

User Manual
Single Phase Two Wire
Static Watt –hour Meter
Class 1

SPM101



Sai PowerrZerve
29/3B, Rajalakshmi Nagar, 1st Main Road,
Velachery Bye Pass, Chennai – 600 042

General Description

- Meter accumulates Active energy (kWh) on 1 phase 2 wire system.
- Meter Front Panel has a 2x16 LCD Blue with white character display and 1 soft key.
- All four quadrant measurement for kWh are stored in non-volatile memory
- Measures instantaneous RMS values, power parameters.
- Rs485 (MODBUS Compatibility)
- LED Indication:
Provided for Power On, kWh Impulse and for Tamper



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Display Parameters:

1. Serial no
2. Time
3. Date
4. ID
5. Cumulative Energy (kWh)
6. Volt
7. Current
8. Power factor
9. Frequency
10. Active Power(kW)
11. Reactive Power (kVAr)
12. Apparent Power (kVA)
13. Maximum Demand (Integration period 30 min)

Key function:

Press the Key to enter into Manual scroll mode
(To view next parameters press the key sequentially)

For Auto scroll mode, press and hold the key for 3 secs



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Serial communication: MODBUS RTU

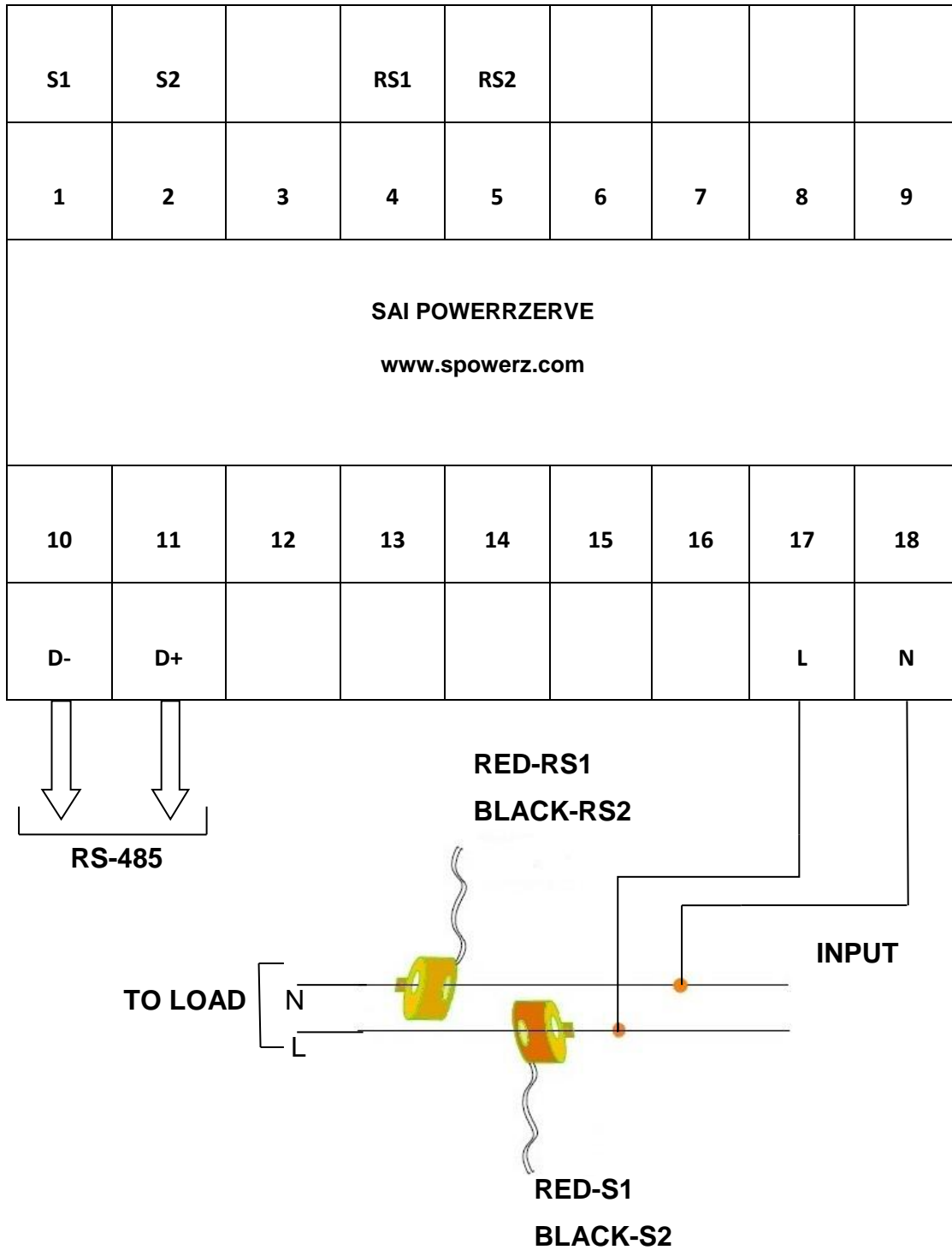
For read Parameters: (Function 3)

Address	Parameters	Words	Resolution
3000	Serial number	2	1
3002	Meter ID	1	1
3003	Real time &date	3	Hr:Min:Sec Day:Mon:Year
3006	Line voltage	2	0.001
3008	Line current	2	0.001
3010	Power Factor	2	0.001
3012	Frequency	2	0.001
3014	Cum Active Energy (kWh)	2	0.1
3016	Active Power (kW)	2	0.001
3018	Reactive Power (kvAr)	2	0.001
3020	Apparent Power (kVA)	2	0.001
3022	Maximum Demand (kW)	2	0.001
3024	MD occurrence – Hr, Mi	1	
3025	MD occurrence – Sc, Dt	1	
3026	MD occurrence – Mn, Yr	1	
For Write parameters			
3002	Meter ID & Day	1	
3003	Real time& Date	3	
3047	MD Reset	1	



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Connection diagram



Technical Specifications

Accuracy	: class 1
Resolution	: 0.1 for kWh
System	: 1 phase 2 wire whole current
Input Voltage	: 240V AC +/- 10%
Basic Current	: 5A
Maximum Current	: 40A
Starting Current	: 100 mA onwards
Measuring Range kWh	: Four Quadrant Measurement
Meter Constant	: 3200 impulses/kWh
Burden	: Voltage Ckt < 1.0VA Current Ckt < 0.5VA
Display	: LCD (2x16) blue with white character
Communication	: RS485 with MODBUS RTU
Dimension	: (96x96x45) mm ±2.0
Panel Cutout	: 92x92 (-0.5mm)
Mounting	: Panel Mounting
Terminals	: Screw terminals (U lug – 2.5mm)
Temperature	: Operating Temp. – (-10 to 55) °C Storage Temp. – (-20 to 70) °C Humidity 5 to 95% RH at 50°C (Non-Condensing)
Weight	: 240gms. (approx.)

Additional Features:

Tamper Indication : Provided through LED placed on font fascia

Neutral current

Measurement : By a separate CT



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