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SICAM P855

Multifunctional power quality recorder for acquisition, visualization, evaluation, and transmission in one device

www.siemens.com/powerquality

Device Description

The SICAM P855 multifunctional power quality recorder is used for acquisition, visualization, evaluation, and transmission of electrical measured variables such as magnitudes of voltage and current, frequency, power, harmonics, flicker. The acquisition, processing, and accuracy of measured values and events are performed acc. to the IEC 61000-4-30 Class S power quality measurement standard.

The measured values can be forwarded to a personal computer or power automation/SCADA system via communication interfaces or shown on a display. Measured values can be recorded in parameterizable time intervals with various recorders such as power quality and fault recorders. Long-term data and events are evaluated directly via the Web browser in the device and can be displayed as a report according to the power quality standards (for example EN 50160).

Recorded data can be transferred to SICAM PQS and SICAM PQ Analyzer via IEC 61850 that comfortably evaluate and generate flexible reports (as EN 50160) automatically.

Benefits

- Comprehensive acquisition and analysis of electrical measurands for early detection of power quality issue.
- High level of investment security through the use of standards
- Improved availability
- Open and transparent connectivity and interoperability



Applications

SICAM P855 is used for power quality measurements in utilities and industries (demand-side power quality).

Features

- PQ measurement according to IEC 61000-4-30 Class S
- Harmonics acc. to IEC 61000-4-7
- Flicker acc. to IEC 61000-4-15
- Energy management and power monitoring functionality
- Standard communication protocols and data export formats

Compact and Reliable

Device Characteristics

Measured Characteristics

- True RMS values of voltage and current with 2048 sampled values/10 sampling cycles (sampling rate 10.24 kHz @50 Hz)
- Voltage, current, frequency, min/max/average values
- Harmonics up to the 40th harmonic
- Power factor
- Unbalance
- THD of voltage and current
- Limit violations and indications

Power Quality Features

- Measurement compliant with IEC 61000-4-30 Class S
- IEC 61000-4-15 Flicker
- IEC 61000-4-7 Harmonics
- Reporting and evaluation compliant with EN 50160

Energy Management

- Active, reactive, and apparent power and energy
- Accuracy class active power 0.5S according to IEC 62053-22
- Accuracy class voltage/current 0.5 %

Communication Protocols

- Ethernet: IEC 61850, Modbus TCP, SNMP
- Serial: Modbus RTU master and IEC 60870-5-103
- OPC UA PubSub (MQTT) - connection to MindSphere

Data Export

- PQDIF according to IEEE 1159.3, measured-value recorder
- CSV data for PQ recordings, measured-value recorder
- COMTRADE according IEEE/IEC, fault records

Security

- Password protection against unauthorized usage

Input Measuring Circuits

- 4 x alternating voltage, V_{L-N}/V_{L-L} : AC 400 V/690 V
- 3 x alternating current, I_N : 1 A/5 A

Binary Inputs/Outputs

- 2 digital outputs

Operation and Display

- Graphic display including operation via 4 function keys
- Integrated Web server to interact with PC and HTML pages

Time Synchronization

- Via Ethernet: NTP client (Network Time Protocol)

Auxiliary Voltage

- AC 110 V to 230 V, DC 24 V to 250 V

Housing Specification

- Dimensions: 96 mm x 96 mm x 100 mm (WxHxD)
- IP51



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SICAM P855 profile V1.docx_04.19

For the U.S., published by
Siemens Industry Inc.

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This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (www.openssl.org), cryptographic software written by Eric Young (eay@cryptsoft.com) and software developed by Bodo Moeller.