

## POWER QUALITY ANALYSIS

### MI 2892 Power Master

Regardless of the definition used, power quality is a major strategic issue in the open electricity market economy. There are several reasons to encourage a systematic and constant approach to the monitoring of the power quality parameters, these include:

- Easy identification and elimination of problems on the utilities or customer's installation.
- Preventative maintenance by the early location of potential sources of disturbances or failures.
- Optimization of the power network based on Power Quality parameters.



#### 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, nonactive, 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 10 adjustable alarms;
- Temperature measurement.

#### 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;
- 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 (4-GB supplied with the instrument) up to 32GB;

#### STANDARD SET:

- Instrument Power Master
- 1-phase flexible current clamps 3000 / 300 / 30 A (A 1227), 4 pcs
- Test probe, red, 2 pcs
- Test probe (CAT III), red, 3 pcs
- Test probe (CAT III), black
- Crocodile clip, black
- Crocodile clip, green
- Crocodile clip, red, 3 pcs
- Voltage measurement lead, red, 3 pcs
- Voltage measurement lead, black
- Voltage measurement lead, green
- Temperature probe
- PC SW PowerView3
- RS232 and USB cables
- Power supply adapter
- 1.2 V NiMH rechargeable battery, 6 pcs
- Soft carrying bag
- Instruction manual
- Calibration certificate



- Color-coded input terminals and terminal labels to suit your application region;
- Intuitive main menu and large icons that make 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.

#### STANDARDS:

##### Functionality:

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.

##### Electromagnetic compatibility:

EN 61326

##### Safety:

EN 61010-1

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## APPLICATIONS AND SOLUTIONS FOR TESTING AND ANALYSIS OF:

- Power Quality Standards compliance
- Load, and energy i.e. consumption profile
- Phase values of voltage, current, frequency
- Voltage and current harmonics, interharmonics and total harmonics distortion (THD)
- Power measurement fully compliant with IEEE 1459
- Voltage events (dips, interruptions, swells)
- Voltage transients (transient recorder)
- Start-up currents (waveform/inrush recorder)
- Mains signaling
- Flicker severity (Plt, Pst)
- Voltage and current unbalance

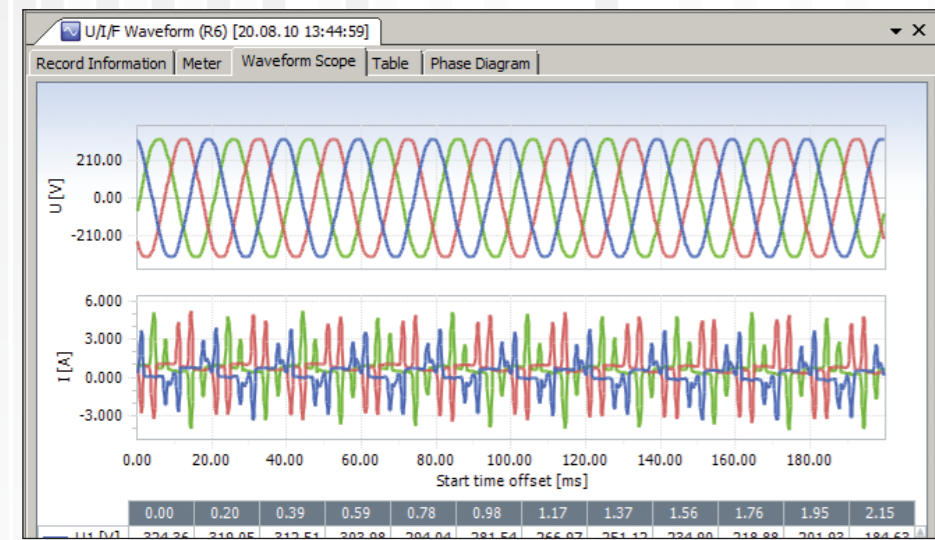
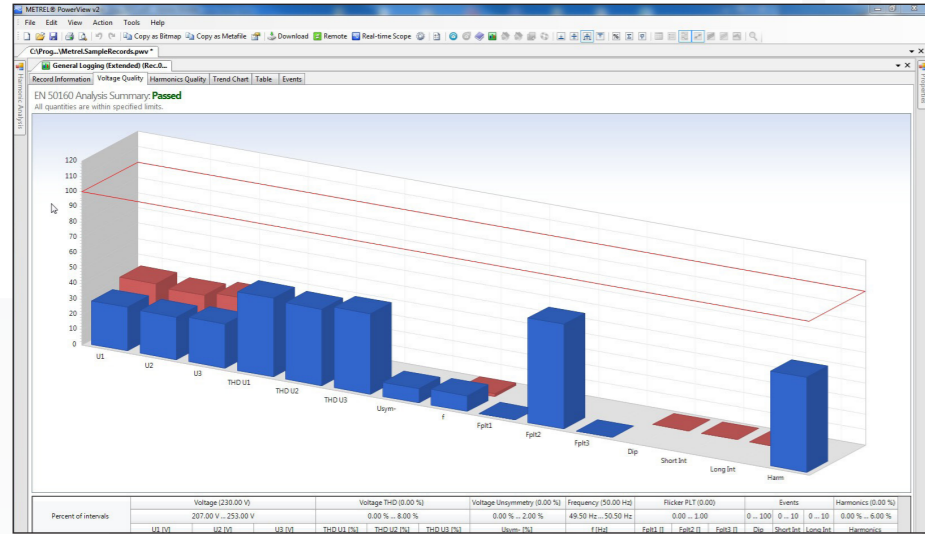
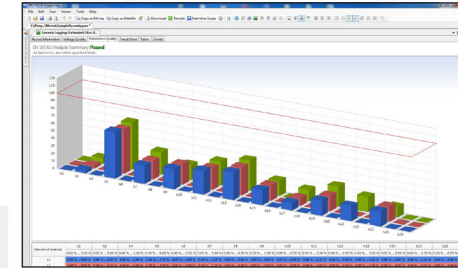


