

## Analyze the quality of power with the PQM-707 power quality analyzer

### Product features

- 7" touchscreen - ergonomic and intuitive graphical user interface
- CAT IV 600 V measurement category - high safety
- all parameters according to class S - high accuracy of measurements
- Li-Ion rechargeable battery - higher mobility
- removable memory card - recording data with no restrictions
- quick setup and reporting - ease of use
- cooperation with desktop Sonel Analysis software - extended data analysis

### Measured parameters

- voltages L1, L2, L3, N-PE (five measurement inputs) – MAX, MIN, AVG up to 760 V, direct or via transducers
- currents L1, L2, L3, N (four measurement inputs) - MAX, MIN, AVG up to 3 kA (range dependent on the clamp type)
- crest factors for current CFI and voltage CFU
- frequency within the range of 40 Hz – 70 Hz
- active P, reactive Q, distortion D and apparent S power with the type of reactive power (capacitive and inductive)
- active  $E_p$ , reactive  $E_q$  and apparent  $E_s$  energy
- power factor PF,  $\cos\varphi$ ,  $\tan\varphi$
- harmonics up to the 50th order of voltage and current
- event logging for current and voltage along with oscillograms and half-period RMS charts
- ...and many more
- **all parameters are recorded in compliance with class S according to IEC 61000-4-30 standard**



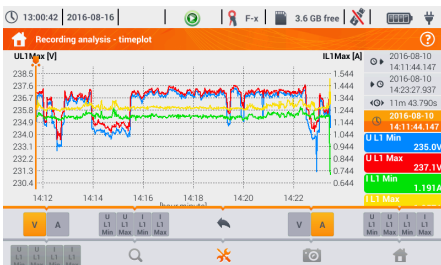
## Application

The analyzer is directed to a very wide range of users, with particular reference to the maintenance staff. Due to its mobility and autonomy, any problems occurring in the supply networks can be diagnosed on the spot. The analyzer can be used in virtually all kinds of networks with rated voltage from 54 V to 760 V directly, or indirectly via transformers. PQM-707 can be used in the field of professional power engineering, maintenance services in industrial plants, as well as among those providing services focused on network analysis.



## Device capabilities

The analyzer is an autonomous meter allowing versatile measurement, analysis, and registration of energy network (DC and 50/60 Hz) parameters. All parameters are measured I/A/W class S of the IEC 61000-4-30 standard guaranteeing high accuracy of measurements. The largest in this class of analyzers 7-inch colour touchscreen enables intuitive and ergonomic operation. Thanks to the built-in lithium-ion battery, the analyzer allows for efficient work during the measurement without the necessity of connecting an external AC adapter.



## Easy readout

The PQM-707 power quality analyzer is equipped with a readable colour touchscreen that, due to its 800x480 pixel resolution, providing both high comfort of interacting with the interface and high readability of the measurement results.



## Durable and practical casing

The casing of PQM-707 has been designed to allow easy access to the touchscreen and all measurement and communication sockets. Ingress protection class IP51 ensures shielding against dust and splashed water for comfortable use in indoor and controlled outdoor conditions. Folding lid on the casing allows quick access to the meter and screen protection while not in use.



## Wide range of mains to analyze

- DC and AC with rated frequency 50/60 Hz
- with rated voltages: 64/110 V, 110/190 V, 115/200 V, 127/220 V, 220/380 V, 230/400 V, 240/415V, 254/440 V, 290/500 V, 400/690 V
- with direct current
- single-phase
- two-phase with neutral conductor
- three-phase - Wye-Star configuration with and without neutral conductor
- three-phase - delta configuration

# Parameters of analyzer

Parameter		Measurement range	Maximum resolution	Accuracy
alternating voltage (TRMS)	—	0.0...760.0 V	0.01% $U_{nom}$	$\pm 0.5\% U_{nom}$
crest factor	voltage	1.00...10.00 ( $\leq 1.65$ for 690 V)	0.01	$\pm 5\%$
	current	1.00...10.00 ( $\leq 3.6 I_{nom}$ )	0.01	$\pm 5\%$ m.v.
alternating current (TRMS)	—	depending on the clamp *	0.01% $I_{nom}$	$\pm 2\%$ m.v. for m.v. $\geq 10\% I_{nom}$ $\pm 2\% I_{nom}$ for m.v. $< 10\% I_{nom}$ (error does not account for clamps error)
frequency	—	40.00...70.00 Hz	0.01 Hz	$\pm 0.05$ Hz
active, reactive, apparent and distortion power	—	depending on configuration (instrument transformers, clamp)	up to four places after the decimal point	depending on configuration (instrument transformers, clamp)
active, reactive, apparent energy	—	depending of configuration (instrument transformers, clamp)	up to four places after the decimal point	as power error
cos $\phi$ and power factor (PF)	—	0.00...1.00	0.01	$\pm 0.03$
tg $\phi$	—	0.00...10.00	0.01	depends on error of active and reactive power
harmonics	voltage	as for alternating voltage True RMS	as for alternating voltage True RMS	$\pm 5\%$ m.v. for m.v. $\geq 3\% U_{nom}$ $\pm 0.15\% U_{nom}$ for m.v. $< 3\% U_{nom}$
	current	as for alternating current True RMS	as for alternating current True RMS	$\pm 5\%$ m.v. for m.v. $\geq 10\% I_{nom}$ $\pm 0.5\% I_{nom}$ for m.v. $< 10\% I_{nom}$
THD	voltage	0.0...100.0% (relative to the RMS value)	0.1%	$\pm 5\%$
	current			$\pm 5\%$
flicker index	—	0.40...10.00	0.01	$\pm 10\%$
assymetry factor	voltage and current	0.0...10.0%	0.1%	$\pm 0.15\%$ (absolute error)
inrush current	current	depending on clamp *	0.01% $I_{nom}$	$\pm 4\%$ m.v. for m.v. $\geq 10\% I_{nom}$ $\pm 4\% I_{nom}$ for m.v. $< 10\% I_{nom}$ (RMS <sub>1/2</sub> )

