

Power analysers

PQA 7700

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Profiles



Power quality analyser

The PQA 7700 is a handheld, simple to use, portable power quality analyser with four current and four voltage measuring channels. Integrated in rugged housing and packed with powerful functions it can be effectively used for monitoring, troubleshooting and analysing of power quality conditions in power distribution networks either in industry or utilities.

The PQA 7700 is compliant with power quality standard IEC 61000-4-30 Class S and standard IEC 61557-12. Powerful PC-software package PowerManager comes delivered as part of a standard set and enables downloading, analysing of recorded data and creation of test reports. Through a simple but powerful interface PowerManager helps to find recorded data quickly and allows to make complex analysis and data comparison.

Features

- 4 voltage channels with wide measurement range 0...1000 Vrms (CAT III / 1000 V)
- 4 current channels with support for automatic clamp recognition
- Compliance with power quality standard IEC 61000-4-30 Class S
- Power measurements compliance with IEC 61557-12 and IEEE 1448 standards
- Simultaneous measurement and recording of basic power quality parameters (U, I, P, Q, S, PF, $\cos\phi$, THD)
- Power quality analysis according to EN 50160 including flicker measurement and standardized report printout in graphic and table form
- 4-quadrant measurements (generator and load with capacitive or inductive character)
- Up to 509 parameters can be monitored or recorded simultaneously
- On-line scope, trend and metering modes
- On-screen displaying of trends and captured events and simultaneous recording in the background
- Flexible clamps (without additional supply) are included in the standard set
- Simultaneous 8 channels - 16 bit AD conversion for accurate power measurements (minimal phase shift error)
- 15 hours of autonomous (battery) supply
- Powerful PC SW PowerManager enables downloading, view, analysis of recorded data and professional report creation

Measurements

- Voltage: TRMS, peak, crest factor (4-channel)
- Current: TRMS, peak, crest factor (4-channel)
- Power (active, reactive, apparent)
- Power factor, $\cos \varphi$
- Unbalance, flicker measurement
- Harmonic analysis up to 50th harmonics, THD measurement
- Energy (active, reactive, generated, consumed)
- Capturing and recording of power supply events (shutdowns, interruptions, swells, dips)
- Inrush currents monitoring and recording
- Waveform displaying and snapshot
- Power quality analysis according to EN 50160
- Recording up to 10 adjustable alarms

Specifications

Functions	Range
AC voltage inputs	
Number of inputs	4
Input voltage	20...1500 V rms L-N (20...26000 V rms L-L)
Accuracy	0.2 % of reading
Resolution	10 mV, 100 mV
Samplingrate	1024 samples per 10 periods
Frequency	10...70 Hz
AC current inputs	
Number of inputs	4
Input current	20.00 mV rms...2 V rma
Current measuring	3...6000 A
Accuracy	0.25 % of reading
Resolution	0.1 mA
Sampling rate	1024 samples per 10 periods
Recording	
Integration interval	1...3600 s
Maximum number of signals	509

Function	Resolution	Accuracy
Frequency 10.00...70.00 Hz	2 mHz	± 10 mHz
Power (W, VA, VAR) 0.000 k ... 9.999M	4 digits	± 0.5 % of reading
Power factor -1.00...1.00	0.01	± 0.02
Cos φ 0.00...1.00	0.01	± 0.02
Harmonic analysis up to 50th components		
UhN < 10 % Unom	10 mV	0.15 % Unom
3% Unom < IhN < 20% Unom	10 mV	5 % UhN
IhN < 10% IN	10 mV	0.15 % IN
10% IN < IhN < 100% Unom	10 mV	5 % IhN
THD		
0 % Unom < THDU < 20% Unom	0.1 %	± 0.3
0 % IN < THDI < 100% IN	0.1 %	± 0.6
100 % IN < THDI < 200% IN	0.1 %	± 1.5
Voltage dips and swell		
Magnitude : 2...1500 V	10 mV, 100 mV	0.5 % of reading
Duration: 30 ms...7 d	1 ms	± 20 ms

Including



Carrying bag



4x current clamp
30 A / 300 A / 3000 A



Testleads
3x red, 1x black,
1x green



Testprobes
3x red, 1x black,



Alligator clamps
3x red, 1x black,
1x green

- + Manual
- + Power supply adapter
- + RS232-cable
- + PowerManager software
- + USB-cable
- + 6x NiMH rechargeable batteries

General	
COM-port	USB and RS232
Display	Graphic LCD with backlight, 320 x 320 dots
Power supply	230 VAC of 6 x 1.2 V NiMh rechargeable batteries, type AA
Overvoltage category	CAT III / 1000 V, CAT IV / 600 V
Protection degree	Double insulation
Dimensions	220 x 115 x 90 mm
Weight	0.65 kg