

PQA820

Rel. 1.08 of 09/09/19

Power quality recorder

Pag 1 of 3

1 - ELECTRICAL SPECIFICATIONS

Accuracy indicated as \pm [%rdg + (no. dgts * resolution)] at 23 °C \pm 5 °C, <75%HR

DC Voltage		
Range [V]	Resolution [V]	Accuracy
10.0 ÷ 265.0	0.1	±(0.7% rdg + 0.4V)

Voltage values <10.0V are zeroed

AC TRMS Voltage – Phase to Neutral				
Range [V]	Frequency [Hz]	Resolution [V]	Accuracy	
10.0 ÷ 265.0	42.5 ÷ 65.0	0.1	±(0.5% rdg + 0.2V)	

Max Crest Factor =1.5, Voltage values <10.0V are zeroed

AC TRMS Voltag	e – Phase to Phas	e	
Range [V]	Frequency [Hz]	Resolution [V]	Accuracy
50.0 ÷ 460	42.5 ÷ 65.0	0.1	±(1.0%rdg + 0.2V)
Max Croat Easter -1 5 Va	tege velues <10.0V are zero	ad	

Max Crest Factor =1.5, Voltage values <10.0V are zeroed

Voltage Anomalie	es – Phase to Neu	tral		
Range [V]	Resolution Voltage [V]	Resolution Time	Accuracy Voltage	Accuracy [ms]
15.0 ÷ 265.0	0.2	10ms	±(1.0%rdg + 2dgt)	\pm ½ cycle

DC TRMS Current by external clamp transducer – STD clamps				
Range [mV]	Resolution [mV]	Accuracy	Overload protection	
5.0 ÷ 219.9	1	±(0.7%rdg + 1mV)	10V	
220.0 ÷ 999.9	I I	±0.7% rdg	100	

Current values correspondent to a voltage < 5mV are zeroed

AC TRMS Current by external clamp transducer – STD clamps				
Range [mV]	Frequency [Hz]	Resolution [mV]	Accuracy	Overload protection
5.0 ÷ 219.9	42.5 ÷ 65.0	1	±(0.5%rdg + 0.6mV)	10V
220.0 ÷ 999.9	42.0 ÷ 00.0	I	±0.5% rdg	100

Current values correspondent to a voltage < 5mV are zeroed

AC TRMS Current by external clamp transducer – Flex (100A AC range – 85uV/A)				
Range [mV]	Frequency [Hz]	Resolution	Accuracy	Overload protection
0.085 ÷ 8.50	42.5 ÷ 65.0	8.5μV	±(0.5%rdg +0.007mV)	10V
Max Crest Factor =1.5, Current values <1A are zeroed				

AC TRMS Current by external clamp transducer – Flex (1000A AC range – 85uV/A)				
Range [mV]	Frequency [Hz]	Resolution	Accuracy	Overload protection
0.425 ÷ 85.0	42.5 ÷ 65.0	85µV	±(0.5%rdg + 0.15mV)	10V

Max Crest Factor =1.5, Current values <5A are zeroed

Frequency		
Range [Hz]	Resolution [Hz]	Accuracy
42.5 ÷ 65.0	0.1	±(0.2% rdg + 0.1Hz)

DC Power – (Vmeas>200V)					
Clamp FS [A]	Range [W] [Wh]	Resolution [W] [Wh]	Accuracy		
1< FS < 10	0.000k ÷ 9.999k	0.001k	±(1.0%rdg + 5W)		
1< F3 ≤ 10	10.00k ÷ 99.99k	0.01k	±(1.0%rdg + 50W)		
10< FS ≤ 200	0.00k ÷ 99.99k	0.01k	±(1.0%rdg + 50W)		
10< F3 \ge 200	100.0k ÷ 999.9k	0.1k	±(1.0% rdg + 500W)		
200 - 55 < 1000	0.0k ÷ 999.9k	0.1k	±(1.0%rdg + 0.5kW)		
200< FS ≤ 1000	1000k ÷ 9999k	1k	±(1.0% rdg + 5kW)		
Vmeas = Voltage in which	the power is measured				

