



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

- ✓ 5 Year Warranty
- ✓ Power and Energy
- ✓ Symmetrical Components
- ✓ Harmonic Analysis
- ✓ Disturbances
- ✓ Waveform Capture

ENA470

Power Quality Analyzer
Phasor Measurement Unit
Digital Fault Recorder

ENA470

Power Quality measurement is the basic function of the device. Main features are – FFT analysis, evaluation of power quality according to EN50160, evaluation of power and energy flow, capturing of fast (transient) and slow (disturbance) events, providing of lot of real-time data and many more. All measurements comply with IEC 61000-4-30 Class A.

Precise measurement of phasors provides real-time values of voltage and current phasors. These values provided from multiple measured points of the electrical power grid are used for on-line detection of the network status evaluating difference between the phasor angles. Data are evaluated and communicated using IEEE C37.118-2005.

The device additionally works as digital fault recorder (also known as Fault Monitoring System) – the device measures currents from protection cores also. Current inputs for protection cores are able to measure up to 25 A peak on 1 A range. The capturing of events can be triggered by the quantity condition and by digital inputs. Such events can be used later on for fault location and classification etc.

ENA470 consists of industrial grade PC and external signal conditioning module SCM. The conditioning module is used for adaptation of measured analog signals, it is equipped with up to 64 digital inputs and current inputs are doubled for both currents from measurement cores (precise measurement for PQ and PMU) and protection cores (large scale for DFR).

ENA470 fully complies with IEC 61000-4-30 Class A.

ENA470 firmware functionality:

- › FFT analyzer of harmonics and interharmonics according to IEC 61000-4-7 (storage of U, I, P, Q, S for each harmonic)
- › Oscilloscope
- › Vectorscope
- › Power and Energy Monitor
- › Flicker meter according to IEC 61000-4-15
- › Voltage monitor according to EN 50160 (calculation acc. IEC 61000-4-30 standard, class A)
- › Transient recorder for analog and digital signals (up to 66 seconds of voltage/current waveforms with up to 2 seconds pre-trigger, sampling rate up to 57 600 Samples/second)
- › Disturbance recorder (half-period values including frequency, length of record 1-10 minutes with up to 1 minute pre-trigger)
- › Signaling Voltages Monitor
- › Alarm Monitor
- › Symmetrical components analyzer
- › Network impedance analyzer
- › Half period U+I extremes monitor
- › PMU – Measurement of phasors of voltage and current (with TVE Total Vector Error less than 0.5 %), frequency, positive components of voltage and current
- › Phasors are sent according to IEEE C37.118-2005
- › Digital Fault Recorder – the capturing of voltage & current waveforms (from protection cores of CTs) in case the preconfigured condition is met or triggered by digital input