Power Master, highlighting its key measuring functions, features, applications, and compliance standards.

4. SETUP

Before operating the MI 2892 Power Master, ensure proper setup:

1. **Battery Installation:** Insert the six 1.2 V NiMH rechargeable batteries into the designated compartment. Ensure correct polarity.
2. **Power Connection:** Connect the power supply adapter to the instrument and a suitable power outlet to charge the batteries or power the device directly.
3. **Memory Card:** Insert the supplied 8GB microSD memory card into the card slot. This card is essential for data logging and recording.
4. **Probe and Lead Connection:** Connect the voltage measurement leads, test probes, and crocodile clips to the appropriate input terminals on the MI 2892. Use the provided color-coding labels to ensure correct phase connections (brown, black, grey, green, blue).
5. **Current Clamp Connection (Optional):** If using current clamps (not included in standard set, but supported), connect them to the current input channels. The instrument supports automatic clamp recognition.
6. **Initial Power On:** Press the power button to turn on the instrument. The display will show the startup screen.

Always refer to the detailed diagrams in the full instruction manual for specific connection points and safety guidelines.

5. OPERATION

Operating the MI 2892 Power Master involves navigating its user interface and utilizing its measurement capabilities:

- **Display Navigation:** Use the directional buttons and the ENTER button to navigate through menus and select options on the color display.
- **Quick Set Buttons:** Utilize the dedicated Quick Set buttons (F1, F2, F3, F4) for rapid access to frequently used functions and data overviews.
- **Measurement Modes:** Select the desired measurement mode (e.g., Voltage, Current, Power, Harmonics, Flicker) from the main menu.
- **Connecting to System:** Carefully connect the probes and leads to the electrical system under test, ensuring all safety precautions are followed.
- **Data Recording:** Initiate long-term recordings or event capturing as required. The instrument will store data on the microSD card.
- **Real-time Monitoring:** Observe real-time measurements, waveforms, and phasor diagrams on the display.
- **Data Transfer:** After measurements, transfer recorded data to a PC using the supplied USB, RS232, or Ethernet cables for detailed analysis with PowerView3 software.

For detailed instructions on specific measurement setups and advanced functions, consult the comprehensive user manual.

6. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your MI 2892 Power Master:

- **Cleaning:** Clean the instrument's casing and display with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure all ports are free of dust and debris.
- **Battery Care:** Regularly charge the NiMH rechargeable batteries. If the instrument will not be used for an extended period, remove the batteries to prevent leakage. Replace batteries when their performance degrades.
- **Storage:** Store the instrument and its accessories in the professional protective waterproof carrying case when not in use. Store in a dry environment, away from extreme temperatures and direct sunlight.

- **Calibration:** The instrument comes with a calibration certificate. Regular recalibration by an authorized service center is recommended to maintain measurement accuracy, typically annually or as per your quality system requirements.
- **Firmware Updates:** Check the Metrel website periodically for firmware updates for the MI 2892 and PowerView3 software. Keeping the software updated ensures optimal performance and access to new features.

7. TROUBLESHOOTING

This section addresses common issues you might encounter:

- **Instrument Does Not Power On:**

- Check if batteries are properly inserted and charged.
- Ensure the power supply adapter is correctly connected and providing power.
- Verify the power button is fully pressed.

- **No Measurement Readings:**

- Ensure test leads and probes are securely connected to both the instrument and the circuit under test.
- Verify that the correct measurement mode is selected.
- Check for damaged leads or probes.

- **Data Not Saving to SD Card:**

- Ensure the microSD card is properly inserted.
- Check if the card is full; if so, transfer data and clear space or use a new card.
- Verify the card is not write-protected.
- Try reformatting the card (this will erase all data).

- **Software Connection Issues (PowerView3):**

- Ensure the correct communication cable (USB, RS232, Ethernet) is connected between the instrument and the PC.
- Verify that the correct communication port is selected in the PowerView3 software.
- Check if instrument drivers are correctly installed on the PC.
- Disable any firewalls or antivirus software that might block the connection temporarily for testing.

If issues persist, refer to the detailed troubleshooting section in the full instruction manual or contact Metrel technical support.

8. SPECIFICATIONS

Key technical specifications for the Metrel MI 2892 Power Master:

Parameter	Value
Voltage Measurement Range	0 ... 1000 Vrms (CAT III / 1000 V)
Current Channels	4 channels with automatic clamp recognition
Sampling Frequency (Transients)	49 kSamples/sec

Parameter	Value
Harmonic Analysis	Up to 50th harmonics, THD measurement
Memory	microSD card (8GB supplied, supports up to 32GB)
Display	Large graphical color display
Compliance	IEC 61000-4-30 Class A, EN 50160
Power Supply	1.2 V NiMH rechargeable batteries (6 pcs), AC adapter
Dimensions	Approx. 230 x 140 x 80 mm (based on typical handheld PQA size)
Weight	Approx. 1.0 kg (based on typical handheld PQA weight)

TECHNICAL SPECIFICATION

FUNCTION

Voltage inputs			AC+DC
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 A, $\pm 0.1\%$ 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) 12.2 kSamples per sec @ 400 Hz
Mains frequency range			42,5 ... 69,0 Hz ± 10 mHz 5 ... 110 Hz ± 10 mHz (VFD) 335,0 ... 465,0 Hz ± 100 mHz
Current inputs			AC+DC
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	Measuring range	Accuracy	
Power (P, Q, S, cos ϕ , PF...)	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	
Harmonics (DC ... 50th) @ 50/60 Hz	0 ... 20% of nom. voltage	IEC 61000-4-7 Class 1	
Harmonics (DC ... 13th) @ 400 Hz			
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 A	
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)		
Transient recorder			
Sampling rate	> 49k samples/sec		
Duration	Up to 50 cycles of voltage and current waveform		
Trigger	Manual, voltage envelope or level		
General			
Display	4.3 inch colour TFT (480 x 272)		
Communication	USB, Ethernet, RS-232		
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 ¹		
Weight	0,96 kg		
Dimensions	230 x 140 x 80 mm		

A detailed technical specifications sheet for the Metrel MI 2892 Power Master, outlining various measurement functions, input ranges, recorder capabilities, and general device characteristics.

