BIM-CH1
Insulation Monitoring Device

User Manual



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Read me

When you use BIM-CH1, be sure to read this user manual carefully, and be able to fully understand the implications, the correct guidance of operations in accordance with user manual, which will help you make better use of BIM-CH1, and help to solve the various problems at the scene.

1. Before turning on the power supply, be sure that the power supply within the provisions of the instrument;

2. When installation, the current input terminal must non-open, voltage input terminals must Non-short circuit;

3. Communication terminal (RS485) is strictly prohibited to impose on high voltage;

4. Be sure the instrument wiring consistent with the internal system settings;

5. When communicating with the PC, instrument communication parameters must be consistent with the PC.



- **Please read this user manual carefully**
- **Please save this document**

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1.- SUMMARIZE

BIM-CH1 is designed for continuous insulation monitoring in unearthed (IT) DC systems, supporting voltage ranges up to DC 100–1000 V. The device features dedicated start/stop control for insulation monitoring, enabling real-time measurement of positive and negative pole insulation resistance. Measurement results remain accurate regardless of DC voltage fluctuations or asymmetry between poles.

Equipped with an RS485/Modbus interface, BIM-CH1 allows seamless remote monitoring of system status, ensuring enhanced safety and operational reliability.

FEATURES

- Monitoring the insulation resistance for 100-1000Vdc unearthed DC systems;
- Real-time monitoring of positive and negative pole insulation resistance to ground;
- Automatic adaptation to the system leakage capacitance up to 5μF;
- Multifunctional LCD screen displaying insulation resistance, voltage, system status, etc.;
- Support manual self-test and circuit connection monitoring;
- Separately adjustable response value range: 10kΩ…10MΩ;
- Selectable NC or NO relay operation;
- Up to 8 types of configurable alarms;
- Supports manual/automatic reset modes;
- RS485 interface with Modbus RTU protocol;
- Password protection to prevent unauthorized modification of parameters.

APPLICATIONS

- EV/ HEV DC charging systems;
- DC power distribution and power supply systems;
- Rail transit and vehicle electrical systems;
- New energy generation and energy storage systems;
- Substation DC power supply systems;
- Medical and high-security power supply systems.

2.- TECHNICAL PARAMETERS

Parameter	Value		
Power supply	10-30VDC, Power 3W		
DC voltage range	100V~1000V		
DC voltage measurement accuracy	≤2V+0.3%		
Insulation resistance measurement range	10KΩ~10MΩ (DC system voltage:100V~1000V)		
Max system leakage capacitance	0-5μF		
Insulation monitoring accuracy ((When: DC voltage:100V-1000V)	**C_Y range**	**Resistance range**	**Accuracy**
	0~0.8μF	≤60kΩ	≤3kΩ
		60kΩ<R<1MΩ	≤5%
	0.8μF ~3μF	≤60kΩ	≤6kΩ
		60kΩ<R<1MΩ	≤20%
Insulation resistance value update time after turning on	After insulation monitoring is turned on, the time until the effective resistance value can be read for the first time		4-5s
Insulation resistance value update time	Switch the insulation resistance until the module can read the switched insulation resistance value.		3-5s
Insulation monitoring function switching times	$50*10^5$ times		
Off-line withstand voltage test	<2mA		
Digital output (DO)	1*DO, passive dry contact, SPST, NO Load capacity: 4A@250Vac, 4A@30Vdc		
Digital input (DI)	2*DI, passive dry contact, operating voltage 5-20Vdc 0.25mA@short circuit		
Communication	RS485/ Modbus RTU		
Standard	IEC 61557-1: 2018; IEC 61557-8: 2018		
Dimension	Standard 35 mm DIN rail mounting Dimensions (W × H × D): 72 × 110 × 66 mm		

Storage temperature	-55°C~90°C; ≤90%RH (non-condensing, non-corrosive), Altitude: ≤3500 m
Operating temperature	-40°C~75°C; ≤90%RH (non-condensing, non-corrosive), Altitude: ≤3500 m

Notes:

1-. When the insulation resistance to earth of the positive pole (RfP) and the negative pole (RfN) differs significantly, with a ratio greater than 5:1, the higher value of RfP or RfN may deviate from the typical insulation resistance.

2-. CY refers to the Y-capacitance from the positive and negative system busbars to earth.

Withstand voltage test

Voltage injection 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 +/-	4200VDC/3000VAC	≤1min
DC+/DC- to A/B	4200VDC/3000VAC	≤1min

Note: The power supply side (+/-), RS485(A/B), and Ground(G) should be isolated from each other.