\* Available clamps:



**F-1A flexible clamp**  
( $\varnothing$  360 mm)  
0...3 kA AC  
(10 kA<sub>p-p</sub>)  
WACEGF1AOKR



**F-2A flexible clamp**  
( $\varnothing$  235 mm)  
0...3 kA AC  
(10 kA<sub>p-p</sub>)  
WACEGF2AOKR



**F-3A flexible clamp**  
( $\varnothing$  120 mm)  
0...3 kA AC  
(10 kA<sub>p-p</sub>)  
WACEGF3AOKR



**C-4A clamp**  
0...1 kA AC  
(3.6 kA<sub>p-p</sub>)  
WACEGC4AOKR



**C-5A clamp**  
0...1 kA AC/DC  
(3.6 kA<sub>p-p</sub>)  
WACEGC5AOKR



**C-6A clamp**  
0...10 A AC  
(36 A<sub>p-p</sub>)  
WACEGC6AOKR



**C-7A clamp**  
0...100 A AC  
(360 A<sub>p-p</sub>)  
WACEGC7AOKR

Abbreviation „m.v.“ used in the specification of measurement means a measured value.

## Standard accessories



**3x black "crocodile" clip 1 kV 20 A**

WAKROBL20K01



**2x red "crocodile" clip 1 kV 20 A**

WAKRORE20K02



**blue "crocodile" clip 1 kV 20 A**

WAKROBU20K02



**yellow "crocodile" clip 1 kV 20 A**

WAKROYE20K02



**4x F-3A flexible clamp (Ø 120mm)**

WACEGF3AOKR



**test lead with banana plugs; 1 kV; 2.2 m; blue**

WAPRZ2X2BUBB



**test lead with banana plugs; 1 kV; 2.2 m; yellow-green**

WAPRZ2X2YEBB



**AZ-2 power adapter (IEC C7 plug / banana plugs)**

WAADAAZ2



**3x test lead with banana plugs; 1 kV; 2.2 m; black**

WAPRZ2X2BLBB



**magnetic adapter (set of 4 pcs.)**

WAADAUMAGKPL



**AC-16 phase splitter adapter**

WAADAAC16



**USB data transmission cable**

WAPRZUSB



**230 V power cord (IEC C7 plug)**

WAPRZLAD230



**Battery charging cable for 12 V car sockets**

WAPRZLAD12SAM



**Sonel Analysis 4 Software for PQM series**

WAPROANALIZA4



**L-4 carrying case**

WAFUTL4



**meter strap (type L-2)**

WAPOZSZEKPL



**Li-Ion rechargeable battery 11.1 V 3.4 Ah**

WAAKU15

## Additional accessories



**F-1A flexible clamp**  
(Ø 360 mm)  
0...3 kA AC  
(10 kA<sub>p-p</sub>)  
WACEGF1AOKR



**F-2A flexible clamp**  
(Ø 235 mm)  
0...3 kA AC  
(10 kA<sub>p-p</sub>)  
WACEGF2AOKR



**C-4A clamp**  
0...1 kA AC  
(3.6 kA<sub>p-p</sub>)  
WACEGC4AOKR



**C-5A clamp**  
0...1 kA AC/DC  
(3.6 kA<sub>p-p</sub>)  
WACEGC5AOKR



**C-6A clamp**  
0...10 A AC  
(36 A<sub>p-p</sub>)  
WACEGC6AOKR



**C-7A clamp**  
0...100 A AC  
(360 A<sub>p-p</sub>)  
WACEGC7AOKR



**magnetic voltage adapter, blue**  
WAADAUMAGKBU



**magnetic voltage adapter, black**  
WAADAUMAGKBL



**voltage adapter with M4/M6 thread (5 pcs.)**  
WAADAM4M6



**pin probe, blue 1 kV (banana socket)**  
WASONBU0GB1



**pin probe, black 1 kV (banana socket)**  
WASONBLOGB1



**pin probe, red 1 kV (banana socket)**  
WASONRE0GB1



**AGT-16T industrial socket adapter 16 A**  
WAADAAGT16T



**AGT-32T industrial socket adapter 32 A**  
WAADAAGT32T



**pin probe, yellow 1 kV (banana socket)**  
WASONYE0GB1



**AGT-16C three-phase socket adapter 16 A (PEN)**  
WAADAAGT16C



**AGT-32C three-phase socket adapter 32 A (PEN)**  
WAADAAGT32C



**L2 carrying case for clamps**  
WAWALL2



**AGT-16P three-phase socket adapter 16 A**  
WAADAAGT16P



**AGT-32P three-phase socket adapter 32 A**  
WAADAAGT32P



**AGT-63P three-phase socket adapter 63 A**  
WAADAAGT63P