

BIM SERIES DC INSULATION MONITOR

DC INSULATION MONITORING



Introduction

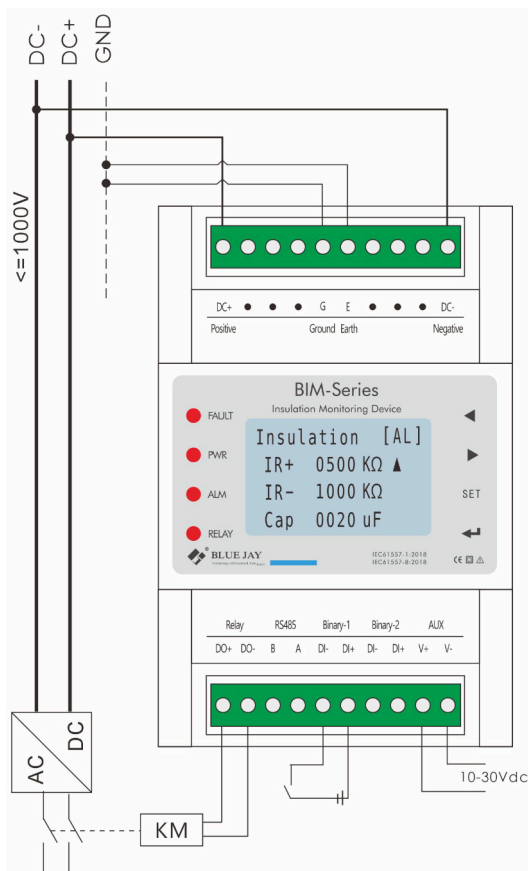
The BIM series insulation monitoring devices are designed for continuous monitoring of unearthed (IT) AC and DC systems, supporting voltage ranges up to 1000V. Models BIM-4MS and BIM-CH1 are optimized for DC IT systems (100–1000VDC), providing real-time measurement of both positive and negative pole insulation resistance. They ensure accurate and stable performance even under voltage fluctuations or pole asymmetry.

The BIM-M1000 extends coverage to 1000 VAC/ DC IT systems, utilizing advanced signal injection technology to continuously track insulation status and enhance system safety. All models support RS485/Modbus RTU, with optional CANbus (BIM-M1000), enabling easy remote monitoring and system integration for energy storage, EV, and DC charging applications.

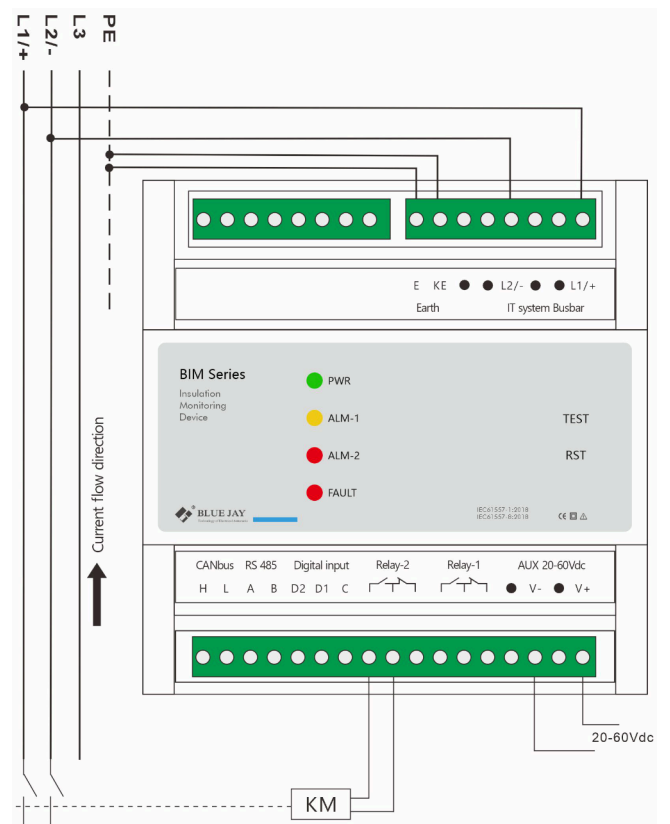
Main Features

- Insulation monitoring for unearthed (IT) AC/ DC systems;
- Auto adaptation to system leakage/ Y capacitance;
- Multifunctional LCD for key parameters display;
- Adjustable alarm thresholds (1kΩ...10MΩ);
- Up to 8 configurable alarms with relay/ LED indication;
- Built-in DI/ DO module for flexible control and alarm interaction;
- Support RS485/ Modbus RTU, optional CANbus;
- Compliant with IEC 61557-1/ IEC 61557-8.

Wiring of BIM-CH1/ BIM-4MS



Wiring of BIM-M1000



Technical Characteristics

	BIM-4MS	BIM-CH1	BIM-M1000
Parameter			
Working principle	Bridge circuit		Active signal injection
Application system	DC system		AC/DC system
Power supply	10-30Vdc, power 3W		20-60Vdc, power≤ 5W
Voltage range	100V~1000Vdc		0~1000Vac/dc
Insulation resistance measurement range	1KΩ~10MΩ		0~30MΩ
Insulation resistance measurement accuracy	CY= 0~0.8μF: ≤60kΩ, accuracy ≤3kΩ ; 60kΩ<R<1MΩ, accuracy≤5% CY= 0.8μF ~3μF: ≤60kΩ, accuracy ≤6kΩ; 60kΩ<R<1MΩ,, accuracy ≤20%		0KΩ~100KΩ, CY≤ 2μF, Bus voltage stability: ±12KΩ 100kΩ~1MΩ, CY≤ 2μF, Bus voltage stability: ±10% 1MΩ~30MΩ, CY =0μF, Bus voltage stability: ±10%
Max system leakage capacitance	≤5μF		≤20μF
Digital output (DO)	1*DO, passive dry contact, SPST, 4A@250Vac/ 30Vdc		2*DO, passive dry contact, SPDT, 5A@250Vac
Digital input (DI)	1*DI, 0.25mA@short circuit	2*DI, 0.25mA@short circuit	2*DI, NO, active dry contact, with internal 15Vdc pull-up voltage Load capacity: Ri<500Ω turn on, Ri> 100KΩ turn off
Virtual alarm	2* virtual alarms	8* virtual alarms	8* virtual alarms
Screen	/	LCD display	/
Dimension (W*H*D)	72*110*66 mm		108*110*66mm
Installation	Standard 35mm Din-rail mounting		
Communication	RS485/ Modbus RTU		RS485/ Modbus RTU, optional CANbus
Standards	IEC 61557-1: 2018; IEC 61557-8: 2018		