

Energom-DU-S1 SERIES INSULATION MONITORING RELAY

DC INSULATION MONITORING



Introduction

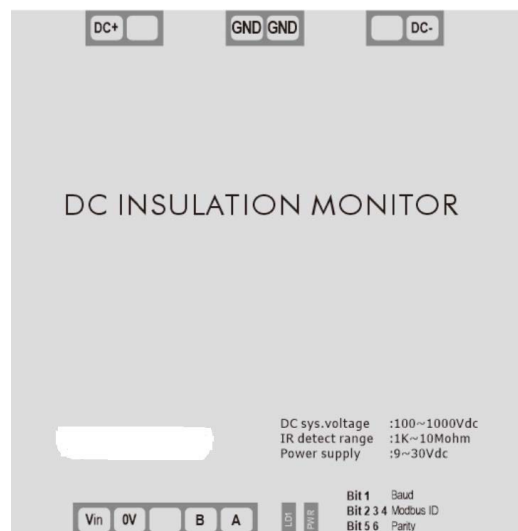
Energom-DU-S1 (-S1S) is a DC insulation monitoring device based on MODBUS protocol, including DC to ground insulation impedance monitoring, DC voltage monitoring, DC voltage reverse connection alarm and other safety monitoring functions. It can be used for electric vehicle DC charging system, photovoltaic system, energy storage system, DC grid and other DC systems below 1000V. Energom-DU-S1 (-S1S) has the function of starting and stopping insulation monitoring. After insulation monitoring is started, the insulation resistance of positive and negative poles to ground can be monitored in real time. The monitoring result is not affected by DC voltage fluctuation, and is not affected by the symmetry of insulation resistance of positive and negative poles.

Energom-DU-S1	Standard model
Energom-DU-S1S	With Self-test function

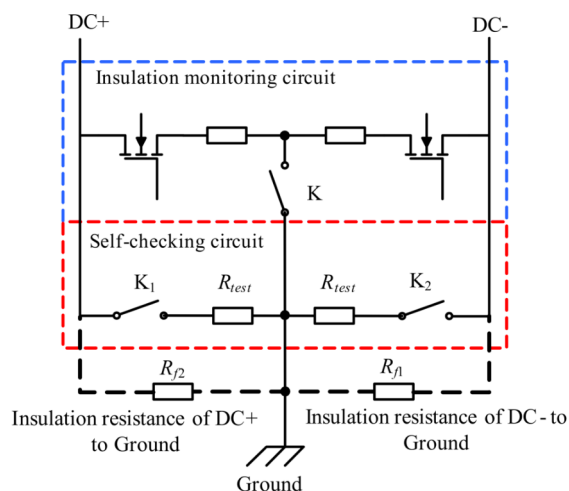
Main Features

- Rail mounting or screw fixing.
- Voltage reverse polarity alarm.
- High voltage grounding switch.
- Convenient parameter setting.
- Adaptive capacitance to ground.
- Monitor positive and negative poles.
- Insulation monitoring equipment self-test.
- RS485 remote monitoring and management.
- Widely insulation monitoring range (100V~1000VDC).

Terminal Definition



Self-test Working Principle (Energom-DU-S1S)



Technical Characteristics

Basic parameters			
Power supply	10-30VDC, power 3W		
DC voltage range	100V~1000V		
DC voltage measurement accuracy	≤2V+0.3%		
Insulation resistance measurement range	1KΩ~10MΩ (DC System voltage:100V~1000V)		
Insulation monitoring accuracy (When :DC voltage:100V-1000V)	CY range	Resistance range	Accuracy
	0~0.8μF	≤60KΩ	≤3KΩ
		60kΩ<R≤1MΩ	≤5%
	0.8μF ~3μF	≤60KΩ	≤6KΩ
60kΩ<R≤1MΩ		≤20%	
Off-line pressure test	<2mA		
Maximum relay switching voltage	250VAC/30VDC		
Maximum relay switching current	3A		
Relay contact resistance	<100mΩ		
Relay insulation resistance	100MΩ		
Communication	RS485,modbus RTU		
Dimension	98*49*52mm,Din-rail:35mm		
Standard	IEC 61851-23 (2014-03):2014-11		
Humidity	85%		
Storage environment	- 40°C ~125°C		
Operating environment	- 40°C ~75°C		

Other parameters		
Pressure point	Maximum voltage rating	Time
DC+/DC- to GND	4200VDC/3000VAC	≤1min
Power supply +/- to GND	3500VDC/2500VAC	≤1min
RS485 A/B to GND	3500VDC/2500VAC	≤1min
DC+/DC- to power supply +/-	3500VDC/2000VAC	≤1min
DC+/DC- to A/B	3500VDC/2000VAC	≤1min