3.- Function introduction

3.1.- Insulation resistance monitoring function

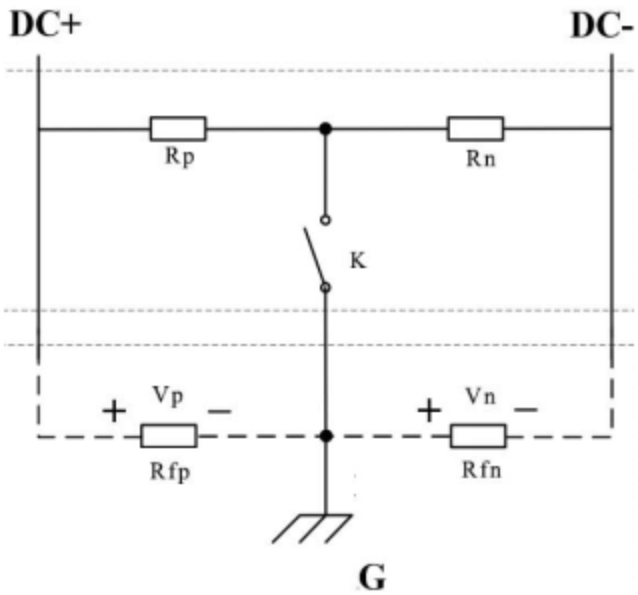
The BIM-CH1 continuously monitoring the insulation resistance of IT systems (ungrounded systems). When the measured insulation resistance falls below the preset alarm threshold, the corresponding alarm relay trips out, and the LED indicator illuminates to issue an alarm. For proper measurement, the device must be connected between the IT system and the protective earth conductor (E).

After power-on, the “PWR” indicator turns on, and the device enters insulation resistance monitoring by default. The operating mode can be configured via registers to “manual trigger insulation monitoring after powered on.” In this mode, insulation monitoring does not start automatically after powered on and must be manually enabled or disabled through register commands.

Working principle:

BIM-CH1 adopts the bridge circuit principle, as shown in the figure below. After device powered on, the grounding switch K is opened by default. After the insulation monitoring function turned on, the grounding switch K is closed, and the insulation resistance values of the positive (RfP) and negative (RfN) poles to the ground or the voltage values of the positive (VP) and negative poles (VN) to the ground can be read.

When insulation monitoring function is enabled, RfP and RfN or VP and VN data are updated in real time. The update cycle for RfP and RfN is 4-5s, and the update cycle for VP and VN is 100ms. After insulation monitoring function is disabled, the grounding switch K is opened, and the RfP, RfN, VP, and VN are all invalid values.



3.2.- Auto and manual reset function

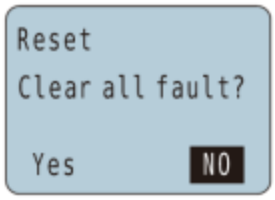
The BIM-CH1 supports both manual reset and automatic reset modes. The reset mode can be selected via register 0x0071. The button on the front panel is effective for reset function only when manual reset mode is selected.

Automatic reset mode (default): When fault occurs, the output signal is activated immediately (e.g. self-test fault indicator turns on, alarm indicator lights up, relay output is energized). When the fault is cleared, the output signal automatically returns to the normal status.

Manual reset mode: When fault occurs, the output signal is activated immediately (e.g. self-test fault indicator turns on, relay output is energized). Even after the fault is cleared, the output signal remains in the "fault" status until it is manual reset by pressing the button.

Manual reset process:

After selecting manual reset mode, on any measurement interface, users manually press and hold the button for 2 seconds or connect the DI reset signal input. A confirmation page will pop up on the screen prompting: **Clear all fault?** Then need to select yes or no.



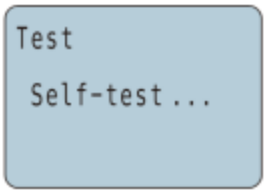
Note: Alarm function 1-8 only support automatic reset. Selecting manual reset for these alarms is invalid.

3.3.- Device manual self-test function

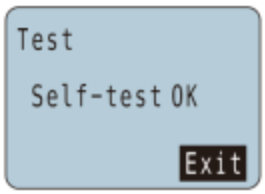
The BIM-CH1 only support manual self-test, the function can be triggered by pressing and holding the  button for 2 seconds or remotely via an RS485 (register 0x0073) command.

3.3.1.- Self-test process and result display

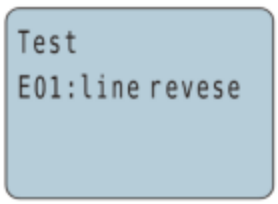
First, press and hold the button for 2 seconds, or send a command via RS485 (register 0x0073), to trigger manual self-test. Then, the screen will enter the self-test process.



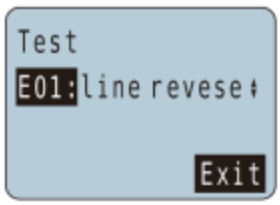
if no fault detected: after the self-test is completed, the screen automatically returns to the measurement interface after 3 seconds, and no fault information is displayed.



if has single fault detected: The Fault LED on the front panel will illuminate in red color, and the screen displays the corresponding fault code and detailed information.



if has multiple faults detected: up and down arrow icons appear on the screen, allowing the user to scroll through and view each fault message.



If no buttons is pressed, the device will automatically return to the measurement interface after 5 seconds.

If any buttons is pressed during fault viewing, User must press the [SET] again to exit the self-test interface and return to the measurement screen. if the [SET] button is not pressed, the screen remains on the fault code display and will not return to the measurement interface.

