SEMARS DIGITAL

SEMARS

Smart Equipment Monitoring and Resolution System

SENSORS
DATA SHEET

SEMARS DIGITAL

India : MSR North Tower, 16th Floor, MS Ramaiah North City, Manyata, Bengaluru - 560045
UAE : FDRK5907, Compass Building, Al Hamra Ind Zone-FZ, UAE
Oman : OFC 2/16, Focus Business Center, Way56, Muscat, Oman
Netherlands : 23-Aramstraat, 1336 HR, Almere, Netherlands
Contacts : info@semarsdigital.com | https://semarsdigital.com

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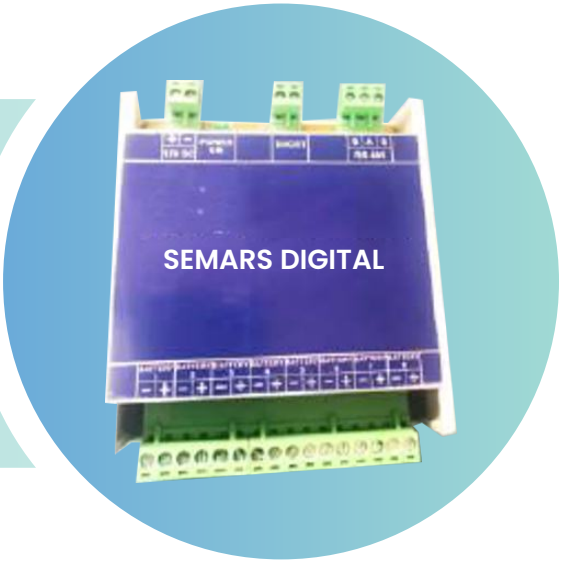
01

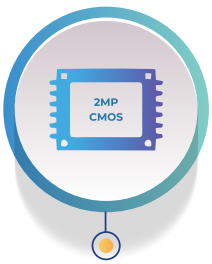
Battery Monitoring Sensors

A Battery Monitoring System (BMS) for an 8-battery series configuration is an electronic solution designed to continuously measure and manage the voltage, temperature, and health of each individual battery within a series-connected bank, ensuring balanced performance, early fault detection, and protection against over-voltage, under-voltage, and thermal issues, while providing communication interfaces for real-time monitoring and integration with supervisory systems.



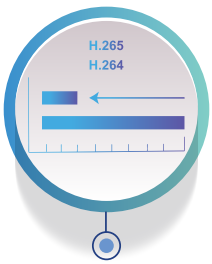
Its features and applications are as follows:

1.1 Key Features:



Monitors individual voltage and temperature for each battery in a series-connected bank

Reduces operating costs



Accurate measurement of each battery's voltage to detect imbalance or faults

Tracks battery temperature to prevent overheating and thermal runaway.

Over-voltage, under-voltage, and over-temperature alerts with relay outputs

Easy installation in battery racks or cabinets

Manageable via Semars Cloud

1.2 Applications:

- Uninterruptible Power Supply (UPS) Rooms
- Solar PV and Renewable Energy Systems
- Telecom Sites
- Industrial Backup Systems
- Energy Storage Systems (ESS)
- Railway and Transportation Infrastructure
- Oil & Gas and Utility Substations

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

1.3 Specifications

SL No.	Specification	Value
1	Input Voltage:	12V DC (9 to 15V DC)
2	Measuring Range:	1V DC to 120V DC (Each channel)
3	Accuracy:	± 0.5V
4	Opto-based Digital Output:	1 Port to extend alarm
5	Number of Channels for Measuring:	8 Channels
6	Communication:	RS485 Modbus
7	Slave ID Selection:	Through DIP switch
8	Mounting:	DIN Rail Mount
9	LED Indication:	Provided for power status of the unit

1.4 Note:

Operating and storage conditions :

- Operating Temperature: 0°C to 55°C
- Humidity: Max. 90% (Non-condensing)
- Chemical Handling: Store reagents away from heat and temperature extremes; powders kept dry

Certifications :

- CE Certified
- RoHS Compliant
- IPV6 Packing
- ISO 9001 Manufacturing Standards