SIEMENS
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! NEW !
Class 0,1 S
according
IEC 62053-22

SICAM Q200

SICAM Q200 – Multifunctional Recorder

www.siemens.com/sicam-q200

Continuous Monitoring of Supply Quality

One of the most frequent causes of unplanned downtimes and device failures is the insufficient quality of the supplied electrical energy. The acquisition and documentation of parameters relevant to supply quality is an important step to identify possible weak points and initiate appropriate measures to eliminate them.

SICAM Q200 is a network analyzer for high-definition acquisition and assessment of the power quality in electrical power supply systems. It offers algorithms and functions for energy management applications. The device supports continuous acquisition and analysis of all relevant parameters. These results help to identify and implement quality programs to ensure the supply quality. This increases the service life of the equipment while at the same time reducing downtimes.

Device Description

SICAM Q200 is a PQ device Class A acc. to IEC 62586-1/2 and IEC 61000-4-30 Ed. 3 beyond Class A.

The SICAM Q200 already meets the measurement accuracy class 0.1S according to the next edition of IEC 62053-22.

SICAM Q200 acquires, visualizes, analyzes and transmits alternating current characteristics such as current, voltage, frequency, performance, harmonic, etc.
The measured variables can be provided to a PC, an energy automation/SCADA system and/or shown on a display using communication interfaces.
In addition, the SICAM Q200 provides a combined recording and analysis function for measured values directly in the device. Long-term data and events can be transferred to SICAM PQS / PQ Analyzer System via IEC 61850, and flexible analyses and reports (e.g. EN 50160) can be generated.

Application

SICAM Q200 is used in single-phase as well as in three-wire and four-wire systems (with neutral conductor) in power utilities, industries, data centers and in commerce.

Customer Benefits

- The early identification of supply quality problems allows for time and cost savings due to comprehensive acquisition of network parameters.
- High level of investment security through the use of standards, e.g.:
  Measuring methods in accordance with IEC 61000-4-30 Class A Ed.3 - ensure manufacturer-independent comparable measured values,
  standard interfaces and protocols
  (IEC 61850, DNP 3i and MODBUS TCP) and data exchange formats (PQDIF, COMTRADE and CSV) - and thus guarantee interoperability.
- Versatile application areas thanks to the high measuring accuracy and the wide measuring range for high-frequency noise (2 to 150 kHz and transients with 1 MHz)

Multifunctional and flexible

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Device Characteristics

Network analyzer, Class A acc. to IEC 62586-1/2 and IEC 61000-4-30 Ed. 3 beyond Class A

Input Measuring Circuits

- 4x alternating voltage, 4x alternating current

Binary Inputs / Outputs

- Up to 6 inputs, 6 outputs, individually programmable

Memory

- 2 GB for approx. several months EN 50160 PQ data (expandable)

Measured Characteristics and Power Quality

- Measurement compliant with IEC 61000-4-30 Class A Ed. 3, reporting and analyses compliant with EN 50160 (CBEMA)
- True RMS of voltage and current with 8192 sampled values / 10 sampling cycles (sampling rate 40 kHz @50 Hz), voltage transients with a sampling rate of 1 MHz
- Harmonics up to the 63rd harmonic
- Measurement, visualization, recording in PQDIF of frequencies in the range of
  2 kHz to 9 kHz (IEC 61000-4-7) and
  9 kHz to 150 kHz (IEC610000-4-30- 2015)
- Rapid voltage changes
- Power of harmonics for harmonic direction detection
- Active, reactive and apparent power and energy
- Phase angles

Energy Management

- Load profile peaks and average values; time of use (TOU) with 4 tariffs
- Complies with the following standards: IEC 62053-22 accuracy class 0.1 S, ANSI C12.20 Class 0.2
- ANSI C12.20 Electricity meter, accuracy class 0.2
- 4 Quadrant Power: received and delivered / inductive and capacitive

* in preparation

Data Export

- CSV data, e.g. for further processing in MS Excel
- PQDIF data compliant with IEEE 1159.3, for PQ recordings
- COMTRADE data compliant with IEC 60255-24 / IEEE standard C37.111 for waveform records

Communication Interfaces, Protocols and I/Os

- 2 x Ethernet (IEC61850, DNPP 3i and MODBUS TCP), MODBUS gateway/master, integrated switch, SNMPv3
- MODBUS RTU master and gateway function for RS485 devices

Security

- Protected web browser communication
- Password protection against unauthorized usage

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)
- Optical IRIG-B *

Auxiliary Voltage

- 100-230 VAC / DC

Housing Specification

- Dimensions: 192 x 96 x 134.6 mm (W / H / D)
- IP54 / NEMA12 option

Special Features

- PQ reporting according to EN 50160 and CBEMA directly over HTML web server
- Visualization of measured Harmonic emissions from 2 kHz to 9 kHz and from 9 kHz to 150 kHz in HTML pages as heat map
- Evaluation of events directly in HTML via COMTRADE viewer/SIGRA plug-in

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