Note! Photographs in this catalogue may slightly differ from the instruments at the time of delivery.  
Subject to technical change without notice.

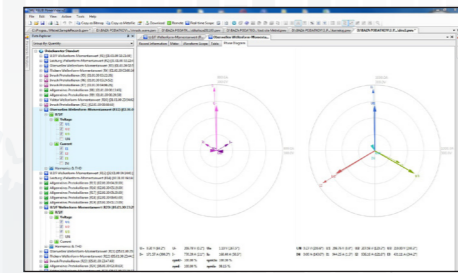
SOLUTIONS FOR TESTING \_April\_2013\_Ang

## PC SW POWER VIEW 3 MI 2892 Power Master

Logged data can be analysed according to custom or predefined EN 50160 Power Quality criteria

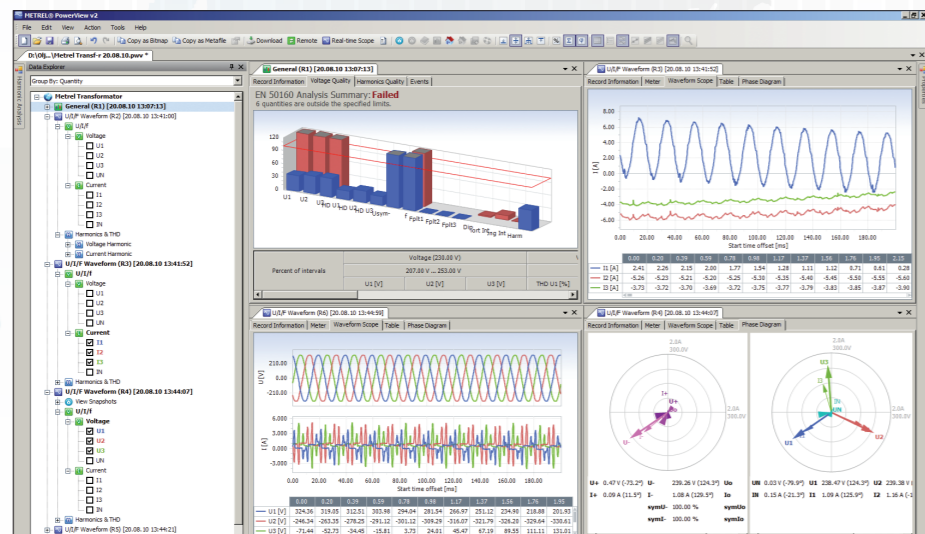


Results can be represented in both trend and table view simultaneously for easier analysis



Selected data can be organized into multiple tabs for easier interpretation

Symbol	Name	L1	L2	L3	LN	Total	Unit
U	Voltage	236.20	236.25	240.00	0.0031	---	V
I	Current	3.6726	5.2338	3.4217	2.6520	---	A
f	Frequency	50.010	---	---	---	---	Hz
THD U	Voltage THD	1.4001	1.8151	1.5778	22.031	---	%
THD I	Current THD	3.3346	4.3418	3.7876	0.0167	---	%
THD I	Current THD	6.3930	60.240	61.282	5.8756	---	%
P	Active Power	0.1697	0.1193	0.0791	0.1553	---	W
Q	Reactive Power	632.25	-43.60	25.395	---	614.04	VAR



## POWER MASTER FEATURES MI 2892 Power Master

The NEW 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.

