

SEMARS DIGITAL

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Smart Equipment Monitoring
and Resolution System

SENSORS DATA SHEET

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01

AC Energy Meter

The dual-channel AC energy meter designed for accurate measurement of voltage, current, and frequency in industrial and telecom environments. It supports both single-phase and three-phase configurations and features Modbus communication over RS485. The device is DIN rail mountable and includes a user-friendly alphanumeric display for local operation.



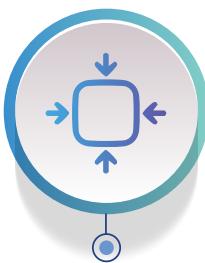
Its features and applications are as follows:

1.1 Key Features:



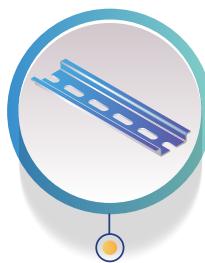
**Dual-Channel
(Dual source 3Ph /1Ph settable)**

Industry
Standard
Sensor



**Reverse
Polarity
Protection**

Milli Amps
Current
Intake



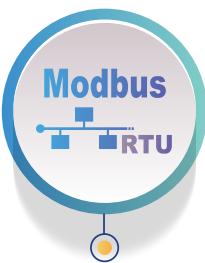
**DIN
Rail
Mounting**

Range of
Voltages
Supported



**Isolated
Rs485
Port**

Alarms and
Buzzer
Indication



**Modbus
Protocol
Support**

Blocks
False
Alarms

1.2 Applications:

- **Telecom shelter power monitoring**
- **Industrial energy management**
- **Generator and grid power tracking**
- **Smart infrastructure metering**
- **Cabinet-level voltage and current monitoring**

This type of sensor is particularly suitable for industrial or commercial environments requiring precise monitoring and integration with existing systems.

1.3 Specifications

I. Mechanical

SL No.	Specification	Value
1	Mounting Type	DIN Rail
2	CT Rating	100A / 200A
3	CT Mounting Type	Hanging Type
4	CT Dimensions	Min ID: 25mm; Max: 100mm × 100mm
5	Display	Two-row, 16-Character Alphanumeric
6	Switches	Yes (Local Operation)
7	PCB Material	ABS Heat-Resistant Grade
8	PCB Coating	Industrial Grade with Multi-level Enamel

II. Electrical

9	Auxiliary Power Supply	230VAC or 20–60VDC
10	Power Consumption	<2W
11	Operating Temperature	0°C to 55°C
12	Storage Temperature	-20°C to -80°C
13	Relative Humidity	Up to 95%
14	DG Running Sensing	Feedback Voltage Sensing with Protection
15	Reverse Polarity Protection	Yes

III. Measurement

16	Voltage Range	80–300V (Ph-Neutral), 135–520V (Ph-Ph)
17	Voltage Resolution	0.1V
18	Current Range	0–1000A
19	Current Resolution	0.1A
20	Frequency Range	45Hz–65Hz
21	Frequency Resolution	0.01Hz
22	Accuracy	±0.5%
23	Temperature Drift	0°C to 55°C

IV. Communication

24	Communication Port	Isolated Rs485
25	Protocol	Modbus
26	Baud Rate	9600
27	Slave ID	Settable (up to 1255)
28	Parity / Stop Bit	None / 1

1.4 Note:**Operating and storage conditions :**

- Supports both generator and grid power monitoring.
- Ideal for environments requiring high accuracy and robust communication.
- Compact design suitable for cabinet integration.

Attention :

- Ensure correct CT rating and mounting for accurate readings.
- Avoid exceeding voltage and current limits. Do not operate outside specified temperature and humidity ranges.
- Use only recommended auxiliary power supply.

Certifications :

- CE Certified
- RoHS Compliant
- ISO 9001 Manufacturing Standards



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