



QNA-500

QNA-500, Advanced power quality analyzers

Code: Q20901. DESCATALOGADO

- > Protocol: Modbus/TCP | ZMODEM | FTP | webserver (HTTP)
- > Memory: 4 GB
- > Memory: Yes
- > Events / Waveform (1 = yes): Yes
- > Web server: Yes
- > Energy accuracy: 0,2S
- > Communications: RS-232 | RS-485 | Ethernet
- > Harmonics: 50
- > Class: S

Description

QNA 500 is a modular power quality analyzer designed to measure and record the main electrical parameters and transient disturbances. The measurement is taken in true root mean square (TRMS), with 5 AC voltage inputs, 4 AC current inputs (via ... / 5 A current transformers) and a leakage current input.

Application

QNA500 is designed to supervise the electric installation and problems relating to electric power quality, in order to control production processes and manage incidents. It integrates easily with **SCADA** applications and interacts with commercially available PLCs, and so can be part of more global data acquisition systems and report to users the information they require at any time. Its modularity and the addition of **M-IO8** modules enable the user to also control energy consumption, states of switches or loads, send alarms, and even connect/disconnect loads according to configurable conditions.

When combined with **CIRCUTOR PowerVision Plus** software, the user can configure customised reports to assess the correct running of the electric installation, and can apply standards such as the **EN-50160**, event tables such as **CBEMA**, **UNIPED** or others. By automating this information, the user can view the most important data needed for the relevant analysis with just one click .



QNA-500

Modular power quality analyzer

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Specifications

Auxiliary battery power supply

| | |
|--------------|---|
| Autonomy | 15 minutes of continuous operation (QNA500) |
| Battery type | Ni-MH extraible (base module) |

AC power supply

| | |
|-----------------|---------------------------------------|
| Consumption | 5 VA |
| Frequency | 50...60 HZ (Alim.Aux.:módulo base) |
| Nominal voltage | 90...300 Vc.a.(Alim.Aux.:módulo base) |

DC power supply

| | |
|-----------------|--|
| Nominal voltage | 100...300 Vdc (Aux. power base module) |
|-----------------|--|

Mechanical characteristics

| | |
|----------------------------------|---|
| Size (mm) width x height x depth | 64 x 125 x 173.3 (mm) |
| Envelope | Self-extinguishing V0 plastic |
| Differential current measurement | ≤ 2,5 mm ² |
| Fastening | DIN rail 46227 (EN 50022) or Bottom Panel |
| Weight (kg) | 0,62 |

Environmental characteristics

| | |
|--|--------------|
| Protection class | IP 41 |
| Relative humidity (without condensation) | 5...95% |
| Working temperature | -10...+60 °C |

Standards

| | |
|--|---|
| Certifications | CE, UL, VDE |
| Electrical safety, Maximum height (m) | 2000 |
| Electrical safety, Installation category | CAT IV (600 V) o CAT III (1000 V) IEC 61010 |
| Standards | IEC 664, VDE 0110, UL 94, IEC 801, IEC 348, IEC 571-1, EN 61000-6-3, EN 61000-6-1, EN 61010-1, EN 61000-4-11, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 55011, IEC 61000-4-30 Class A or Class S |

Current measurement circuit

| | |
|-------------------------------|----------------------------|
| Sampling frequency | 512 samples / cycle |
| Phase current measuring range | 1...120% of In (In: 5A) |
| Permanent overload | 120% In (In: 5A, Imax: 6A) |
| Maximum pulse current | 100 A |

Voltage measurement circuit



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| | |
|---------------------------------------|------------------------------------|
| Sampling frequency | 512 samples / cycle |
| Frequency measuring range | 42.5...69 Hz |
| Nominal voltage | 0...500V Ph-N / 0...866V Ph-Ph |
| Insulation voltage | 1.2/50 μ s (8/20 μ s) 6 kV |
| Maximum permanent measurement voltage | 1500 V (Ph-Ph) |

Electrical characteristics

| | |
|-----------------------------|-----------------------------------|
| Insulation voltage, circuit | 1.2/50 μ s (8/20 μ s) 6kV |
|-----------------------------|-----------------------------------|

Communication Network

| | |
|------------------------|----------------------------|
| Protocol | ModBus/TCP, Cirbus, TCP/IP |
| Technology / Interface | Ethernet |

Electrical safety

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

Leakage current measurement (ID)

| | |
|--------------------|--------------------|
| Sampling frequency | 64 samples / cycle |
| Measurement range | 0-3 A |
| Maximum current | 3 A |

Measurement accuracy

| | |
|---------------------------------|---|
| Current unbalance (Kd) | ± 5 % (IEC61000-4-30 class S) |
| Voltage unbalance (Kd) | ± 5 % (IEC61000-4-30 class S) |
| Active energy measurement (kWh) | 0,2 % (in accordance with IEC 62053-22) |
| Active power measurement (kW) | 0,2 % (in accordance with IEC 62053-22) |
| Phase voltage measurement | 0,2 % (IEC-61000-4-30 class S) |
| Pst Flicker | According to IEC 61000-4-15 |
| Current harmonics (THD) | According to IEC 61000-4-7 |
| Voltage harmonics (THD) | According to IEC 61000-4-7 |

Processor

| | |
|-------------------------------------|-------------------------------|
| Analoque to digital converter (ADC) | 24 bits |
| Sampling frequency | 512 samples/cycle per channel |

Serial communication

| | |
|-------------------|---------------|
| Protocol | Modbus RTU |
| Technology / Type | RS-232 RS-485 |

Communications through the BASE module (mandatory). Check the maximum number of modules that can be connected for each BASE system. The QNA500 include the Power Vision+ software Each unit is made up of a BASE module (power supply) + measuring module + inputs/outputs module (according to each type). Compatible with PowerStudio (version 4.02 and higher).

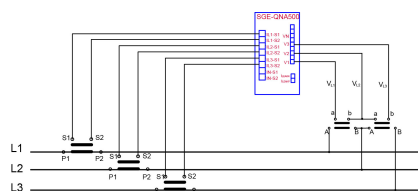


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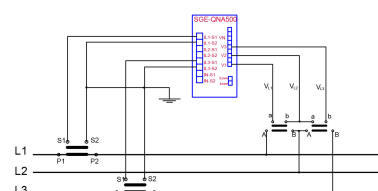
Modular power quality analyzer

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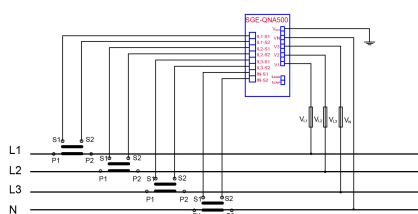
Connections



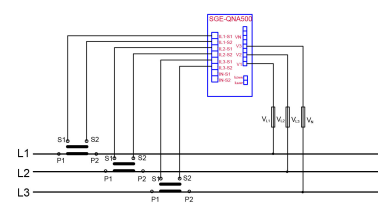
Conexión 2 TT's y 3 TI's



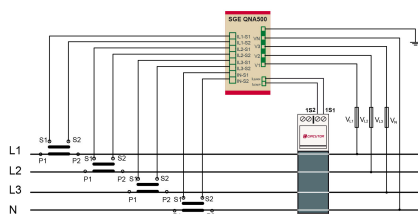
Conexión 2 TT's y 2 TI's



Conexión tensión directa y 4 TI's



Conexión tensión directa 3 hilos y 3 TI's



Conexión tensión directa y 4 TI's + trafo WG