Version: 30091200201028 R

Instruction Manual of EA-IO Addressable I/O Module

Read through these instructions before using this device to ensure correct installation and use!

I. General

EA-IO Addressable I/O module (EA-IO for short) can be used with a loop-type fire alarm control panel. Powered by a non-polar by using 2-bus, it's designed with low power consumption, no need for external 24V supply. The EA-IO should be installed on the DZ-9058 base.

II. Features and technical parameters

1. Standard: EN 54-18
2. Operation voltage: loop DC20~28V (non-polar wiring)
3. Quiescent current: ≤1.2mA
4. Activated current: ≤4mA
5. Relay Contact (Resistive Load): Rated at 2A, 30VDC(Max)
6. Output mode: volt-free relay, dry contact without monitored
7. Input monitoring mode: Mode 1: Normally open input
   Mode 2: Normally closed input
   Mode 3: Equipment fire alarm and fault input
8. End-of-line resistor: 47kΩ
9. Trigger resistor: 15kΩ
10. Address method: soft address with a CODER(address range: 1~324)
11. Loop: non-polar 2-wire loop
12. Operating environment:
13. Temperature: -10 °C ~ 55 °C; Relative humidity: ≤ 95% (40 °C ± 2 °C, without condensation)
14. Weight: about 132g (with base)
15. External dimension: 86×86×41mm (with base)
16. Status Indications: Refer to table 1

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Mode 1: Normally open input				
"INPUT ON" INDICATOR			"OUTPUT ON" INDICATOR	
Normal	Open circuit	Alarm(Short circuit)	Monitoring	Relay activated
off	Continuous flashed	Continuous lighted	Flashed every 12 seconds	Continuous lighted

Mode 2: Normally closed input				
"INPUT ON" INDICATOR			"OUTPUT ON" INDICATOR	
Normal	Alarm(Open circuit)	Short circuit	Monitoring	Relay activated
off	Continuous lighted	Continuous flashed	Flashed every 12 seconds	Continuous lighted

Mode 3: Equipment fire alarm and fault input detection				
"INPUT ON" INDICATOR			"OUTPUT ON" INDICATOR	
Normal	Open circuit, Fault, Short circuit	Fire alarm	Monitoring	Relay activated
off	Continuous flashed	Continuous lighted	Flash every 12 seconds	Continuous lighted

Table 1

Note 1. The alarm condition is reset manually at the control and indicating equipment.

2. Confirm the type of input devices (feedback devices or fire alarm devices) connected to EA-IO module and set the corresponding device type of EA-IO module on the fire alarm control panel.

3. In mode 3, please set the device type of EA-IO module as IR detector on the fire alarm control panel.

III.Instructions for use

1. EA-IO module terminal description:

Terminal Name	Function
L1, L2	Loop connection, non-polarized
TO+, TO-	Input monitoring interface; Voltage-free Input, default mode: Input monitoring (Mode 1: Normally Open Input). Other mode: Please refer “Module working mode configuration”.
NO1	Normally open contact, output interface
NC1	Normally closed contact, output interface
COM1	Common contact, output interface

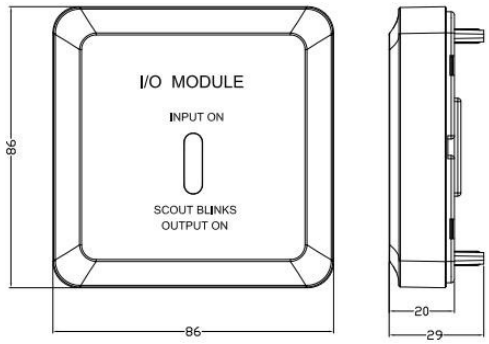


Fig. 1 (Main body)

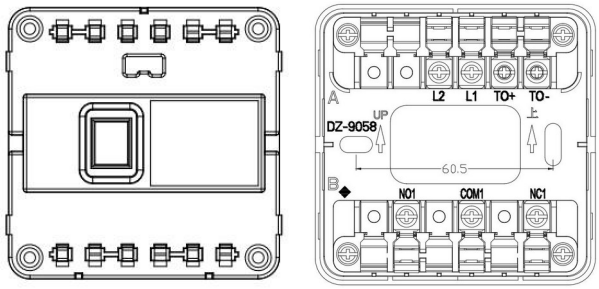


Fig. 2 (Base)

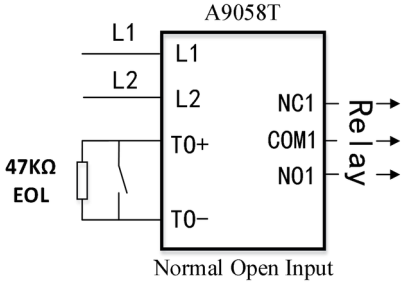
IV. Addressing and mode configuration

1. Module addressing:
   Connect the 4-pin coding plug on the coder with the 4-pin coding socket (see Fig.1) on the main body of the EA-IO module. Press the ON/OFF button to turn on the coder . Press the “#” button to select “324” mode as addressing function. After inputting the correct address number, press the "RUN/STOP" button to complete the addressing. (Note: The coder will beep after the addressing is completed. For more details of addressing, please refer to the coder manual).
2. Module working mode configuration:
   Module working mode can be set via coder according to different applications. When setting the working mode, connect the “4-pin code plug” on the coder to the “code socket” on the module body (see Fig. 1). Press the “#” key on coder to switch to “99A” mode. Then enter the corresponding working mode code listed in the table below, and then press the “RUN/STOP” button to finish the setting.