3.3.2.- Self-test status query

Method 1: View directly on the screen
Method 2: View via RS485 register 0X0515

Fault code	Definition	Screen display
E01	"L1/+, L2/-" any terminal reverse connection	E01: Line reverse
E02	"L1/+, L2/-" any terminal open circuit	E02: Line open
E03	G,E grounding terminal open circuit	E03: G open
E04	Any LED light function failure	E04: LED err.
E05	Relay function failure, no response	E05: Relay err.
E06	RS485 communication connection failure(Reserved)	E06: RS485 err.
E07	Internal abnormal value detected	E07: Value err.
E08-E10	Reserved	/

Notes:

-. The true fault status of code E04 and E05 can only be verified on-site inspection. RS485 queries always return a normal status by default.

-. E06 is reserved function and not enabled in the present version.

3.4.- Alarm function

BIM-CH1 support up to 8 types of configurable alarm function for monitoring critical parameters, the alarm thresholds can be flexibly configured to enable accurate system condition warning and protection.

Alarm No.	Item	Parameter	Value
Alarm -1	IR positive pole alarm	IR+	10KΩ~10MΩ, Default 300KΩ
Alarm-2	IR negative pole alarm	IR-	
Alarm-3	Voltage over threshold	Volt	0-1000V
Alarm-4	System leakage capacitance over threshold (Reserved)	YCap	0-5 μF
Alarm-5	DC offset over threshold	DCoff	20-1kV
Alarm 6-8	Reserved function	Rfu	/

3.5.- DI/ DO function

BIM-CH1 supports 1 channel DO for alarm status output, and 2 channels DI for external control signals input.

Configuration	Parameter	Value
Relay output	Mapping	OFF,Alarm-1, Alarm-2, Alarm-3, Alarm-4, Alarm-5, Alarm-6, Alarm-7, Alarm-8
	Link	OFF,Alarm-1, Alarm-2, Alarm-3, Alarm-4, Alarm-5, Alarm-6, Alarm-7, Alarm-8
	Logic	AND, OR
	Default status	NC: Normally close NO: Normally open

Configuration	Parameter	Value
Relay input	Function	Optional functions are as follows: **(0) Off:** Disable function **(1) Test:** Device self-test **(2) Reset:** Reset self-test faults and relay status **(3) Switch:** Switch between insulation resistance detection and DC offset voltage detection.
	Mode	Active high Active low
	Delay	Signal response time delay, ranging from 0000 to 9999 milliseconds.

4.- INSTALLATION AND START-UP

The manual you hold contains information and warnings that users should follow in order to guarantee a proper operation of all the instrument functions and keep it in safety conditions. The instrument must not be powered on and used until its definitive assembly is on the cabinet's door.

If the instrument is not used as manufacturer's specifications, the protection of the instrument will be damaged.

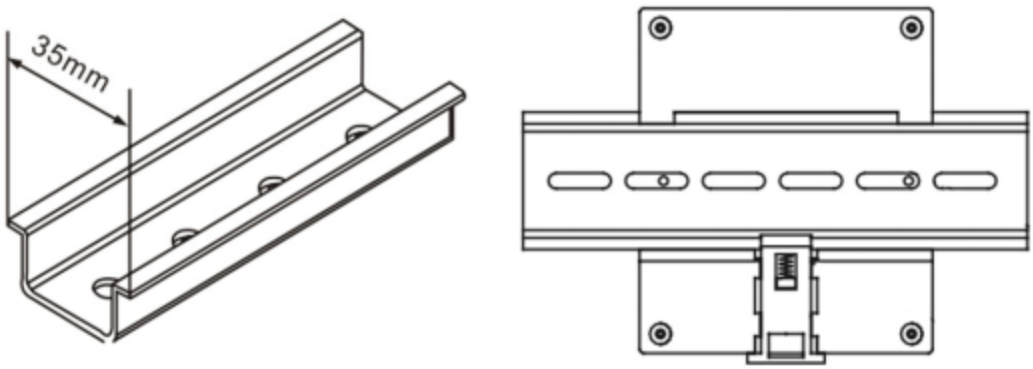
When any protection failure is suspected to exist (for example, it presents external visible damage), the instrument must be immediately powered off. In this case contact a qualified service representative.

4.1.- Installation

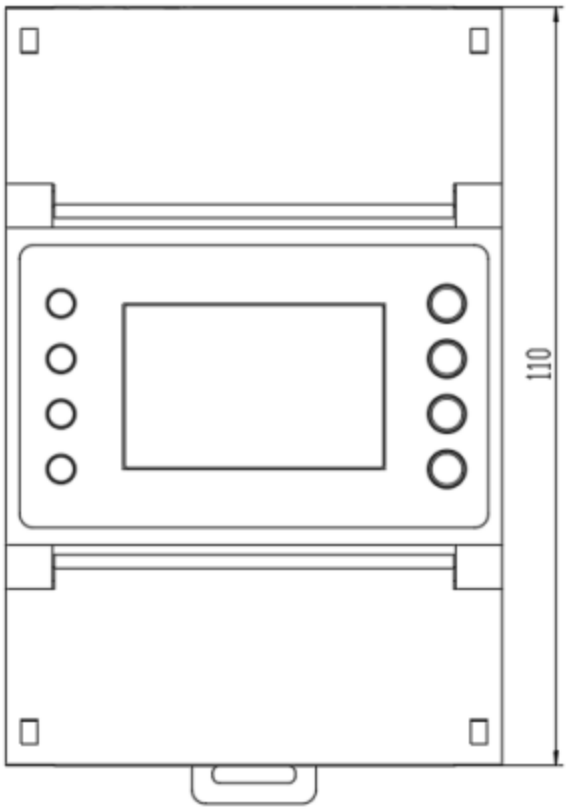
Mounting

The instrument is to be mounted on the 35mm Din-rail. Keep all connections inside the cabinet.

