

Technical Specifications
of
Single Phase AC Static Utility Meter
(SPU101)



240VAC, (10-60)A, Class 1
(IS:13779)

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General Specifications

1) GENERAL:

Meter measures Active, Reactive, Apparent energy on 1 phase 2 wire system, Output LED are placed on front panel to indicate Power ON, KWh Impulse and Tamper Condition,
16X2 LCD with backlight feature are provided for indicating presence of voltage, Current and other parameters,
Front Key is provided to stop, scroll and to view the display parameters,
RTC with battery backup is used for time keeping and has a calendar of 100 years,
Power Line Communication can be done using RS485 communication with MODBUS RTU,
Conforms to standards IS13779 and other relevant standards depending on the configuration.

2) METER FEATURES:

2.1) Display Details:

Liquid Crystal Display (LCD) type – The parameters calculated by the meter are displayed on a custom built LCD.

Selectable Parameters – Can select any out of 13 parameters.

Scroll rate – The scroll rate of the display parameter scroll in steps of 4secs. A key is provided to stop the scroll to view the particular parameter.

2.1.1) Display Parameters:

Time,
Date,
Meter ID,
Active Energy (Kwh), Voltage
(V),
Current (I),
Power Factor (p.f.) ,
Frequency (Hz.),
Active Power (KW)
Reactive Power (KVAr),
Apparent Power (KVA),
Maximum Demand (KW), MD
Date and Time.

2.2) Communication:

2.2.1) Communication Interface:

Through RS485 Communication with MODBUS RTU,
Power Line Communication using Power Line Node and Concentrator.

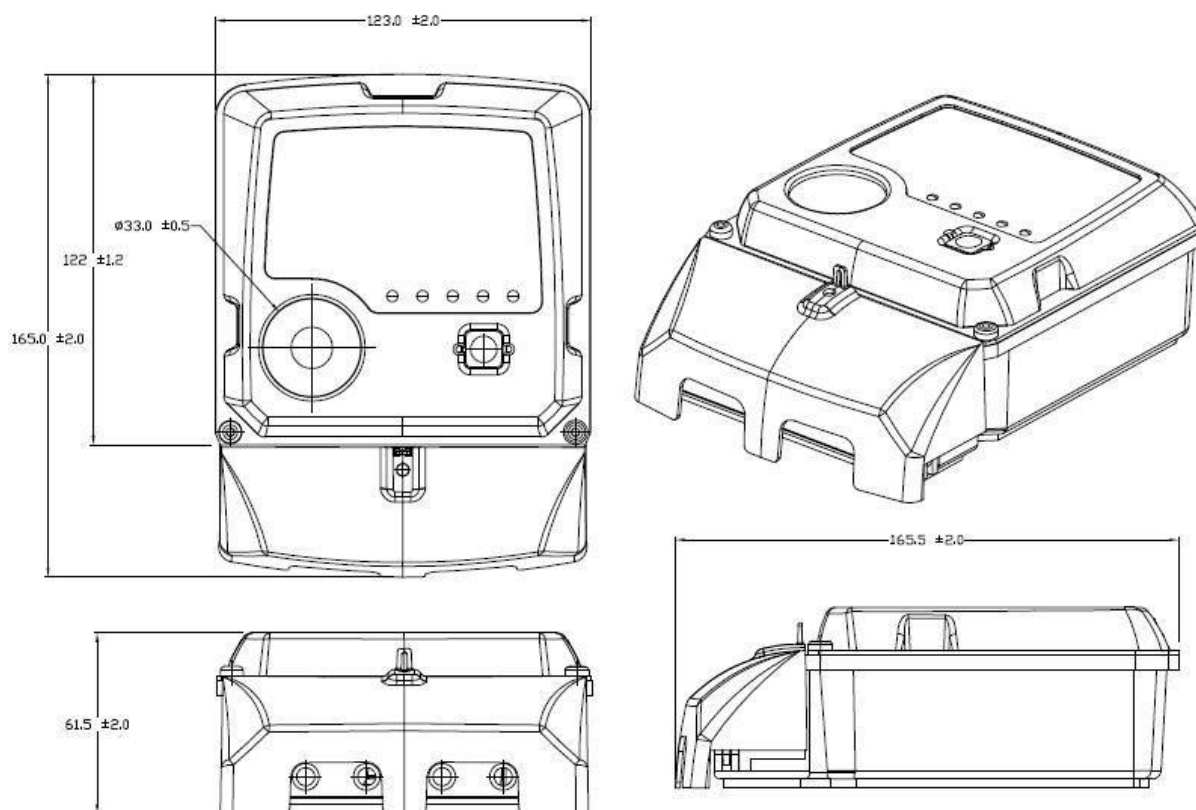
Note:

- (i) Field Programmability of the meter is optional based on the customer requirement,
- (ii) Each meter is given a unique number at the factory.

2.3) Pulse Counting Method:

KWh Impulse and Tamper Indication output LEDs are provided on the front panel,
It shows 3200 Impulses/KWh for 1ph 2W 240V / 60A.

3) DIMENSION DIAGRAM:



Dimension Chart for Single Phase AC Static Utility Meter

Technical Specifications

Accuracy	: IS13779 (Class 1.0S)
Nominal Voltage	: 1Ph 2W – 240VAC ($\pm 10\%$)
Nominal Current	: Whole Current (10-60A)
Basic Current	: 5A
Starting Current	: 0.2% Ib (Class 1.0)
Power Factor	: 4 quadrant operation
Frequency	: 50Hz, $\pm 5\%$
Meter Constant	: 3200 Impulses/KWh
Resolution	: 0.1
Display	: LCD (16x2 Digits – white character with blue background)
Tamper Indication	: Through LED Indication (Separate Neutral CT Provided)
Communication	: RS485 Communication with MODBUS RTU in integration with Power Line Communication
Temperature	: Operating Temp. – (-10 to 55) $^{\circ}$ C Storage Temp. – (-20 to 70) $^{\circ}$ C Humidity 5 to 95% RH at 50 $^{\circ}$ C (Non-Condensing)
Dimension	: (L 165 x W 123 x H 61.5) ± 2.0 mm
Mounting	: Wall Mounting
Weight	: 720gms. (app.)