

QNA 500

Modular power quality analyzer



Description

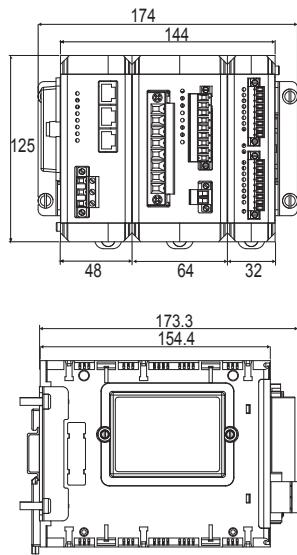
QNA 500 is a modular power quality analyzer designed to measure and record the main electrical parameters and transient disturbances. The measurement is taken in true root mean square (TRMS), with 5 AC voltage inputs, 4 AC current inputs (via /5 A current transformers) and a leakage current input.

Applications

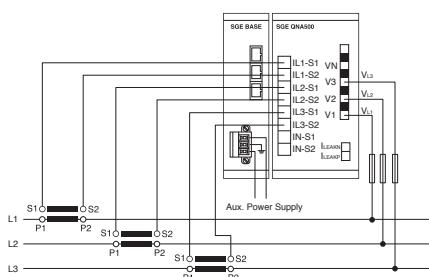
QNA500 is designed to supervise the electric installation and problems relating to electric power quality, in order to control production processes and manage incidents. It integrates easily with **SCADA** applications and interacts with commercially available PLCs, and so can be part of more global data acquisition systems and report to users the information they require at any time. Its modularity and the addition of **M-8IO** 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**, **UNIPEDE** or others. By automating this information, the user can view the most important data needed for the relevant analysis with just one click .

Dimensiones



Conexiones



Technical features

Auxiliary power supply (BASE)	Power supply voltage	90...300 Vac - 130...380 Vdc	
	Frequency	50 ... 60 Hz	
	Consumption	7 W / 11 VA (BASE) 4 W / 5 VA (QNA500) 6 W / 10 VA (8IO)	
Auxiliary power supply by battery (BASE)	Type	Removable battery	
	Battery life	15 minutes of continuous operation (QNA500) 1 minute of continuous operation (8IO)	
Voltage measurement (QNA 500)	Measurement circuit	3 or 4 wires	
	Measurement range	0...500 VP-N / 0...866 VP-P	
Current measurement (QNA 500)	Other voltages	Via measurement transformers	
	Maximum permanent measurement voltage:	1500 Vca.F-F	
Leakage current measurement (RCCB) (QNA 500)	Maximum instantaneous measurement voltage:	1,2/50 μ S (8/20 μ S) 6 kV	
	Frequency	42.5...69 Hz	
Accuracy	Sampling frequency	512 samples/cycle	
	Measurement range	1%...120% I_n ... I_n = 5 A	
Memory	Maximum current	120% of I_n (for I_n = 5 A, I_{max} = 6 A) permanent, 100 A t < 1 s	
	Sampling frequency	512 samples/cycle	
Electrical safety	Measurement range	0...3 A	
	Maximum current	3 A	
Standards	Sampling frequency	64 samples/cycle	
	Type	QNA-500-A	QNA-500
Flicker	Voltage	0,1 %	
	Current	0,1 %	
Harmonics	Power & Energy	0,2 % *	
	Unbalance	$\pm 0.15\%$	
IEC-61000-4-15	Flicker	in accordance with IEC -61000-4-15	
	Harmonics	in accordance with IEC -61000-4-7	
IEC-61000-4-30	2 GB memory (Micro SD card)		
	Category III - 300 Vac / 520 Vac		
IEC-61000-4-3	EN-61010 Double-insulated electric shock protection, class II		
	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, CE, IEC 61000-4-30 Class A or Class S		

* measurement according to **IEC-61000-4-30**

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Variables

Log variables	Unit	L1	L2	L3	III
Phase-phase and phase-neutral voltage (effective, maximum, minimum)	V	•	•	•	•
Current (effective, maximum, minimum)	A	•	•	•	•
Neutral current (effective, maximum, minimum)	A				•
Neutral earth voltage (effective, maximum, minimum)	V				•
Frequency (effective, maximum, minimum)	Hz	•	•	•	
Active power (effective, maximum, minimum)	kW	•	•	•	•
Inductive reactive power (effective, maximum, minimum)	kVar	•	•	•	•
Capacitive reactive power (effective, maximum, minimum)	kVar	•	•	•	•
Apparent power (effective, maximum, minimum)	KVA	•	•	•	•
Maximum demand	kW	•	•	•	
Power factor (effective, maximum, minimum)		•	•	•	•
Crest factor (voltage and current)	V o A	•	•	•	
K factor		•	•	•	
Active energy	kWh	•	•	•	•
Inductive reactive energy	kVarh	•	•	•	•
Capacitive active energy	kVarh	•	•	•	•
Voltage THD or TDD (effective, maximum, minimum)	%	•	•	•	
Current THD or TDD (effective, maximum, minimum))	%	•	•	•	
Voltage harmonics (up to 50 th order)	Arm V	•	•	•	
Current harmonics (up to 50 th order)	Arm A	•	•	•	
Voltage interharmonics (up to 50 th order)	Arm V	•	•	•	
Current interharmonics (up to 50 th order)	Arm A	•	•	•	
Flicker (PST)		•	•	•	
Gaps	%		•	•	
Interruptions	%		•	•	
Overvoltage	%		•	•	
Voltage transients			•	•	
Current transients			•	•	
Voltage unbalance			•	•	
Current imbalance			•	•	

References

Type	Code	Energy accuracy	Class	Harmonics	Events	Transitory log	Inputs / Outputs	Impulse centraliser	Demand control
K-QNA 500	Q20911	0,5	S	50	•	•	-	-	-
K-QNA 500 8IO	Q20912	0,5	S	50	•	•	8 / 8 digitals	•	-
K-QNA 500 8IOR	Q20913	0,5	S	50	•	•	8 / 8 relay	•	•
K-QNA 500-A	Q20931	0,2	A	50	•	•	-	-	-
K-QNA 500-A 8IO	Q20932	0,2	A	50	•	•	8 / 8 digitals	•	-
K-QNA 500-A 8IOR	Q20933	0,2	A	50	•	•	8 / 8 relay	•	•

Each unit is made up of a BASE module (power supply) + measurement module + relay module (depending on the type)

Type	Code	Class	Inputs	Outputs	Memory	Web server	Communications
QNA 500	Q20901	S	-	-	2 GB	•	-
QNA 500-A	Q20921	A	-	-	2 GB	•	-
8IO	Q20902	-	8	8 digitals	2 GB	•	-
8IOR	Q20903	-	8	8 relay	2 GB	•	-
QD-500	Q20915	-		Display module	-	-	RS-485/RS-232