QNA 600

QNA600, Advanced power quality analyzers

Code: Q22010.

> Protocol: HTTPS - NTP - SFTP - IEC61850
> Memory: 16 GB
> Events / Waveform: Yes
> Web server: Yes
> Certification: IEC 61000-4-30 (Class A)
> Energy accuracy: 0,5s
> Communications: Ethernet | Wi-Fi | 4G
> Harmonics: 64
> Class: A
> Measurement Range (V): 11 ... 500 V ~ (V F-N / V Ph-N)
> Measurement Range (A): 0.05 ... 10 A
> Power supply: 180 ... 300 V ~
> Input current: ... / 5 A
> Mounting: Rack

Description

The **QNA 600** is a high-end power quality analyzer that measures and records electrical parameters, power quality events and transient events in an electrical installation with maximum accuracy. This allows any incidents that said power quality events may have caused in the installation or on the devices connected to it to be analysed after the fact.

It complies with IEC 61000-4-30, edition 3, and IEC 62586-2. Its designation, PQI-A-FI1-H, defines it as a **Class A** device for fixed installation in 19" 4U racks, suitable for interiors with uncontrolled temperatures and noisy environments. It has 5 voltage and 5 current measurement channels, and is compatible with current transformers of up to 5 amperes.
The device has two Ethernet ports (front/rear), a simple API and protocols such as IEC 61850, MQTT, ftp and sftp for integration into SCADA applications, as well as to access instantaneous values and historical data, which can be downloaded in PQDIFF and COMTRADE formats.

It generates EN 50160 reports in PDF format automatically, and sends them to sftp or ftp repositories, providing the user with detailed information on the power quality. GPS synchronization ensures the accuracy of the time mark and location.
It also has an internal memory that records data for 5 years and can store up to 4,000 quality events, in standard configuration, for subsequent analysis.

Application

The **QNA 600** has been specially designed to be installed at utility demarcation points (transformer station) or at the main connection of any user's electrical installation, operating in parallel to the billing meter. This gives it the ability to automatically detect and analyse the utility's compliance with the EN 50160 standard, and it can also be used to identify power quality events that may cause damage, deterioration or malfunction in the installation loads.
This information allows the user to understand the effects of the problem and to take corrective measures if the quality problems are caused by the loads in the installation itself. Moreover, if the problems are caused by external factors, this device is IEC 61000-4-30 certified, and offers reliable data to demonstrate any incident or damage caused by the utility company.

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Power quality analyzer (PQI-A-FI1-H)

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Specifications

Auxiliary battery power supply

Autonomy	30 minutes
Battery type	Ni-MH
Capacity	2500 mAh

AC power supply

Installation category	CAT III 300 V
Consumption	15 ... 25 VA
Frequency	50 ... 60 Hz.
Nominal voltage	180 ... 300 V ~

Mechanical characteristics

Size (mm) width x height x depth	210 x 132.25 x 305.2 (mm)
Envelope	Zinc plated sheet steel
Fastening	Rack 19''
Weight (kg)	3,5

Environmental characteristics

Protection class	IP 20 IK 08
Relative humidity (without condensation)	0 ... 95%
Storage temperature	-40...+70 °C
Working temperature	-10...+45 °C

Current measurement circuit

Sampling frequency	512 samples / cycle
Nominal current (In)	... /5 A
Phase current measuring range	0.05 ... 10 A~

Voltage measurement circuit

Installation category	CAT IV 600 V
Input impedance	1 MΩ
Frequency measuring range	42.5 ... 69 Hz
Voltage measuring range	11 ... 500V Ph-N / 17 ... 866V Ph-Ph
Nominal voltage	230 V ~
Minimum measurement voltage (Vstart)	11 V ~

Communication Network

Connection mechanism	RJ-45
Protocol	HTTPS-NTP-SFTP-IEC61850

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Technology / Type	Ethernet 10 Base T - 100 Base Tx self-detectable

Standards

Electrical safety, Maximum height (m)	2000
Electrical safety, Installation category	CAT IV (600 V) o CAT III (1000 V) IEC 61010
Standards	IEC 60529, IEC 61000-4-30, IEC 61000-6-5, IEC 62586-1, IEC 62586-2, IEC 61010-1, IEC 60297-3-100, IEC 62053-22, IEC-62053-23, IEC 17065, IEC 61850, IEEE 1159-3, IEC 61557-12, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-78

Electrical safety

Insulation	Double-insulated electric shock protection class II (IEC 61010-1)

User interface

LED	6 LED
Resolution of the display	240 x 128 points
Keyboard	7 keys

Measurement accuracy

Current unbalance (Kd)	± 0,15 % (IEC61000-4-30 class A)
Voltage unbalance (Kd)	± 0,15 % (IEC61000-4-30 class A)
Frequency measurement	± 0,1 % (IEC-61557-12 class 0.1)
Phase current measurement	± 0,2 % (IEC-61557-12 class 0.2) (0.5 ... 10 A~)
Reactive energy measurement (kvarh)	±1 % (IEC-62053-24 class 1s)
Reactive power measurement (kvar)	± 1 % (IEC 61557-12 class 1)
Active energy measurement (kWh)	± 0,5 % (IEC-62053-22 class 0.5s)
Active power measurement (kW)	± 0,5 % (IEC-61557-12 class 0.5)
Power factor measurement	± 0,5 % (IEC-61557-12 class 0.5)
Current THD	(10 ... 100%): Class I (IEC 61000-4-7) Class A (IEC 61000-4-30)
Voltage THD	(10 ... 100%): Class I (IEC 61000-4-7) Class A (IEC 61000-4-30)
Phase voltage measurement	± 0,1 % (IEC-61557-12 class 0.1) (50 ... 500 V~)
Neutral voltage measurement	1% FS
Pinst. Flicker	Class F1 (IEC 61000-4-15) Class A (IEC 61000-4-30)

Radio communication

Technology / Type	4G

Wireless communication

Band	2.4 GHz, IEEE 802.11 b / g / n
Technology / Type	Wi-Fi

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QNA 600

Advanced power quality analyzers (according Standard UNE-EN-50160 and IEC 61000-4-30)

CODE	TYPE	Measurement Range (V)	Energy accuracy	Measurement Range (A)	Communications	Protocol	Certification	Memory
Q22010.	QNA 600	11 ... 500 V ~ (V F-N / V Ph-N)	0,5s	0.05 ... 10 A	Ethernet | Wi-Fi | 4G	HTTPS - NTP - SFTP - IEC61850	IEC 61000-4-30 (Class A)	16 GB

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Dimensions

Connections