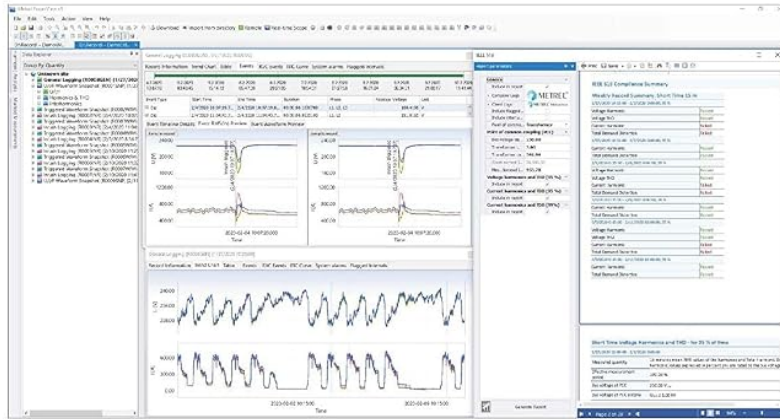
9. PC SOFTWARE: POWERVIEW3

The PowerView3 PC software is an integral part of the MI 2892 Power Master system, providing powerful tools for data analysis and report generation.

- **Data Download:** Facilitates easy download of recorded data from the MI 2892 to your computer.
- **Detailed Analysis:** Offers advanced analytical capabilities for recorded power quality data, including graphical representations of waveforms, trends, harmonics, and events.
- **Report Generation:** Enables automatic creation of professional test reports based on the analyzed data, compliant with various standards.
- **Direct Reading:** Supports direct reading of data from the microSD memory card.
- **Long-term Records:** Optimized for analysis of extensive long-term recordings.
- **User Interface:** Features a user-friendly interface with quick buttons and customizable views.
- **Data Management:** Allows for organized data management, including filtering and grouping of data by quantity or phase.

PC SOFTWARE POWERVIEW 3

PC Software PowerView 3 software is a powerful platform for downloading, analysing recorded data and creation of power quality test reports. PC Software contains a package of functionalities needed for profound evaluation of power quality phenomena, data comparison and creation of complex test reports. It works in conjunction with Metrel new generation power quality analysers. For the instruments equipped with GPRS functionality PowerView3 enables remote control and data download.



KEY FEATURES

- User friendly interface: wide range of quick buttons, possibility to customize the environment by dragging, docking and resizing the window tabs.
- Structure: downloaded data is organized into Windows Explorer-like tree structure.
- "Drag and drop": downloaded data can be easily organized into multiple sites and sub-site locations.
- Data filtering: data in a structure can be grouped by quantity or by phase.
- Views: depending on selected record type, different views are available (Record Information view, Trend Chart view, Table view, Waveform Scope view, Voltage Quality view, etc.)
- EN 50160 analysis: automatic voltage quality analysis in compliance with custom or predefined EN 50160 Power Quality criteria and quick report printing.
- Chart zoom: chart can be zoomed depending on selected in a table value range.
- Remote control: via GPRS communication remote handling of the instrument and its data can be executed.
- GPS synchronization: simultaneous measurement on the different network points by using 2 or more synchronized instruments.
- On-line monitoring: real-time observing of signals and parameters is possible via PowerView3 while instrument is measuring / recording in the background.
- Export of test results: test results can be filtered and exported to other programs (MS Excel, MS Word, CSV, TXT).
- Reports: automatic generation of test reports from the selected views and data with attached graphs according specific standards/national specification, like: IEEE 519, GOST 32144/33073, Energy report, Energy demand report Codigo de RED
- SW and FW update: PowerView3 checks for new versions of the application and downloads updates from the Internet if necessary.

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

ORDERING INFORMATION



MI 2892 Advanced set (AD)

- Instrument Power Master
- A 1502 1-phase flexible current clamps 3000 / 300 / 30 A, 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 colour coding
- Temperature probe
- microSD memory card 8.0GB
- microSD card reader
- PC 5W PowerView3
- RS232, USB and Ethernet patch cable
- Power supply adapter
- 1.2 V NiMH rechargeable battery, 6 pcs
- Professional protective waterproof case (A 1685)
- Instruction manual
- Calibration certificate



MI 2892 Euro set (EU)

- A 1227 1-phase flexible current clamps 3000 / 300 / 30 A, 4pcs (instead of A 1502 flexible current clamps)



MI 2892 Standard set (ST)

- Without flexible current clamps



An image displaying the user interface of the Metrel PowerView3 PC software, showing various data analysis graphs and options, alongside ordering information for different MI 2892 sets.

10. WARRANTY AND SUPPORT

The Metrel MI 2892 Power Master comes with a **2-year (24-month) warranty** from the manufacturer, covering defects in materials and workmanship under normal use.

For technical support, service, or warranty claims, please contact Metrel customer service or an authorized Metrel distributor. Ensure you have your instrument's serial number and proof of purchase available when contacting support.

For the most up-to-date contact information and support resources, please visit the official Metrel website.

Note: Warranty terms and conditions may vary by region. Always refer to the official warranty statement provided with your product.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question