

Electric Vehicle DC Insulation Monitoring Device

This device monitors DC voltage and detects insulation resistance within 0-1000 kOhm. It provides alarm outputs, CAN-BUS communication, and earth fault detection for integration into electric vehicle systems.



ADDITIONAL IMAGES



Overview

Advanced Insulation Monitoring

The JY1000-EV series is a specialized insulation monitoring device designed for real-time safety assessment in high-voltage electric vehicle and energy storage systems. It provides reliable monitoring of insulation resistance for both DC floating systems up to 1000V and AC floating systems up to 750V, even under complex conditions like acceleration, braking, and energy recovery. With built-in CAN bus communication and automatic Y-capacitor adaptation, it ensures seamless integration and accurate fault detection for critical high-voltage infrastructure.

Technical Specifications

IP Protection

IP 55

DC Measurement Range	1000 VDC
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AC Measurement Range	750 VAC
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Insulation Resistance Range	0 - 50 M Ω
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Power Supply	9-36 VDC
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Input Power Consumption	2 W
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Weight	0.5 kg
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Performance Metrics

Measurement Accuracy

1 %

General Accuracy

12 k \odot

Accuracy @ 0-100k \odot

Response Time Table

Resistance (RISO)	Capacitance (CY)	Response Time
e 500k \odot	0 F $\frac{1}{4}$	4s
< 500 k \odot	0 F $\frac{1}{4}$	5s
1 M \odot	1 F $\frac{1}{4}$	8s
1 M \odot	2 F $\frac{1}{4}$	12s

Environmental & Interface

Operating Temperature	-40 to +85
Communication Interface	CAN bus
Isolation Withstand Voltage	3500VDC, 2500VAC (RMS)

Applications

Suitable Applications

- Electric vehicle high voltage power battery systems
- Hybrid electric vehicle high voltage systems
- Hydrogen energy vehicle high voltage systems
- Energy storage systems
- General DC/AC floating systems