



# Smart Meter

## SPM-1800



### Features

- Class 0.5 bi-directional energy and full power parameters measurement.
- Block or Rolling power demand measurement.
- THD, individual harmonics, and sag/swell power quality records.
- Data logging for alarm, sag, swell events with time-stamped.
- Report generation for daily and monthly power usage including kWh, Demand, peak THD, peak voltage, max/min kW
- Communication interfaces : Ethernet, RS485
- Communication protocol: Modbus over TCP/IP for Ethernet, Modbus or DNP 3.0 for RS485.
- Up to 4 channels of re-transmission analog outputs for field integration.
- 12 digital inputs for power system status monitoring.
- 2 digital relays for kWh pulse or alarm outputs.
- Automatic detection of voltage & current wiring
- Multi-language support

### Specifications

#### Power parameters measure

Current : 3 phase, neutral, accuracy 0.1%  
 Voltage : 3 phase phase-phase, phase-neutral, accuracy 0.1%  
 Frequency : 47/63 Hz  
 Total power : Active, reactive, apparent power, accuracy 0.5%  
 Power per phase : Active, reactive, apparent power, accuracy 0.5%  
 Power factor(True and Fundamental ) : Total, per phase.

#### Energy measure

Energy : Active, reactive, apparent energy, accuracy 0.5%  
 Bi-directional energy : Deliver and receive kWh, kVARh, kVAh

#### Demand measure \*

Bi-directional Block/Rolling demand

#### Power Quality measure \*

Harmonic : V, I THD and individual harmonics  
 Sag/Swell : Configurable setting points

#### Report and event logging \*

Report : Daily report : this day, yesterday  
 Regular report : this period, last reset  
 Event logging : Sag, swell, alarm logging

#### Display and input/output

Panel display : Mono 128 x 128 STN-LCD  
 Digital input : 12 channel dry contact inputs  
 Digital output : 2 channel relay for alarm or kWh pulse output  
 Analog input\* : 4 channel 4~20mA input  
 Analog output : 4 channel 4~20 mA for V, I, kW, kVA, kVAR  
 Voltage connection : not exceed 600 V  
 Current connection : 0~5A  
 Power supply : 86~242 VAC or 100-300VDC

#### Communication

Primary port : RS485 Modbus or DNP 3.0 protocol  
 Secondary port\* : Ethernet for 10/100 Mbps  
 Modbus over TCP/IP protocol

#### Environmental & Physical

Operation temperature : -10 °C to 55 °C  
 Storage temperature : -25 °C to 60 °C  
 Humidity : 20 to 80%RH (non-condensing)  
 Dimensions : 144mm(L) x 144mm(W) x 94mm(H)

\* : only in Advance model

### Ordering Information

#### Ordering Code

SPM-1800 -

#### Model

0 : Standard  
 1 : Advance

#### Secondary Port

0 : No secondary port  
 1 : Ethernet

#### AO function

0 : Without AO function  
 1 : With AO function

#### AI function

0 : Without AI function  
 1 : With AI function

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