PQA-Portable

CLASS A PORTABLE POWER QUALITY ANALYZER

Power Quality acc. to
IEC 61000-4-30 ed.3

√ Modern Control
√ Touchscreen
√ Large Data Storage
√ Battery
√ GPS

√ Harmonic Analysis up to 9 kHz
√ Power and Energy
√ Disturbances
√ Waveform Capture
√ Symmetrical Components

The **PQA-Portable** calculates the power quality parameters according to **EN50160**, meeting evaluation requirements according to the **IEC 61000-4-30 ed. 3** class A standard and others.

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→ Functionality

The firmware calculates power quality parameters according EN50160 and fully follows the requirements described in IEC 61000-4-30 ed. 3 Class A and others (61000-4-7, 61000-4-15).

Main measurement functions:

√ U, I, P, Q, S, frequency, THD U, THD I, power factor, energies – AP, AQ, AS, APin, APout; all quantities are per phase and total

√ Harmonics – U, I, P, Q up to 50th harmonic; U and I also as 200Hz spectra (0-9 kHz)

√ Symmetrical components - three-phase system decomposition into a positive, negative, and zero component

√ All quantitates are calculated on 200 ms (10/12 period basis) according to IEC 61000-4-30 ed. 3

√ Voltage quality according to EN50160, IEC 61000-4-30 ed. 3 Class A (U, freq., THD U, flicker, unbalance, harmonics)

√ Voltage events according EN50160, IEC 61000-4-30 ed. 3 Class A (dip, swell, interruption – time, extrema, length)

√ Waveform capture (transients) – in case of trigger, the device captures the waveform
  - Trigger can be activated by selected quantities (U, I, P, Q, S, freq., PF) crossing specified limits
  - Waveform means raw voltage/current signal with sampling rate at 9,6 k/19,2 k per second, waveform length is up to 60 periods, with pre-trigger up to 1.2 second

√ Disturbances – in case of trigger, the device captures the half-period RMS quantities
  - Trigger can be activated by selected quantities (U, I, P, Q, S, freq., PF) crossing specified limits
  - Capture contains half-period quantities of voltage, current, frequency, power etc. (sampling rate is 100/120 samples per second), capture length is up to 15 minutes, with pre-trigger up to 30 seconds

→ Technical Parameters

VOLTAGE INPUT

CHANNELS	4
INPUT RANGE	500 V (Measuring up to 1000 V)
ACCURACY	0.05 %
ISOLATION VOLTAGE	6 kV
IMPEDANCE	10 MOhm

CURRENT INPUT

CHANNELS	4
CURRENT CLAMPS	Clamps, Rogowski Coils
INPUT RANGE	Acc. to the sensors, typical 5 A for clamps, 3000 A for Rogowski Coils
ACCURACY	Clamps 0.1 %, Rogowski Coils 0.5 %

HARDWARE

DISPLAY	7", touchscreen
DATA STORAGE	256 GB
INTERFACES	USB, Ethernet, Wi-Fi
A/D CONVERSION	Sigma-delta
TRANSIENT SAMPLING RATE	48 kSa/s
POWER SUPPLY	100 VAC - 240 VAC
BATTERY	2 hours
CLASS	CATIV 600 V

OTHERS

OPTIONAL INTERFACES	GPS