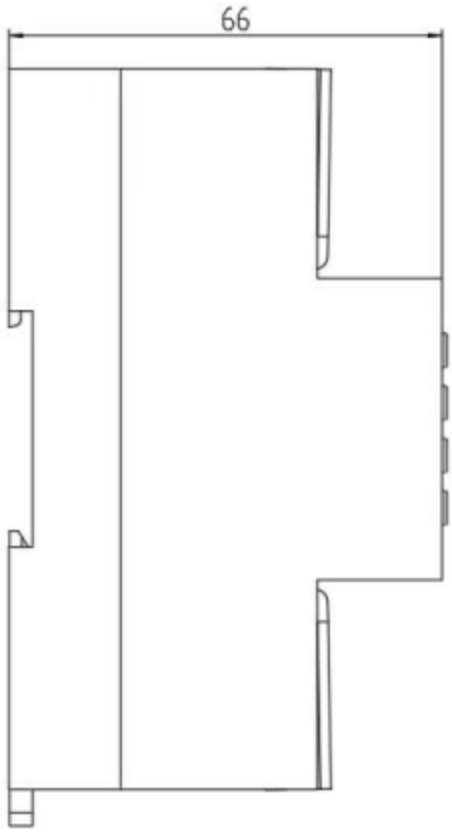
Note that with the instrument powered on, the terminals could be dangerous to touch. and cover opening actions or elements removal may allow accessing dangerous parts. Therefore, the instrument must not be used until this is completely installed.