**APPLICATION:**

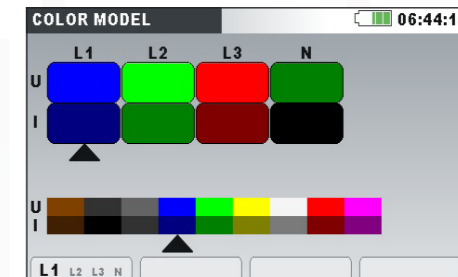
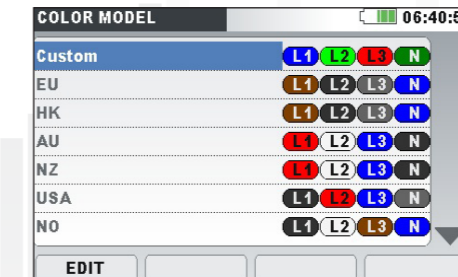
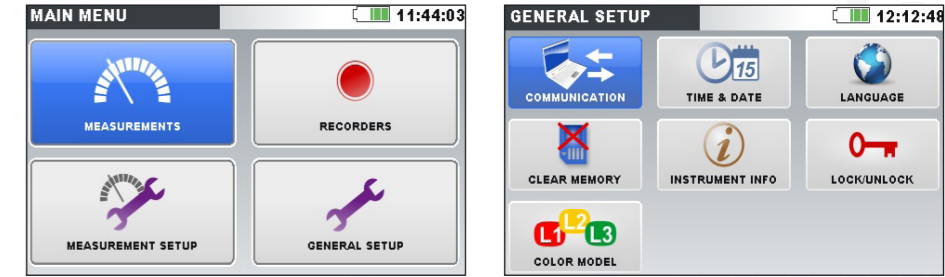
- Power quality assessment and troubleshooting in low and middle voltage electrical systems;
- Checking power correction equipment performance;
- Long-term analysis;
- Predictive maintenance;
- Verification of electrical system capacity before adding loads.



## INSTRUMENTS MENUES MI 2892 Power Master

**INTUITIVE MENU**

Intuitive main menu and large icons that makes the equipment very easy to navigate and configure.

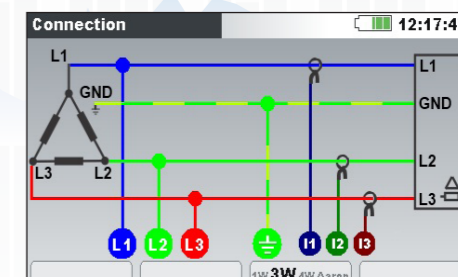
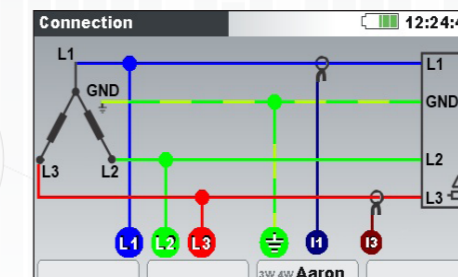
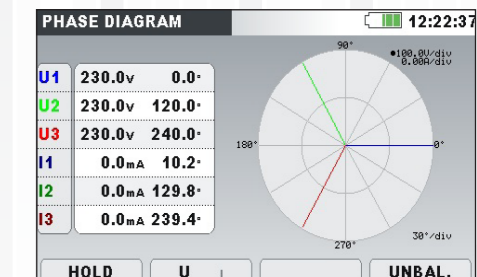
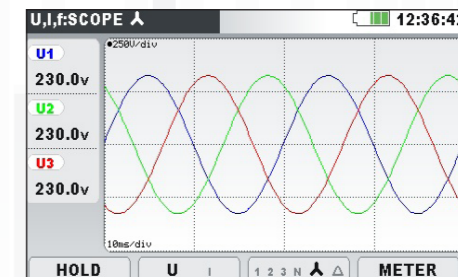


**COLOUR CODING**

Select from several preprogrammed and custom colour coding models.

**MEASURING MENUS**

Colour display enables fast and detailed view of phasors and waveforms anomalies.



**CONNECTION DIAGRAMS**

User can toggle between different connection diagrams.

**MULTIPLE RECORDERS FOR BETTER MANIPULATION**

GENERAL / EN 50160 RECORDER - Voltage Characteristics in Public Distribution Systems.

WAVEFORM/INRUSH RECORDER - Waveform recorder for troubleshooting and capturing current and voltage waveforms and recording inrush currents of motors.

TRANSIENTS RECORDER - For recording of short, highly damped momentary voltage or current disturbance.

