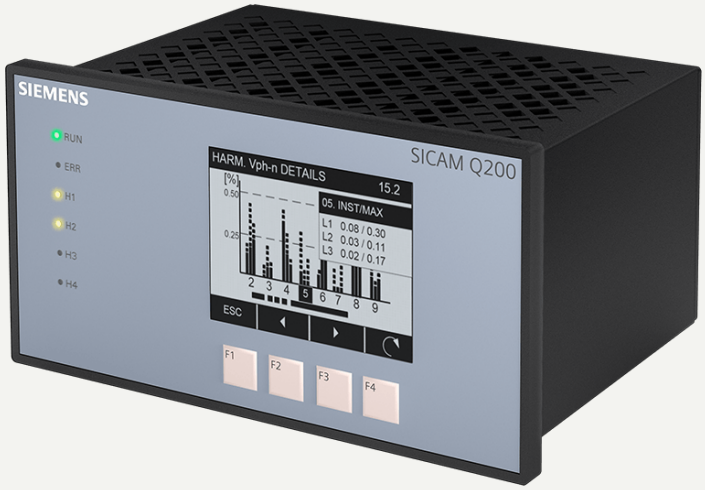
SIEMENS



MULTIFUNCTIONAL POWER QUALITY INSTRUMENT

Determined, clear, precise - your power quality analysis with **SICAM Q200**

siemens.com/sicam-q200

SICAM Q200 is a Power Quality Instrument for high-definition acquisition and assessment of power quality measurements in electrical power supply systems. Additionally, it offers algorithms and functions for energy management applications. The device supports continuous measurement and analysis of all relevant parameters. These results help to identify and implement measures to improve the power quality.

Highlights

- Measurement of high frequency supraharmonics from 2 kHz to 150 kHz
- Detection of transients up to 6 kV amplitude with 1 µs time resolution
- Power quality reports acc. to EN 50160 and IEEE 519 are generated automatically by the device
- Parameterization without separate software directly in the web browser
- Evaluation of power quality phenomena and voltage events without separate software directly in the web browser

Benefits

- Time and cost savings through early identification of problems in the quality of supply based on comprehensive recording of power system parameters
- Measurement procedures according to IEC 61000-4-30, Ed.3, Class A, guarantee manufacturer-independent comparable measured values
- Standard interfaces and communication protocols, IEC 61850, DNP 3i and MODBUS TCP, as well as data exchange formats, PQDIF, COMTRADE and CSV, guarantee interoperability
- Wide range of applications thanks to the high measurement accuracy and the wide measurement range for high-frequency disturbances, 2 kHz to 150 kHz, and transients up to 6 kV with 1 µs time resolution

Measured Characteristics and Power Quality

- True RMS measurement of voltage and current with approx. 819 samples per cycle (sampling rate 40.96 kHz @ 50 Hz)
- Measurement compliant to IEC 61000-4-30, Ed. 3, Class A
- IEC 61000-4-15 flicker meter for measuring Pst, Plt
- Harmonic and interharmonic measurements up to the 63rd order, incl. harmonic phase angle and harmonics power
- THDS (Subgroup Total Harmonic Distortion) of voltage and current and TDD (Total Demand Distortion)
- IEC 61000-4-7 harmonics in the range of 2 kHz to 9 kHz
- IEC 61000-4-30 supraharmonics in the range of 9 kHz to 150 kHz
- Voltage transients up to 6 kV with 1 µs time resolution
- PQ events (dip, swell, interruption), direction of voltage events
- ITI(CBEMA) and SEMI F47 curve
- ITI(CBEMA) violation alarm
- Rapid voltage changes
- Mains signaling voltage
- Reporting, evaluation acc. to EN 50160 and IEEE 519

Energy management

- Active, reactive, apparent power and energy; power factor
- Compliant to: IEC 62053-22 accuracy Class 0,1 S, ANSI C12.1 electricity meter, accuracy Class 0.2
- Accuracy class voltage / current 0.1 %
- Load profile peaks and average values; time of use (TOU) with 8 tariffs, energy profile records
- 4 quadrant power: received and delivered / inductive and capacitive
- Power and line loss compensation
- CO_2 emissions

Data export

- PQDIF compliant to IEEE 1159.3 for PQ recordings
- COMTRADE compliant to IEEE C37.111 / IEC 60255-24 for waveform records
- CSV data of measurement recordings

Communication protocols

- 2 x Ethernet: IEC 61850, DNP 3i and MODBUS TCP, MODBUS TCP Gateway/Master, SNMPv3, with integrated switch
- 2 x Serial: MODBUS RTU Gateway/Master for RS485 devices

Cybersecurity

- Role-based access control (RBAC): password protection against unauthorized usage, central user management
- FTPs secure file transfer protocol
- Secured and protected communication via IEC 61850 protocol, Web browser communication via https
- Firmware signature: only firmware signed by Siemens will be loaded
- Security log: non-volatile storage of SYSLOG events

Input Measuring Circuits

- 4 x alternating voltage UL-N / UL-L: up to AC 400 V / 690 V
- 4 x alternating current IL: 1 A / 5 A

Binary Inputs / Outputs

- Up to 6 digital inputs, 6 digital outputs

Memory

- 2 GB, storage of PQ data according to EN 50160 for several months

Operation and display

- Graphic display including operation via 4 function keys
- Integrated web server for interaction via web browser interface

Time synchronization

- Ethernet: NTP-Client (Network Time Protocol)

Auxiliary Voltage

- AC / DC 100 V to 230 V

Housing Specification

- Dimensions: 192 mm x 96 mm x 134.6 mm (W/H/D)
- IP40 (IP54 with optional kit) / NEMA12 option

Siemens AG
Smart Infrastructure
Electrification & Automation
Mozartstrasse 31c,
91052 Erlangen, Germany

Siemens Industry Inc.
3617 Parkway Lane
Peachtree Corners, GA 30092
United States

Online Shop - Industry Mall

SICAM Power Quality and Measurement Catalog

Tutorial series: Power Quality - Essentials