



AIM-D100 insulation monitor

# AIM-D100 DC insulation monitor

## 1 Overview



AIM-D100 type products are mainly used for monitoring of the positive and negative terminal-to-ground insulation resistance in the DC ungrounded systems. When the insulation resistance is lower than the set alarm value, an alarm message can be sent. The product is based on the unbalanced bridge principle.

The products can be used in DC systems such as DC EV charging systems, PV Solar systems, energy storage systems, and DC power grids.

## 2.Functions

2.1 Real-time measurement and display of the voltage between the positive and negative terminals in the DC system, also voltage between the positive and negative terminals to the ground, the measuring voltage range is 200V~1000V.

2.2 Monitor the voltage fluctuation of the system in real time, and send alarm signal in time when it is over voltage or under voltage .

2.3 Measure the insulation resistance of the positive and negative terminals to ground real time in the DC system. When the resistance is lower than the set alarm value, will send alarm signal.

2.4 The insulation monitoring response time is adjustable from 3 to 60s.

2.5 There are 2 adjustable relay output to set insulation resistance alarm value, optional N/C or

N/O

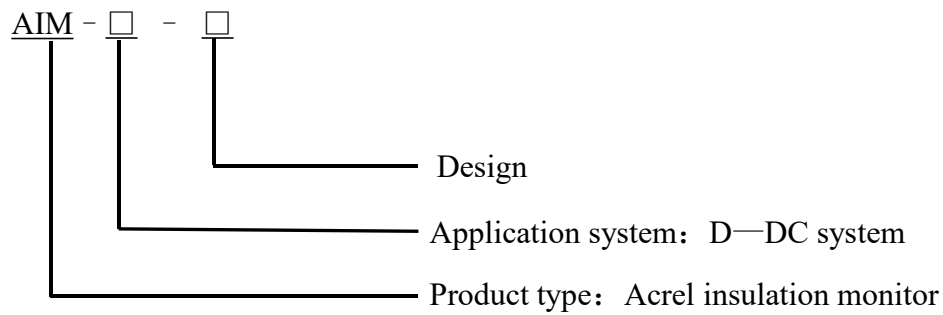
2.6 128\*32 LCD display, LED alarm indication.

2.7 Event record function, which can record the time and fault type while alarm occurs, which is convenient for the maintenance operator to analyze the operating status of the system in time.

2.8 RS485 Modbus-RTU protocol, it can realize data exchange of the system.

2.9 Standard 35mm din rail installation

### 3 Type



### 4 Technical detail

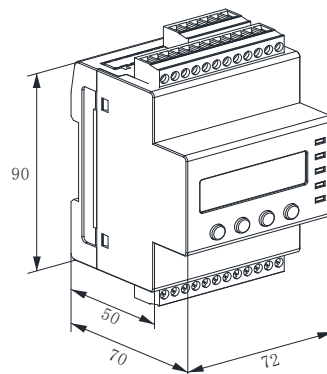
Power supply		9~36VDC
Power consumption		≤6W
System voltage		200~1000VDC
Alarm	Over voltage	110% System voltage
	Under voltage	90% System voltage
Insulation monitor	Resistance range	20 kΩ~10MΩ
	Alarm range	20kΩ~10MΩ, 2 relay settable
Internal DC impedance		<1MΩ
Output		2 relay output, N/C or N/O settable

Communication		RS485 Modbus-RTU protocol
Fault record		20 records fault
Installation		Din rail
Environment	Working Environment	-15~+55℃
	Storage Environment	-20~+70℃
	Relative humidity	<95%
	Elevation	<2000m

## 5 out shape and installation

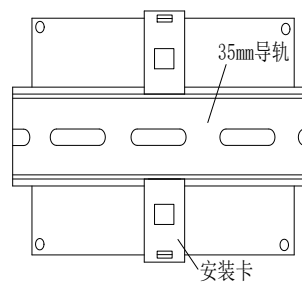
### 5.1 shape and size

AIM-D100 insulation monitor use 4 module size , the size is as below (unit:mm)



### 5.2 installation

AIM-D100 is Din rail 35mm installation as below:

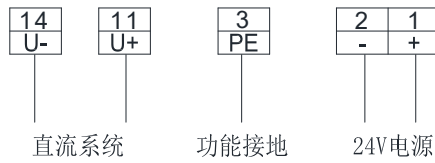


### 5.3 wiring

Terminal 1&2 is power supply 24V, terminal 1 is “+”, terminal 2 is “-”

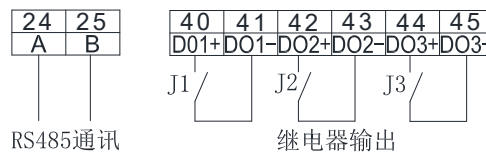
Terminal 11&14 is DC system voltage, terminal 11 is “+”, terminal 14 is “-”

Terminal 3 is “PE”



Terminal 24&25 is RS485, terminal 24 is A, terminal 25 is B

Terminal 40&41, 42&43, 44&45 is relay terminal, terminal 40&41 is fault, terminal 42&43 is over voltage, terminal 44&45 is low voltage.



#### 5.4 Diagram

AIM-D100 DC Insulation Monitor is mainly used to monitor the insulation resistance of the DC power distribution system to ground. When the positive or negative terminal has a ground fault or the insulation resistance to ground below the alarm setting value, the insulation monitoring The instrument will send alarm signal.

