



- 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-61326-1
- External Plug-in Module for RS-485 Modbus RTU Model: A-01s (isolated type)

### technical data

#### Network Type

3P4W, 3P3W, 3P3W (Aron)

#### Display Type

Graphical LCD with white LED backlight

#### Current Measurement

AC Input Range : 0.005 ~ 6.500 A  
 Accuracy :  $\pm 0.5\%$   
 CT Range : 0 ~ 10,000 / 5A  
 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)

#### Communication

A-01s : Modbus RTU RS-485 (isolated type)  
 Plug in module with selectable baud rate (kbps)  
 (sold separately) 0.6, 1.2, 2.4, 4.8, 9.6, 19.2, 38.4

#### Aux Power Supply

AC range : 65 ~ 275 Vac, 45 ~ 65 Hz  
 DC range : 90 ~ 300 Vdc  
 Consumption : < 3VA

#### Mechanical

Operating Temp. :  $-5^{\circ}\text{C} \sim +55^{\circ}\text{C}$   
 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 (kVarh)

**Apparent Energy** : (kVAh)

**Frequency** : Hz

**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 (odd harmonics) 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

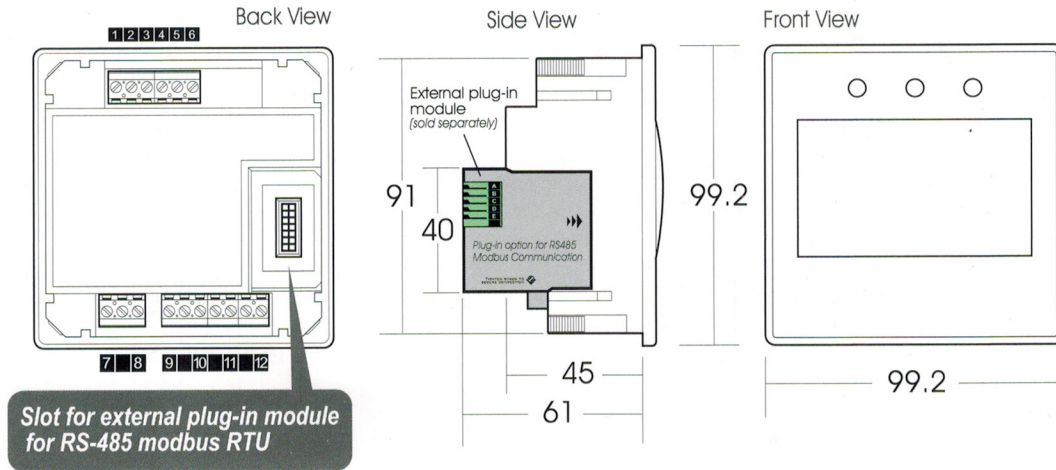
#### k-Factor measurement for Ampere :

kF1, kF2, kF3 (indicative)

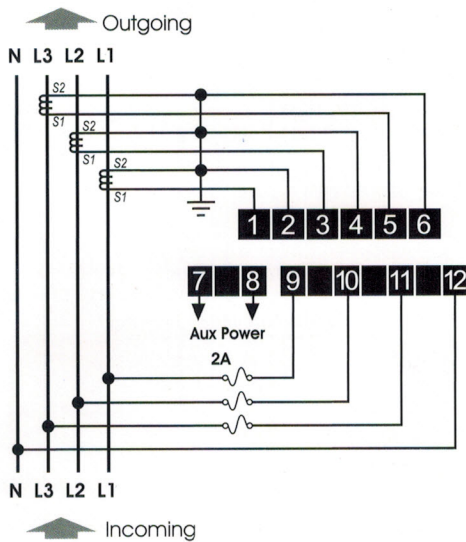
#### Running Hours

Hour Run

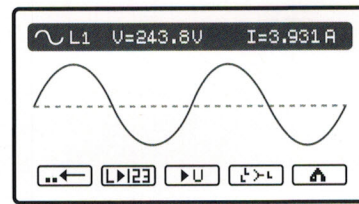
## casing dimension



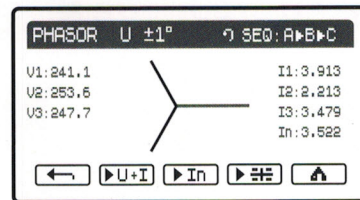
## wiring diagram



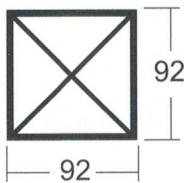
## display : voltage & ampere waveform



## display: phasor angle definition

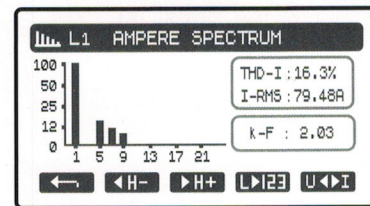


## panel cut-out



Panel Cut-out : 92 x 92

## display : total harmonic distortion



## ordering information

Model	Description
PQM-1000s	65 ~ 275 Vac (45~65 Hz) 90~300 Vdc