

SEMARS DIGITAL

SEMARS

Smart Equipment Monitoring
and Resolution System

SENSORS DATA SHEET

SEMARS DIGITAL

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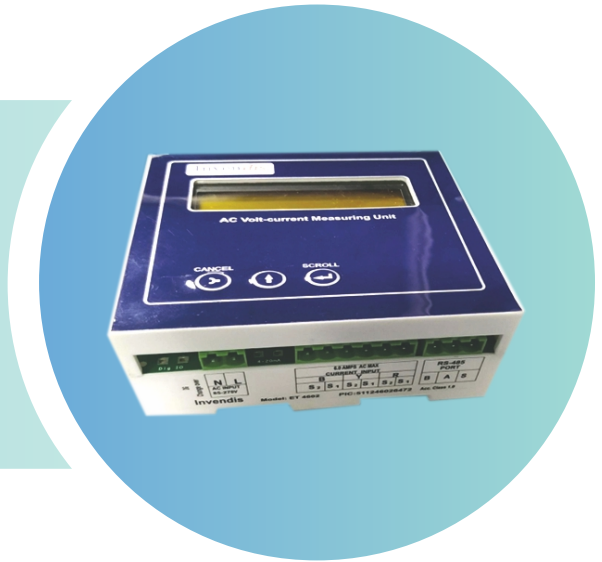
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01

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.



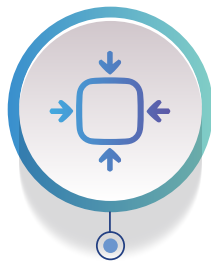
Its features and applications are as follows:

1.1 Key Features:



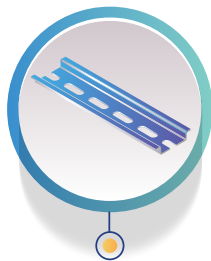
Dual-Channel
(Dual source 3Ph
/1Ph settable)

Industry
Standard
Sensor



**Reverse
Polarity
Protection**

Milli Amps
Current
Intake



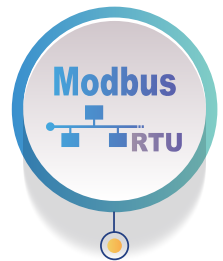
**DIN
Rail
Mounting**

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.

Certifications :

- CE Certified
- RoHS Compliant
- ISO 9001 Manufacturing Standards

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.



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