

# PQM-1000s

## features



- True RMS Measurement
- Waveform Display for Voltage and Current
- Graphical Phasor Display
- Harmonics Spectrum Bar Graph Display
- 4 Quadrant Energy Measurement
- Demand for kW, kVA and Ampere (Max, Previous, Rolling)
- Info / Event Summary Page Display
- Phase Supply LED Indicator
- Phase Rotation Indication
- Complies with: IEC 60255-27-Clause 10.6.4.2 / 4.3 ; EN 61326-1
- External Plug-in Module for RS-485 Modbus RTU Model: A-01s / A-01sp (isolated type)
- External Data Logging Module Model: B-01s (micro SD card / max. storage 32GB) (Compatible only with firmware version 2.0.02 onwards)

## technical data

### Network Type

3P4W, 3P3W, 3P3W (ARON) & 1P2W

### Display Type

Graphical LCD with white LED backlight

### Aux Power Supply

PQM-1000s-220a : 65 ~ 275 Vac (45 ~ 65 Hz),  
90 ~ 300 Vdc  
PQM-1000s-024d : 18 ~ 72 Vdc  
Consumption : < 3VA

### Current Measurement

AC Input Range : 0,005 ~ 6,500 A  
Accuracy :  $\pm 0.5\%$   
CT Range : 0 ~ 10,000 / 5A (for model CT.../5A)  
0 ~ 4,000 / 1A (for model CT.../1A)  
Burden : < 0.1 VA at 5A

### Voltage Measurement

AC Input Range : 0~300 VLN , 0~500 VLL  
Accuracy :  $\pm 0.5\%$   
VT Range : 1.0 ~ 2500.0 : 1

### Power Measurement

Accuracy (W, Var, VA, PF, Cos  $\Phi$ ) :  $\pm 1.0\%$

### Frequency Measurement

Range : 45 ~ 65 Hz  
Accuracy :  $\pm 0.1\%$

### Energy Measurement (4 Quadrant)

Range : 0.0 ~ 9,999,999,999.9  
(kWh, kVAh, kVAh)

### Mechanical

Operating Temp. : -5°C ~ +55°C  
IP Rating : IP54 (front panel)  
Installation : Panel flush mount  
Dimension (mm) : 99.2 (h) x 99.2 (w) x 45 (d)  
Weight : approx. 310 gram

## measured parameters

**Voltage** : V1, V2, V3, V12, V23, V31, V asymmetry

**Current** : I1, I2, I3, In

**Power** : P1, P2, P3,  $\Sigma P$

**Reactive Power** : Q1, Q2, Q3,  $\Sigma Q$

**Apparent Power** : S1, S2, S3,  $\Sigma S$

**Active Energy** : Import and Export (kWh)

**Reactive Energy** : Inductive and Capacitive (kVAh)

**Apparent Energy** : (kVAh)

**Frequency** : Hz

**True Power Factor** : PF1, PF2, PF3, PFavg

**Displacement Power Factor:**

Cos  $\Phi$  1, Cos  $\Phi$  2, Cos  $\Phi$  3, Cos  $\Phi$  avg,  
360° phasor angle measurement for  
V1, V2, V3, I1, I2, I3, In

**Max / Roll / Prev. Demand** :

I1, I2, I3, Iavg, P1, P2, P3,  $\Sigma P$ , S1, S2, S3,  $\Sigma S$

**Harmonics:**

1st to 31st for Voltage and Current

**Total Harmonic Distortion** : Voltage and Current

Min/Max events (V, I, thd-V, thd-I & P) with elapsed time for max

**k-Factor measurement for Ampere** :

kF1, kF2, kF3 (indicative)

**Running Hours**

Hour Run

## communication

**A-01s / A-01sp** Plug in module  
(sold separately)

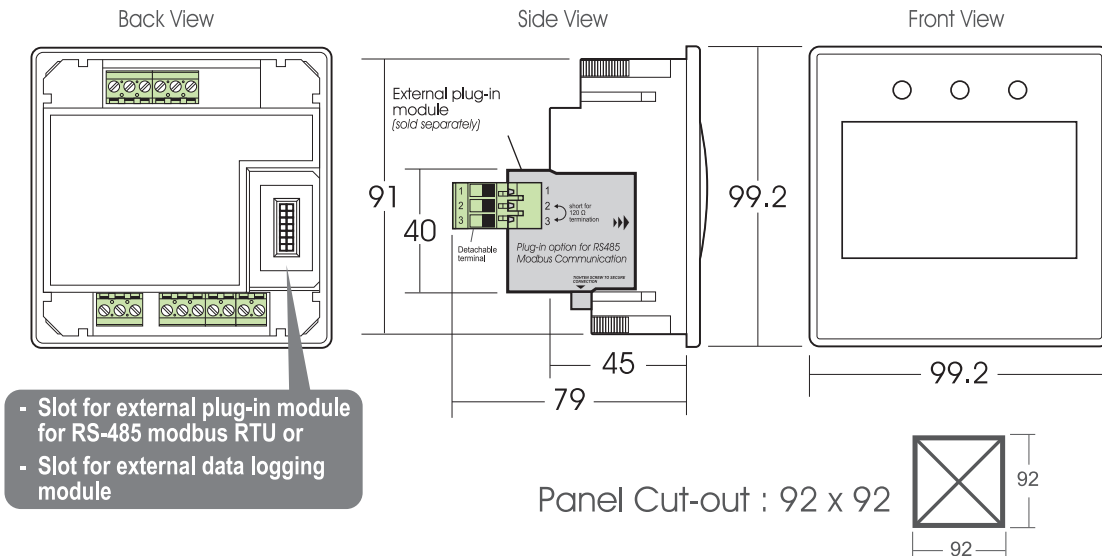
Modbus RTU RS-485 (isolated type) with :-

