ZJJ

Panel mounting
Insulation monitoring relay

Description

ZJJ DC insulation monitoring relay monitors the insulation of the DC bus, and it sends alarm signal when the bus-to-ground insulation drops to a certain value,also it is panel mounted type,and the relay has a high-sensitivity grounding resistance monitoring and display circuit, it is great significance for the safe operation of the DC system.

Main Features

- Monitoring of the DC circuit bus bar insulation resistance RF to earth.
- LCD screen display resistance value.
- Bridge balance method for resistance measurement.
- Adjustable response value ranges of 0-100kΩ.
- Smaller short-circuit grounding current for safe operation.

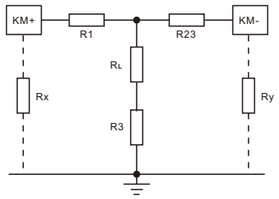
Application

- DC or AC/DC main circuits.
- UPS systems, battery systems.
- IT systems with high leakage capacitances.
- DC charging stations for electric vehicles.

Technical characteristics

Model	ZJJ-4S
Input voltage	300-1200VDC
Power supply voltage	90-150VDC 180-300VDC
Power supply current	7-20mA
Operating temperature	-40°C ~ 70°C, 85%
Measuring resistance	0~199.9KΩ
Precision	V=220V (5%)
Short circuit ground current	V=220V (2mA)
Alarm setting range	0~100KΩ
Action return factor	Rs=50KΩ(95%-98%)
Output contact capacity	Sensitive load=5mS(DC220V0.2A) Resistive load(DC220V 2A)

Typical Schematic



DCG

Din-Rail mounting
Insulation relay

Description

DCG series DC insulation monitor is based on RS485 Modbus protocol, suitable for EV DC charging system, photovoltaic system, energy storage system, DC power grid and other DC systems under 1000V.

This device has the function of insulation monitoring start and stop, insulation monitoring can be real-time monitoring of positive and negative poles to the ground insulation resistance, the monitoring result is nota affected by DC voltage changing, is not affected by the positive and negative poles insulation resistance symmetry.

Main Features

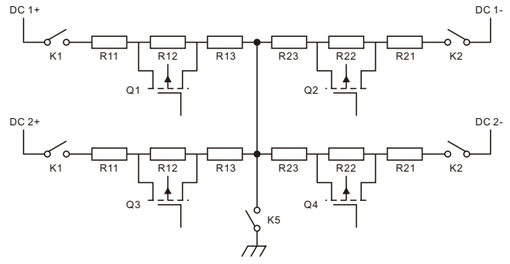
- Monitoring of the DC circuit bus bar insulation resistance RF to earth.
- Bridge balance method for resistance measurement.
- Single channel and dual-channels type optional.
- Wider DC insulation monitoring range DC0~1000V.
- Faster monitoring speed of turning on.
- Communicate with RS485 Modbus networks
- Adaptive capacitance to ground.
- Simple device setting by DIP switch.

Technical characteristics

Model	DCG-UBC1	DCG-UBCH2
Detect channels	Single channel	Dual channels
DC voltage range	0~1000V	
Power supply	9~30VDC	
Insulation resistance range	1KΩ~10MΩ	
Insulation monitoring accuracy	≤3KΩ+10%(100-300V) ≤3KΩ+5% (300-1000V)	
Measurement accuracy	≤2V+0.3%	
Storage temperature	-40°C ~ 125°C	
Operating temperature & humidity	-40°C ~ 70°C,85%	
Off-line pressure test	<2mA	
Communication	RS485 Modbus	
Installation type	Din Rail mount	

Typical Schematic

Dual channel type



DC Insulation monitoring
BLUE JAY®
Technology of Electrical Automatic

ZJS-102

DC System Insulation Monitoring

Description

ZJS-102 Insulation monitoring system is a high accurate and secure online monitoring equipment for DC system insulation. It is designed for the measurement of different types of ground fault, insulation decreasing, AC signal interruption, DC signal interruption and so on.

Monitor detect DC leakage current, mixed with balanced & unbalanced bridge detection mode, can display leakage current of each sub export loops. It integrates voltage transient capture and current synchronous detection, records voltage and current fault curves to achieve instantaneous grounding monitoring and line selection alarm functions.

Main Features

- Monitoring various faults in the DC system: all types of grounding, abnormal voltage, voltage difference.
- Monitoring AC cross-current faults in DC systems.
- Monitoring DC system mutual channeling (ring network) faults.
- It can accurately detect the distributed capacitance of the DC system to the ground.
- Detect the leakage current of all branches.
- With battery pack grounding monitoring and positioning functions.
- Multi-caliber open and closed CT can meet all usage scenarios.

Technical characteristics

Detect range of insulation resistance to ground	
Ground impedance	0 - 50Kohm
Insulation reduction	50-300Kohm
Balance compensation bridge	40K, 60K, 120K;
Detect voltage range	
Positive to ground voltage	0 - 300V
Negative to ground voltage	0 - 300V
Total system voltage	0- 300V
AC interference voltage	0- 300V
Voltage monitoring error	≤0.5%
Real-time current	
Current display resolution	0.01mA
Current display channels	≤240
Current sensor range	10mA, 20mA, 50mA, 100mA optional
History record	
Insulation fault location	±1pcs in battery bank
Number of the record list	2000 lists, every list include 32 channels
Recording frequency	1KHz, 500Hz, 250Hz, 125Hz configuraion
Waveforms capture	8 lists per record
Others	
Passive nodes	7 output
Fault indicator lights	6pcs
Distributed capacitance	0-200uF
Communication interface	RS485 / Ethernet

Ordering Notes:

1. Rated voltage of the DC system.
2. Monitored loops in the DC system.
3. Comm protocol request when work with other SCADA.
4. If dual bus DC system, please provide schematic drawing.
5. Please provide outline diagram of install site.