

MI 2392 PowerQ *Plus*



Advanced,
handheld, easy
to use, 3-phase
power quality
analyser



PowerQ *Plus* is a genuine, portable 3-phase power quality analyser which favorably competes with higher priced instruments and can be easily implemented in a variety of different situations.

PowerQ *Plus* is due to its small dimensions and ease of use ideally suited for routine or complex power quality assesment in heavy duty industrial environments.

Pre-set logging screens allow on-site evaluation of all major power quality parameters (U,I, P, PF, $\cos \phi$, THD, individual harmonic components, phase shift, etc.).

Windows compatible **PowerView** PC Software expands a versatility of the instrument.

Target applications

- Power quality assessment and troubleshooting in low and middle voltage electrical systems
- Balancing phase loads in 3-phase systems
- Checking power correction equipment performance
- Harmonics spectrum analysis for selection of harmonic filters
- Capturing inrush currents e.g. motor s start up currents
- Voltage fluctuation recording
- Consumption recording

Main features

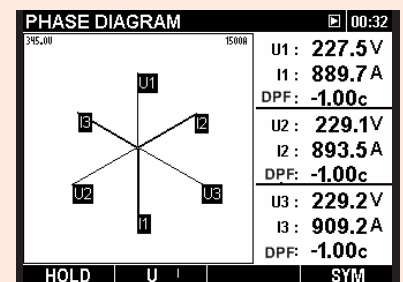
- Simultaneous measurement and recording of basic power quality parameters (U, I, P, Q, S, PF)
- Harmonics analysis up to 50th component
- Phase diagram
- Voltage unbalance calculation for 3-phase systems
- On-line scope function
- Windows compatible software package PowerView
- EN 50160 power quality assessment
- Recording of anomalies and inrush currents via adjustable triggers
- Lightweight design

Standards:

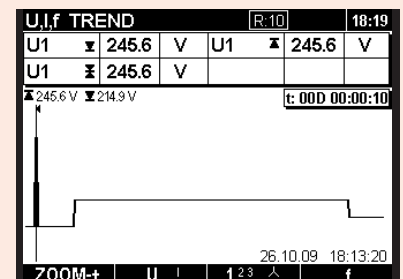
Safety: IEC/EN 61010-1

EMC: IEC/EN 61326-1

Measurements: EN 50160 and EN 61000-4-30, Class B



Phase diagram helps at connecting the instrument on the power network and is effectively used at individual phase conditions assesment.



PowerQ *Plus* enables on-screen evaluation of various pre-set loggers. This is an example of logger for U, I, f.

Technical specification

Function

AC Voltage inputs

Number of inputs	3
Input voltage range	3.0 ... 550.0 Vrms L - N (952.0 Vrms L - L)
Basic accuracy	± (1 % of reading + 0.5 V)
Resolution	0.1 V
Sampling rate	1024 samples per 10 periods

AC Current inputs

Number of inputs	3
Input voltage range	0.04 ... 1 Vrms
Current measuring range	4 ... 100 A and 40 ... 1000 A (with current clamp A 1033)
Resolution	0.1 A
Basic accuracy	± (2 % of reading + 0.3 A)
Sampling rate	1024 samples per 10 periods

Function	Measuring range	Resolution	Accuracy
Frequency	45.00 ... 66.00 Hz	10 mHz	± (0.5 % of reading + 0.02 Hz)
	0.000 ... 0.999 k	1	
	0.00 ... 9.99 k	10	
	0.0 ... 999.9 k	100	
	0.000 ... 9.999 M	1 k	
Power (W, VA, VAR)	0.00 ... 99.99 M	10 k	± (3 % of reading + 3 digits)
	0.0 ... 999.9 M	100 k	
	0.000 ... 9.999 G	1 M	
	0.00 ... 40.00 G	10 M	
Power factor, cos φ	0.00 ... 0.39	0.01	± 0.06
	0.40 ... 1.00	0.01	± 0.03
Harmonics analysis up to 50 th component	$U_M > 3\% U_N$ ($I_M > 3\% I_N$)	0.1 %	5 % U_M (I_M) (3 % for DC)
	$U_M < 3\% U_N$ ($I_M < 3\% I_N$)	0.1 %	0.15 % U_N (I_N)

Recording

Integration period (IP)	1 ... 3600 s
Maximum number of signals	500
COM port	RS232 and USB
Display	Graphic LCD with backlight, 320 x 200 dots
Memory module	8 MB Flash
Voltage supply	230 V _{AC} or 6 x 1.2 V NiMH rechargeable batteries, type AA
Overtoltage category	CAT IV / 600 V
Protection class	Double insulation
Dimensions	220 x 115 x 90 mm
Weight	0.65 kg

Ordering information:

Standard set

Part No. MI 2392



- Instrument PowerQ^{Plus}
- Current clamp 1000 A/1 V, 3 pcs
- Test tips, 3 pcs
- Alligator clips, 4 pcs
- Voltage measurement cables, 4 pcs
- PowerView PC SW package with RS232 and USB cable
- Power supply adapter
- Rechargeable batteries, 6 pcs
- Soft carrying bag
- User manual
- Handbook "Modern Power Quality Measurement Techniques" on CD
- Product verification data

Standard set

Part No. MI 2392F



Similar content as MI 2392:
Current clamp 1000 A/1 V, 3 pcs replaced by
1-phase flexible current clamps 3000/300/30 A, 3 pcs

Option 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	Clamp adapter (for A 1069 and A 1122)
	A 1069	Mini clamp 100 A/1 V to be used with A 1039
	A 1122	Mini clamp 5 A/1 V to be used with A 1039
	A 1171	USB/RS232 converter with 1 m fixed cable
	A 1179	3-phase flexible current clamps 2000/200/20 A
	A 1227	1-phase flexible current clamp 3000/300/30 A
	A 1257	3-phase flexible current clamps 3000/300/30 A
	S 2014	Safety fuse adapter
	S 2015	Safety flat clamps



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