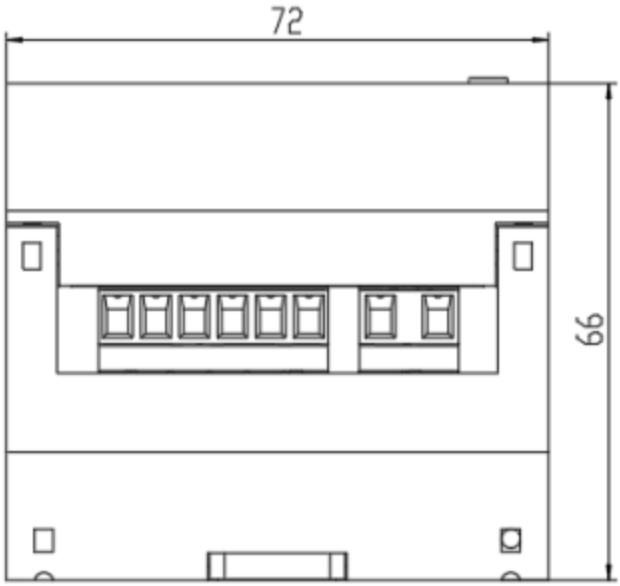
Dimension: W*H*D: 72*110*66 mm



Front view

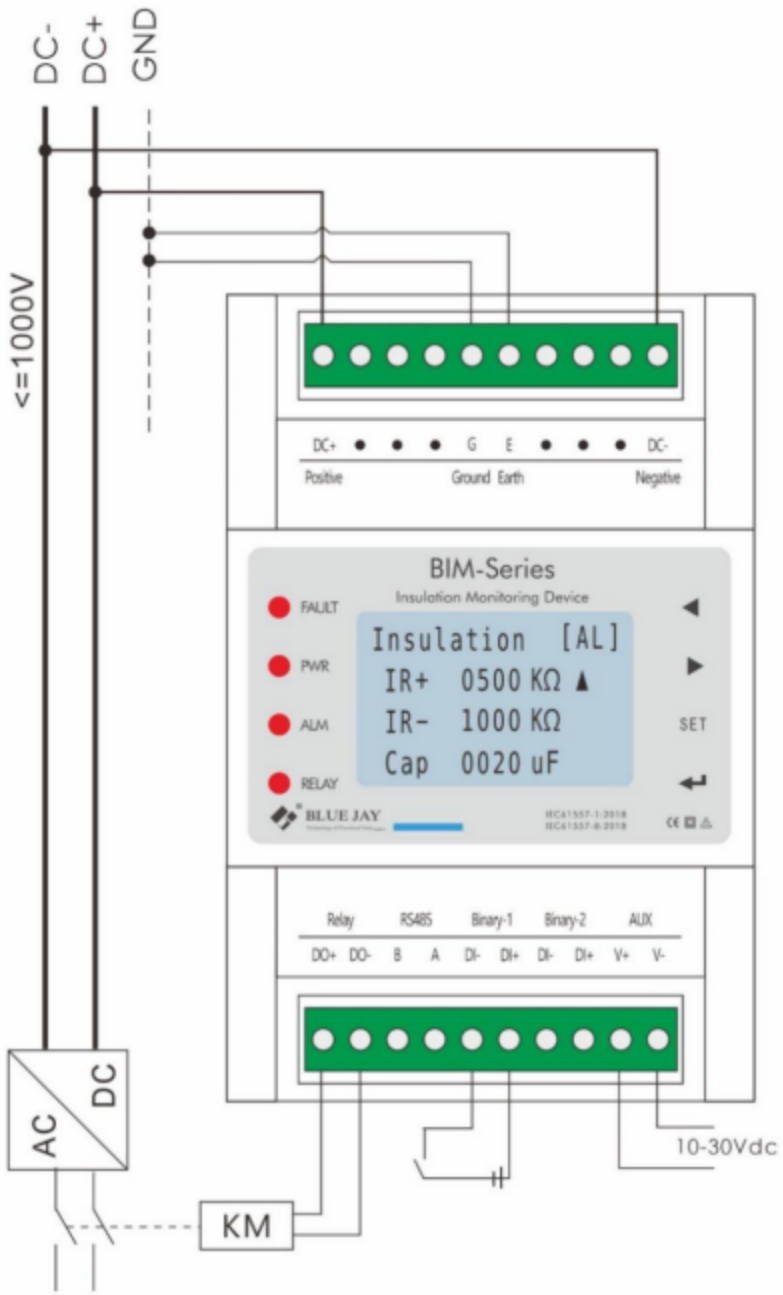


Side view



Upper view

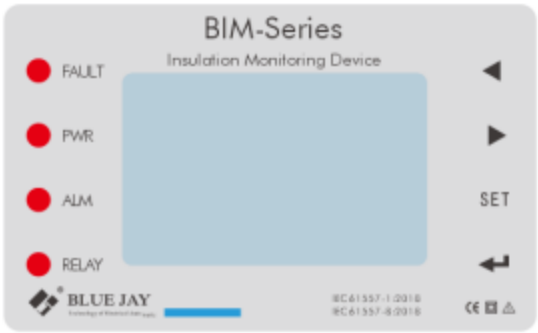
4.2.- Wiring diagram and terminal definition



Terminal	Description
DC+	DC positive pole
G, E	System ground wire
DC-	DC negative pole
Relay	Relay output
Binary-1	Relay input channel 1
Binary-2	Relay input channel 2
RS485	RS485 Communication interface A, B
AUX	Auxiliary power supply 10-30VDC

4.3.- Indicator lights and buttons description

After the module is powered on, the PWR indicator is on.



Indicator	Description
Fault	**Self-test fault status indicator** Off: no fault Red: self-test fault detected
PWR	**Power indicator** Off: Device not powered Red: Device powered on and operating normally
ALM	**Alarm status indicator** Off: No alarm Red: Alarm activated (e.g. threshold exceeded)
RELAY	**Relay output status indicator** Off: Relay not trip Red: Relay trip out

Buttons description:

Buttons	In monitor screen	In config menu	In parameter setup
◀ **Test**	**Short press:** The screen will switch to previous page. **Press and hold for 2s**: Activate manual self-test.	Move cursor up and down to select function	Move setting cursor to left
▶ **Reset**	**Short press:** The screen will switch to next page. **Press and hold for 2s**: Activate manual reset.		Scroll selection number 0 ~ 9
SET	Call out password screen	Exit & roll back to up level menu.	
↵	Call out sub-screen	Confirm the values & Entry or jump to down level menu	

Notes:

1-. Users need to send command to select manual reset in register 0x0071, then press and hold the ▶ button, the reset function will valid.

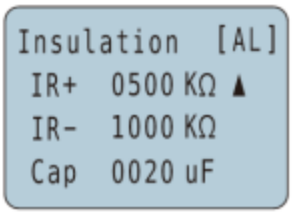
2-. Simultaneously press and hold both the ◀ and ▶ buttons for 3 seconds to reset the communication to the default parameters: address 1, baud rate 9600, parity n.8.1. After changing, device must be restarted, then the change can be valid.

3-. In Setup menu, if change the setting value, SET for exit menu, device will call out confirm screen ask “SAVE”. Then press SET exit without saving, press ↵ save and exit.

5.- SCREEN DISPLAY

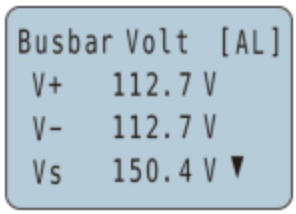
5.1.- Measurement screen

After device powered on, the “PWR” light on and display a welcome screen. After 3s, show the measurement screen, users can press ◀ or ▶ to switch to view between different pages.



