

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 (KVA_r),
- 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.

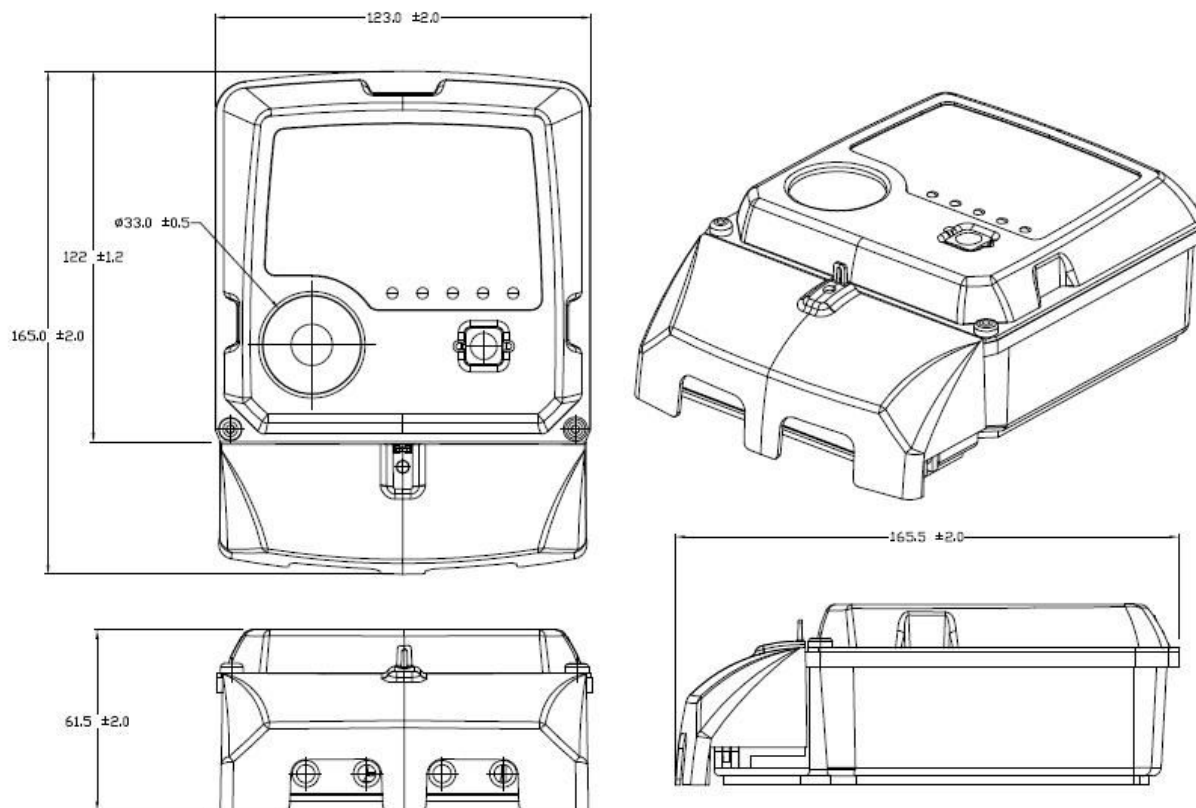
Note:

- (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.)