i) Modbus Address : 1 ~ 247

ii) Baud rate (kbps) : 0.6, 1.2, 2.4, 4.8, 9.6, 19.2, 28.8, 38.4

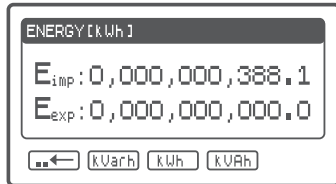
iii) Parity : None / Odd / Even

## casing dimension

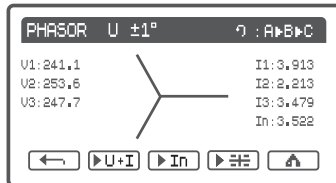


## page display sample

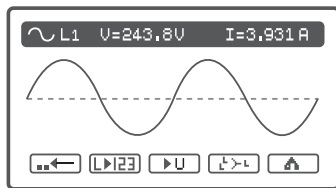
energy parameters page (kWh)



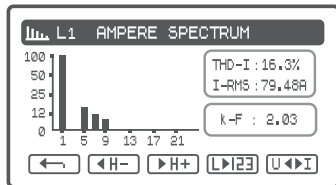
phasor angle definition page



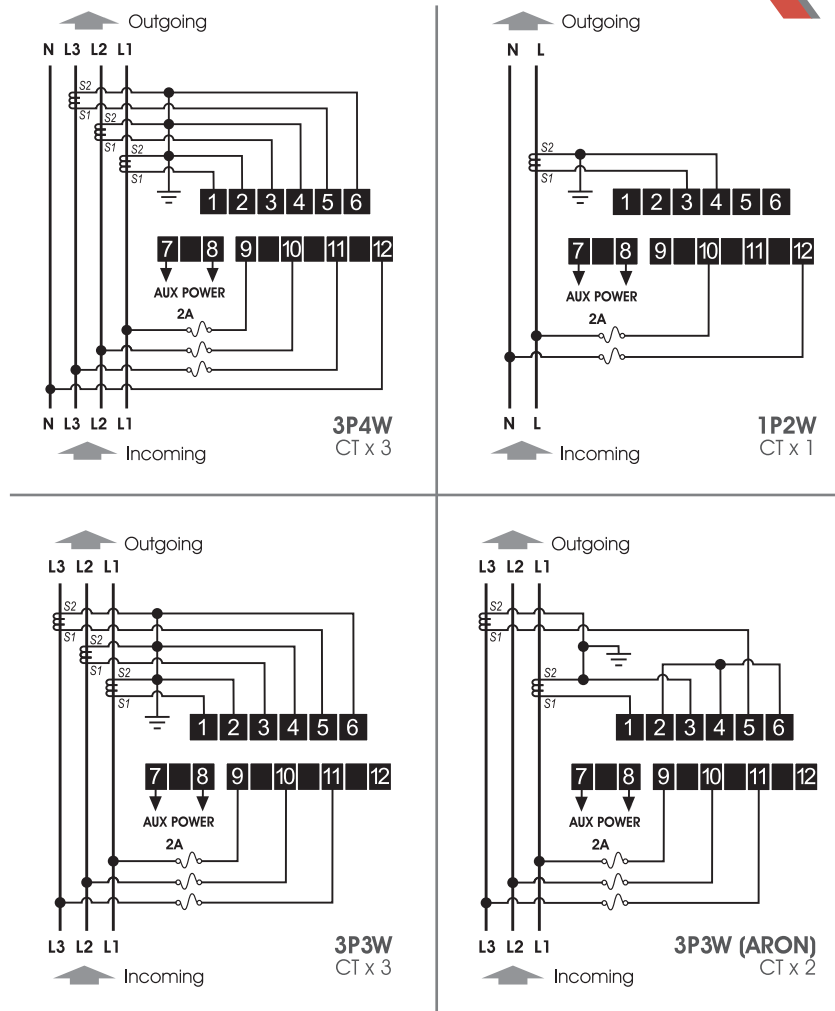
voltage & ampere waveform page



harmonic spectrum bar graph page



## wiring diagram



## ordering information

Model	Description
PQM-1000s-220a-5A	(CT.../5A) 65 ~ 275 Vac (45~65 Hz), 90~300 Vdc
PQM-1000s-220a-1A	(CT.../1A) 65 ~ 275 Vac (45~65 Hz), 90~300 Vdc
PQM-1000s-024d-5A	(CT.../5A) 18 ~ 72 Vdc
PQM-1000s-024d-1A	(CT.../1A) 18 ~ 72 Vdc

Note: All measurement in mm.