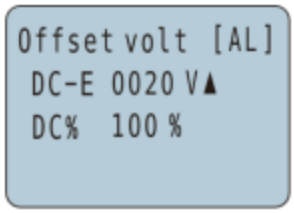
Insulation resistance monitoring

Positive insulation resistance value
Positive insulation resistance value
System leakage capacitance value



Busbar voltage monitoring

Positive bus voltage value
Negative bus voltage value
System bus voltage value



DC to ground offset voltage

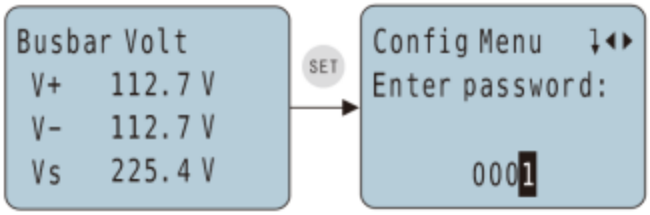
DC to ground offset voltage
Offset voltage %

Note:

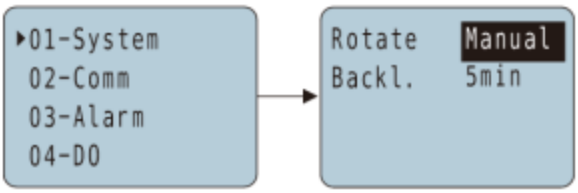
When an alarm is trig, [AL] will appear on screen top right corner.
▲ indicates upper limit alarm; ▼ indicates lower limit alarm.

5.2.- Configuration screen

Press the SET button on any measurement screen and enter the default password **0001** to enter the configuration menu.

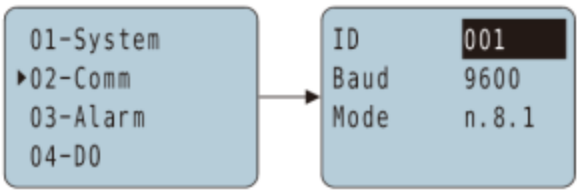


5.2.1.- System & Comm setting



System settings

Screens rotate interval: manual, 3-30 seconds (default: 15s)
Screen backlight duration: 0-10min (default: 5min)

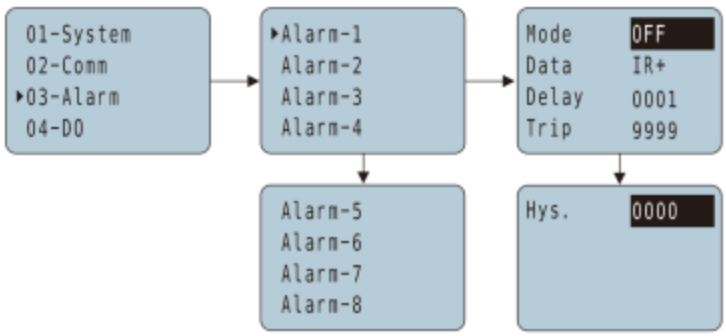


Communication settings

Modbus ID: **1-247** (default: 001)
Comm. port baud rate (default: 9600)
Comm. port data format (default: n.8.1)

Note: Modify the baud rate and format need to restart device to take effect. Only modify Modbus ID not need restart device.

5.2.2.- Alarm settings



Alarm mode: OFF, Rising, Falling

Alarm data: IR+, IR-, Volt, YCap, DCoff, Rfu, Rfu, Rfu.

Delay time: 0000-9999s, (default 1000ms)

Trip value: 0000-9999

Hysteresis: 0-9999, (default 20)

Alarm data description:

Alarm No.	Item	Parameter	Value
Alarm -1	IR positive pole alarm	IR+	10KΩ~10MΩ, Default 300KΩ
Alarm-2	IR negative pole alarm	IR-	
Alarm-3	Voltage over threshold	Volt	0-1000V
Alarm-4	System leakage capacitance over threshold (Reserved)	YCap	0-5 μF
Alarm-5	DC offset over threshold	DCoff	20-1kV
Alarm 6-8	Reserved function	Rfu	/

5.2.2.- DO/ DI settings



DO setting:

Mapping data: OFF, Alarm 1-8

Link data: OFF,Alarm 1-8

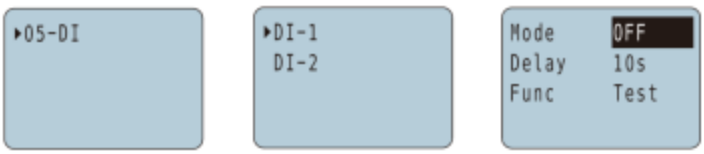
Association logic mode: AND, OR,

Relay default status: NC (normally close), NO (normally open)

Notes:

Mapping Data: When the selected data reaches the threshold, the DO output is triggered directly.

Link Data: The selected data is logically linked to the mapping data. The DO output is triggered based on the combined status of both data according to the configured logic mode (e.g. AND / OR).



DI setting:

Function: off, test, reset, switch

Mode: Active high, active low

Delay: Signal response time delay, 0000–9999ms (default: 100 ms)

Note:

Switch function means: switching between insulation resistance monitoring and DC busbar voltage monitoring.

6.- COMMUNICATION INTERFACE

6.1.- Connection for RS485

Users can send and receive data frames through the RS485 communication port. The circuit is equipped with 510Ω terminal resistance. Terminals A and B correspond to RS485 outputs A and B respectively.

6.2.- Communication Protocol

This device use Modbus RTU protocol 0x03/0x06 command, default initial baud rate 9600, communication address 001, parity check mode n.8.1. The time interval between each byte in the sent frame shall not exceed 20ms, otherwise the frame will be cleared.