Vmeas = Voltage in which the power is measured

HT ITALIA SRL

Via della Boaria 40 - 48018 Faenza (RA)- Italy



PQA820

Rel. 1.08 of 09/09/19

Power quality recorder

Pag 2 of 3

Power/Energy – (Vmeas>200V, Pf=1)					
Clamp FS [A]	Range [W] [Wh]	Resolution [W] [Wh]	Accuracy		
1< FS ≤ 10	0.000k ÷ 9.999k	0.001k	±(0.7%rdg + 3W/Wh)		
1< F5 ≤ 10	10.00k ÷ 99.99k	0.01k	±(0.7%rdg+30W/Wh)		
10< FS ≤ 200	0.00k ÷ 99.99k	0.01k	±(0.7%rdg+30W/Wh)		
10< F5 ≤ 200	100.0k ÷ 999.9k	0.1k	±(0.7%rdg+300W/Wh)		
200< FS ≤ 1000	0.0k ÷ 999.9k	0.1k	±(0.7%rdg+0.3kW/kWh)		
	1000k ÷ 9999k	1k	±(0.7%rdg+3kW/kWh)		

Vmeas = Voltage in which the power is measured

Power factor (0	Cosφ)	
Range (cosφ)	Resolution	Accuracy (°)
0.20 ÷ 0.50		0.6
0.50 ÷ 0.80	0.01	0.7
0.80 ÷ 1.00		1.0

Voltage/Current harmonics			
Range	Maximum resolution	Base accuracy	
$DC \div 25^{th}$		±(5.0% rdg + 2dgt)	
$26^{\text{th}} \div 33^{\text{th}}$	0.3V / 0.1% FS clamp	±(10% rdg + 2dgt)	
$34^{th} \div 49^{th}$		±(15% rdg + 2dgt)	

Harmonics will be zeroed:

> DC harmonics: DC value <0.5% 1st Harmonic value or if DC value < 0.5% FS clamp

> 1st Harmonic: 1st Harmonic value <0.5% FS clamp

> 2nd ÷ 49th Harmonics: 2nd ÷ 49th values <0.5% 1st Harmonic value or <0.5% FS clamp



PQA820

Rel. 1.08 of 09/09/19

Power quality recorder

Pag 3 of 3

2. GENERAL SPECIFICATIONS

ELECTRICAL SYSTEMS

- Single Phase,
- 3 Phase without Neutral
- 3 Phase with Neutral

CHANNELS RECORDED SIMULTANEOUSLY

- Phase to Neutral and Phase to Phase voltages
- Voltage anomalies (sags, swells, breaks)
- Voltage unbalance
- Phase currents, neutral current
- Voltages and currents harmonics (DC,1,2,...49)
- Phase and Total Active, Reactive, Apparent power
- Phase and Total Power factor and Coso
- Phase and Total Active energy (Class 2 EN61036), Reactive energy (Class 3 IEC1268)
- All channels concerning Powers, Pf, cosφ and Harmonics are automatically managed as generated and consumed.
- Number of recorded parameters: 383 (fixed)
 Max number of voltage anomalies: 65530
 Integration Period: 5, 10, 30s, 1, 2, 5, 10, 15, 60min.
 Recording autonomy: > 30 days with integrated period of 10 minutes
 Memory capacity: 8Mbyte

POWER SUPPLY: Internal power supply:

Battery autonomy: External power supply: Rechargeable battery LI-ION > 6h (WiFi on), >15h (WiFi off) By mean Red/Yellow plugs, 100V ÷ 415V, 50/60Hz 45mA@100V, 30mA@230V, 20mA@415V

COMMUNICATION INTERFACE

PC (Windows), Tablet/Smartphone(iOS, Android): USB (PC only) / WiFi

MECHANICAL FEATURES:

Dimensions (L x W x H): Weight: 245 x 210 x 110mm 1.5kg

WORKING ENVIRONMENTAL CONDITIONS:

Reference temperature:	$23^{\circ}C \pm 5^{\circ}C$
Working temperature:	0°C ÷ 40°C
Allowed relative humidity:	<80%RH
Storage temperature:	-10°C ÷ 60°C
Storage humidity:	<80%RH

POWER/ENERGY MEASUREMENTS REFERENCE GUIDELINES:

Features of voltage supplied by public utilities: Active energy static counters for AC current Reactive energy static counters for AC current EN50160 (flicker and frequency analysis not performed) EN61036 (Class 2) IEC1268 (Class 3)

GENERAL REFERENCE GUIDELINES:

Safety of measuring instruments: Insulation: Pollution degree: Encapsulation: Measurement category: Max height of use:

double insulation 2 IP65 (case board closed) CAT IV 300VAC to ground, max 460V between Inputs 2000m

This instrument complies with the prescriptions of the European directive on low voltage 2014/35/EU (LVD) and EMC directive 2014/30/EU

IEC/EN61010-1