



MULTIFUNCTIONAL POWER QUALITY RECORDER

SICAM Q100 – determines power quality

[siemens.com/sicam-q100](https://www.siemens.com/sicam-q100)

SICAM Q100 is used for acquisition, visualization, evaluation and transmission of electrical measured variables such as magnitudes of voltage and current, frequency, power, flicker, harmonics, inter harmonics, transient and PQ events (dip, swell and interruption). Long-term data and events can be transferred to SICAM PQS/PQ Analyzer and PQ Advisor Compact via IEC 61850.

Your benefits

- SICAM Q100 is the ideal solution for monitoring of the power quality at the point of common coupling (PCC)
- High level of investment security through use of standards
- Open and transparent connectivity and interoperability
- Cause detection for harmonics
- Roll based access control (RBAC)
- Secure transmission of sensitive data
- Protection against firmware manipulation
- Measurements that can be used in court and are in conformity with the contract



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



Special Features

- Power quality reports according to EN 50160 and IEEE 519 can be generated directly in the web browser
- Parameterization without separate software directly in the web browser
- Evaluation of events and waveform without separate software directly in the web browser



The SICAM Q100 is a Power Quality Instrument (PQI) according to IEC 62586-1/2 and IEC 61000-4-30, Ed. 3, Class A, and meets the measurement accuracy class 0.2S according to IEC 62053-22, IEC 62053-24. The measured variables can be provided to a PC, SCADA/ energy automation system and shown on a display.

Product features

- Web browser for parameterization and evaluation, full and easy-to-read PQ analysis according to EN 50160
- Harmonic, interharmonics and harmonic phase angles according to IEC 61000-4-7
- Exhaustive cybersecurity features, including HTTPs, RBAC, security logs, and digitally signed firmware
- Standard interfaces and communication protocols, IEC 61850 and MODBUS TCP, as well as data exchange formats, PQDIF, COMTRADE and CSV, guarantee interoperability

Energy management

- Active, reactive, apparent power and energy; power factor
- Complies with the following standards: IEC 62053-22 accuracy Class 0.2 S, ANSI C12.20 electricity meter, 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 powers: received and delivered / inductive and capacitive
- CO2 emissions

Data export

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

Communication protocols

- Ethernet: IEC 61850, MODBUS TCP, MODBUS TCP Gateway/Master, SNMPv3, with integrated switch
- Serial: MODBUS RTU Gateway/Master for RS485 devices

Input measuring circuits

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

Binary inputs / outputs

- 2 digital inputs, 2 digital outputs

Measured Characteristics and Power Quality

- True RMS of voltage and current with 2048 sampled values/10 sampling cycles (sampling rate 10.24 kHz @50 Hz)
- Measurement compliant with IEC 61000-4-30, Ed. 3, Class A
- IEC 61000-4-15 flicker meter, Pst, Plt
- IEC 61000-4-7 harmonic measurements up to the 63rd, incl. harmonic phase angle and harmonics power
- THDS (Subgroup Total Harmonic Distortion) of voltage and current and TDD (Total Demand Distortion)
- Transient detection (100 μ s 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 according to EN 50160 and IEEE 519

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

Housing Specification

- Dimensions: 96 mm x 96 mm x 100 mm (W/H/D)
- IP40

 [Catalog: Power Quality and Measurement](#)