Modbus RTU Frame Format:

Address code	**1 BYTE**	Slave device address **1-247**
Function code	**1 BYTE**	Indicates the function codes like read coils / inputs
Data code	**4 BYTE**	Starting address, high byte Starting address, low byte Length of registers, high byte Length of registers, low byte
Error Check code	**2 BYTE**	Cyclical redundancy check (**CRC**)

MODBUS FUNCTIONS:

Code	Meaning	Description
FUNCTION 03	Read hold register	This function permits to read all the electrical parameters
FUNCTION 06	Write single register	This function permits to write a value into a single holding register.

Modbus Exception Response Description

-. **For Function 0x03:** an illegal register address returns 01 83 02 + CRC, while an invalid data value/range returns 01 83 03 + CRC.

-. **For Function 0x06:** an illegal register address returns 01 83 02 + CRC, while an invalid data value/range returns 01 83 03 + CRC.

6.3.- Register map

6.3.1.- Parameter query- basic parameters, read only, function 03 to read

Register	Data	Description
0x0000-0x000A	Reserved	
0x000B	DC bus voltage	Unit: 0.1V
0x000C	Positive pole to ground voltage	Unit: 0.1V
0x000D	Negative pole to ground voltage	Unit: 0.1V
0x000E-0x0028	Reserved	
0x0029	Positive pole insulation resistance	Unit: KΩ (0xFFFF: invalid value; 0xEA60: resistance value greater than 10MΩ)
0x002A	Negative pole insulation resistance	
0x002B	DC alarm status	DC fault % (Valid only when DC voltage ≥ 20V) **Offset value:** **1:** 0 … 25% → DC positive fault **2:** 25 … 75% → symmetrical fault **3:** 75 … 100% → DC negative fault
0x002C	DC to ground offset voltage	DC to ground offset voltage absolute value Unit: 0.1V (Valid only when DC voltage ≥20V).
0x002D-0x0033	Reserved	
0x0034	System leakage capacitance (Reserved)	Unit: 0.1μF
0x0035	Reserved	
0x0036	DC component (positive pole impedance %)	Unit 0.1% 0% = positive DC fault 100% = negative DC fault
0x0038-0x0064	Reserved	

Note: During insulation resistance monitoring, DC voltage is not measured; so, all above DC voltage related RS485 values are 0.

Special code 0XFF, for host reads the slave address

Register	Data	Description
0X0037	Host reads the slave address	Example: Host inquiry: FF 37 A5 AA 2B 10 FC Slave response: FF 37 01 AB 90 10 FC The slave address is 0x01

6.3.2.- Basic parameters, readable& writable, function 03 to read/ 06 to write

Register	Data	Description
0x0064-0x006D	Reserved	
0x006E	Working mode	0: Auto start insulation monitoring after power-on (default) 1: Manual trigger insulation monitoring after powered on (via 0x0070)
0x006F	Reserved	
0x0070	Insulation monitoring control	0: Turn off insulation monitoring function 1: Turn on insulation monitoring function (default)
0x0071	Reset mode	0: Manual reset 1: Auto reset (default)
0x0072	Reserved	
0x0073	Trigger self-test	0: Not in self-test status (default) 1: Trigger a device self-test
0x0074-0x00C7	Reserved	
…		
0x00C8	Reserved	
0x00C9	Screens rotate interval	manual, 3-30 seconds (default: 15s)
0x00CA	Screen backlight duration	0-10min (default: 5min)
0x00CB-0x00F9	Reserved	
0x00FA	Modbus ID	Range: 1-247 (default 001)
0x00FB	Comm. port baud rate	0:1200; 1:2400; 2:4800; 3:9600 (default);
0x00FC	Comm. port data format	0: n.8.1 (default); 1: o.8.1; 2: e.8.1; 3: n.8.2
0x00FD-0x012B	Reserved	

Note: Modify the communication baud rate and format need to restart device to take effect. Only modify Modbus ID not need restart device.

6.3.3.- Alarm, DI, DO configuration, readable& writable, function 03 to read/ 06 to write

Register	Data	Description
0x012C-0x0136	Reserved	
0x0137	Alarm-1 Mode	0: Off (default); 1: Rising; 2: Falling
0x0138	Alarm-1 Data	Choose 1 from 8 functions, repeatable: **0:** IR+ for Positive insulation resistance (default) **1:** IR- for Negative insulation resistance **2:** Volt for Voltage **3:** YCap for System leakage capacitance **4:** DCoff for DC offset alarm **5:** Reserved function **6:** Reserved function **7:** Reserved function
0x0139	Alarm-1 Delay	Range: 0000-9999, default 1000ms
0x013A	Alarm-1 Trip value	Range: 0000-9999 For IR+: unit: kΩ, default 300 For IR-: unit: kΩ, default 300 For Volt: unit: 0.1V For YCap: unit: 0.1μF For DCoff: unit: 0.1V
0x013B	Alarm-1 Hys.	0-9999: hysteresis value, default 20
0x013C-0x014A	Reserved	
0x014B-0x014F	Alarm-2	The same as Alarm-1
0x0150-0x015E	Reserved	
0x015F-0x0163	Alarm-3	The same as Alarm-1
0x0164-0x0172	Reserved	
0x0173-0x0177	Alarm-4	The same as Alarm-1
0x0178-0x0186	Reserved	
0x0187-0x018B	Alarm-5	The same as Alarm-1
0x018C-0x019A	Reserved	
0x019B-0x019F	Alarm-6	The same as Alarm-1
0x01A0-0x01AE	Reserved	
0x01AF-0x01B3	Alarm-7	The same as Alarm-1
0x01B4-0x01C2	Reserved	
0x01C3-0x01C7	Alarm-8	The same as Alarm-1
0x01C8-0x02BC	Reserved	