Working mode code	1	2	3
Description	Mode 1: Normally open input	Mode 2: Normally close input	Mode 3: Equipment fire alarm、fault input

V. Wiring

1. Mode 1: Normally open input detection: The 47KΩ EOL resistor should be placed at the end of the input line, and as close as possible to the device being monitored, as shown in Fig. 3. Only if properly connected that the module can recognize the three states in the input terminals: normal, open circuit and alarm (short circuit).

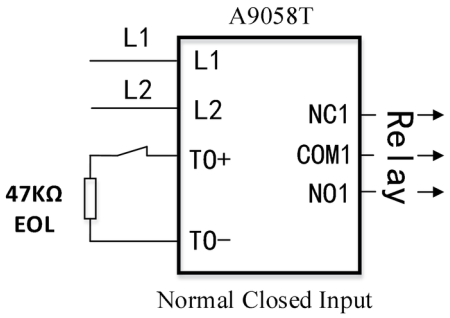


Normal Open Input

Fig. 3

2. Mode 2: Normally closed input detection: The 47KΩ EOL resistor should be placed at the end of the input line, and as close as possible to the device being monitored, as shown in Fig. 4. Only if correctly

connected that the module can recognize the three states in the input terminals: normal, short circuit and alarm (open circuit).



Normal Closed Input

Fig. 4

3. Mode 3: Device Fire Alarm or Fault Mode: The 47KΩ EOL resistor and 15KΩ trigger resistor should be placed at the end of the input line, and as close as possible to the device being monitored, as shown in Fig. 5. Only if correctly connected that the module can recognize the four states in the input terminals: normal, fire alarm, fault (including open circuit), short circuit. Wiring method is shown in Fig. 5 below.

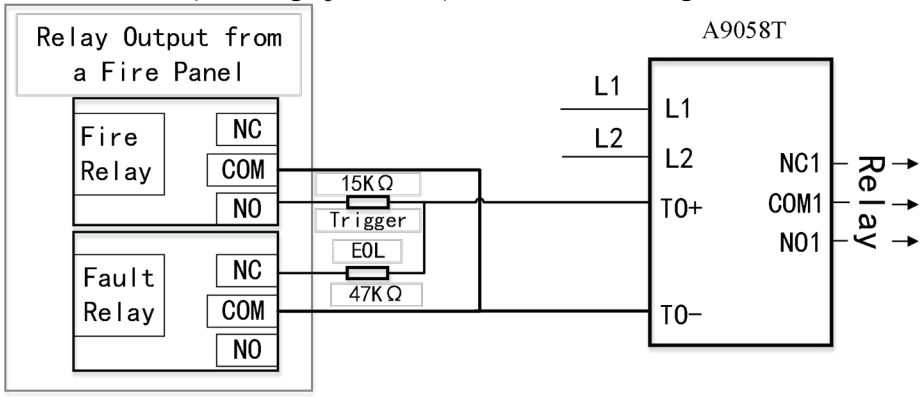


Fig. 5

Note **In mode 3, please set the device type of EA-IO module as IR detector on the fire alarm control panel.**

The alarm condition is reset manually at the control and indicating equipment.

VI. Installation and debugging:

1. Make sure the EA-IO module matches the type given on the construction drawings.
2. Addressing and working mode setting: Connect the 4-pin code plug on the coder with the 4-pin code socket on the main body of the EA-IO module (see Fig. 1 for wiring) and then set the coder with the coding function and compile the correct address code to finish the addressing and working mode setting.
3. To enhance the RF immunity of the CIE, the decoupling module (DM-XCDL25 / 5A) should be connected in series to the signal loops (L1 and L2).
4. Conduct correct wiring as instructed in Fig. 3/ Fig. 4 /Fig. 5.
5. Fix the module base through the two oval screw holes shown in Fig. 2, using two M4 screws. Then insert the body of the EA-IO module into the base and make sure they contact with each other well.
6. After installing and checking the EA-IO module, connect the power supply to the fire alarm control system. After programming on panel successfully, EA-IO module will work properly if the output indicator flashes about every 12 seconds.
7. Debugging after the installation is complete. Relay output debugging: The fire alarm control system sends out a start signal to EA-IO module to change state on the dry contact relay output, and the output indicator of EA-IO module will be continuous light. Input monitor debugging: When alarm or fault status happens in the monitored zone, EA-IO module will send signals to the fire panel, and the panel will return signals to the EA-IO module. After confirming the information, the module will make the input indication accordingly. For the status of the indicators, please refer to Table 1. If the status of the input indicators is the same as Table 1, it means the module operates normally.

VII. Attentions

1. Do not connect the output interface to AC signal, otherwise the EA-IO module may be damaged.
2. Confirm the type of input devices (feedback devices or fire alarm devices) connected to EA-IO module and set the corresponding device type of EA-IO module on the fire alarm control panel. After learning automatically, EA-IO module treats the input devices as feedback devices by default.
3. The module should be powered on, before the device is connected to the output interface.
4. The final interpretation right belongs to Shenzhen fanhai sanjiang electronics Co., Ltd.