Register	Data	Description
0X02BD	DO-1 mapping data	0: OFF (default) 1: Alarm-1 2: Alarm-2 3: Alarm-3 4: Alarm-4 5: Alarm-5 6: Alarm-6 7: Alarm-7 8: Alarm-8
0X02BE	DO-1 link data	0: OFF (default) 1: Alarm-1 2: Alarm-2 3: Alarm-3 4: Alarm-4 5: Alarm-5 6: Alarm-6 7: Alarm-7 8: Alarm-8
0X02BF	DO-1 association logic mode	0: AND (default); 1: OR
0X02C0	DO-1 default status	0: NC (when power on, relay closes and when reached the trigger condition relay opens). 1: NO (default)
0X02C1-0X0384	Reserved	

Register	Data	Description
0X03E9	DI-1 Function	0: OFF (default) 1: Test 2: Reset 3: Switch between voltage / insulation resistance monitoring
0X03EA	DI-1 Mode	0: Active low 1: Active high (default)
0X03EB	DI-1 Delay	Range 0000-9999ms, default 100ms
0X03ED-0X03FC	Reserved	
0X03FD-0X03FF	DI-2	The same as DI-1
0X0400-0X0514	Reserved	

6.3.4.- Query alarm status and self-test fault status, read only, function 03 to read

Register	Data	Byte mode		Description
0X0515	Self-test status	Int	2	**Bit 0:** Self-test progress (0: Self-test completed; 1: Self-test in progress) **Bit 1:** Reserved **Bit 2:** Reserved **Bit 3:** Code E01 fault status (0: Normal; 1: Fault) **Bit 4:** Code E02 fault status (0: Normal; 1: Fault) **Bit 5:** Code E03 fault status (0: Normal; 1: Fault) **Bit 6:** Code E04 fault status (0: Normal; 1: Fault) **Bit 7:** Code E05 fault status (0: Normal; 1: Fault) **Bit 8:** Code E06 fault status (0: Normal; 1: Fault) **Bit 9:** Code E07 fault status (0: Normal; 1: Fault) **Bit 10-15:** Reserved
0X0516-0X0546	Reserved			
0X0547	Alarm status	Int	2	**Bit 0:** Alarm 1 status (0: Normal; 1: Triggered) **Bit 1:** Alarm 2 status (0: Normal; 1: Triggered) **Bit 2:** Alarm 3 status (0: Normal; 1: Triggered) **Bit 3:** Alarm 4 status (0: Normal; 1: Triggered) **Bit 4:** Alarm 5 status (0: Normal; 1: Triggered) **Bit 5:** Alarm 6 status (0: Normal; 1: Triggered) **Bit 6:** Alarm 7 status (0: Normal; 1: Triggered) **Bit 7:** Alarm 8 status (0: Normal; 1: Triggered) **Bit 8-15:** Reserved
0X0548-0X0578	Reserved			

Note: Bit sequence is from LSB to MSB.

6.3.5.- Factory information query, read only, function 03 to read

Register	Data	Description
0XF000	Manufacturer	BLUE JAY
0XF010	Device model	BIM-CH1
0XF020	Product number	100
0XF030	Firmware version	V3.7
0XF040	Firmware date	2026.01.07
0XF050	Hardware version	V6.0
0XF060	Production week	Reserved
0XF070	SN code	Reserved
0XF080	MAC address (Reserved)	
0XF090	Reserved	
0XF0A0	Reserved	
0XF0B0-0XFFFF	Reserved	

Note: The above specifications may be updated due to product revisions. Please refer to the actual device query for final information.

7.- SAFETY CONSIDERATIONS



All installation specification described at the previous chapters named: **INSTALLATION AND STARTUP, INSTALLATION MODES and SPECIFICATIONS.**

Please note that with the instrument powered on, the terminals could be dangerous to touching and cover opening actions or elements removal may allow accessing dangerous parts. This instrument is factory-shipped at proper operation condition.

- The device must have a professional installation and maintenance;
- Any operation of the device, you must cut off the input signal and power;

8.- MAINTENANCE

The BIM-CH1 does not require any special maintenance. No adjustment, maintenance or repairing action should be done when the instrument is open and powered on, should those actions are essential, high-qualified operators must perform them.

Before any adjustment, replacement, maintenance or repairing operation is carried out, the instrument must be disconnected from any power supply source.

When any protection failure is suspected to exist, the instrument must be immediately put out of service. The instrument's design allows a quick replacement in case of any failure.

For any inquiry about the instrument performance or any failure,
contact to Blue Jay's technical service.

Blue Jay - After-sales service

E-mail: tech@cqbluejay.com