Features

✧ Digital communication with fire alarm control panel (FACP) ensures immunity to electromagnetic interference and reliable operation.

✧ Optoisolated output signal, resistant to industrial frequency interference.

Description

P-9903 Loop Relay Module is 24VDC powered. The input and output of loop signal are insulated to ensure transmission of detector signal which enhances interference-resistant ability of the system and prolongs the loop distance.

P-9903 is mainly used in applications where strong electromagnetic interference exists or where the loop needs to be extended to longer than 1000m.

The relay module consists of a transmitter circuit, a receiver circuit, and an isolated power supply. Optocoupler isolation technology is used between the transmitter and receiver circuit.

Connection & Wiring

1. Terminals are shown in Fig. 1.

Fig. 1

✧ Z1IN, Z2IN: loop input terminals, polarity-insensitive, connecting with loop output terminals of the FACP. The distance to the FACP shouldn't be longer than 1000m.

✧ 24VIN, 24VIN: 24VDC power input terminal, polarity-insensitive. It shares the ground with output loop of the relay, requiring the voltage between 18VDC and 27VDC.

✧ Z1o, Z2o: Isolated loop output terminal, polarity-insensitive. It can connect with $1\sim242$ loop devices.

2. **Recommended wiring:** 1.5 mm^2 or above fire cable for the polarity-insensitive signal loop and 24VDC power supply, subject to local codes.
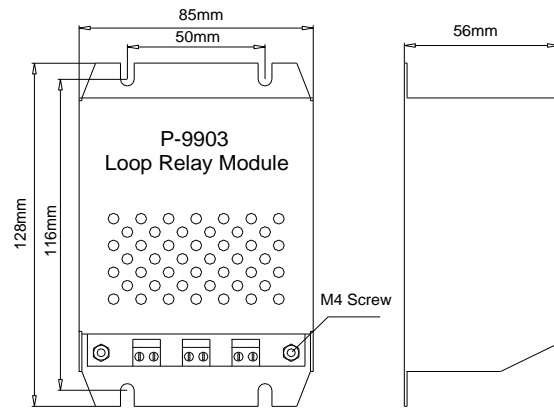

Fig. 2

Installation

Mounting dimension is shown in Fig. 2. If the relay is used to resist interference, it should be installed outside the area suffering from the interference. For example, it can be installed inside the FACP. If it's used to lengthen communication distance, it should be installed where the distance to the FACP is not longer than 1000m. It should be indoor-installed using M4 screws.

Application
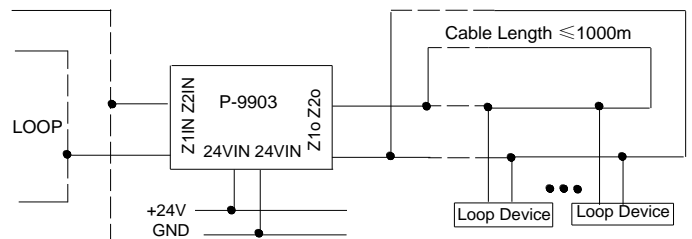
Typical application is shown in Fig. 3.

Fig. 3

Troubleshooting

1. Possible reasons and fixing methods if there is no output voltage:

✧ There may be fault with the power, please clear the fault.

✧ The output loop may be shorted, please fix the shorted point.

✧ Internal power may be damaged, please return it to the manufacturer for repair.

2. If there is an error with the transmission of loop signal,

◇ Maybe the power is lower than 18V, please adjust voltage between 18VDC～27VDC.

◇ Maybe the length of input loop or output loop is longer than 1000m, please move the relay's location to meet the length requirement.

◇ Internal component may be damaged, please return it to the manufacturer for repair.

Specification

Operating Voltage	24VDC
Loop Input Distance	≤1000m
Loop Output Distance	≤1000m
Power Voltage	24VDC (18VDC～27VDC)
Operating Current in Empty Load	≤50mA
Operating Current in Full Load	≤200mA
Load Ability and Compatibility	Connecting with 1～242 loop devices, compatible with all the loop devices.
Isolation Voltage	Isolation voltage between loop input and loop output is not less than 1500V.
LED	Red LED lights when FACP sends signals.
Operating Environment	Temperature: −10℃～+50℃ Relative Humidity: ≤95%, non condensing.
Dimension	85mm×128mm×56mm
Material and Color of Enclosure	Q235A, grayish white

Limited Warranty

GST warrants that the product will be free from defects in design, materials and workmanship during the warranty period. This warranty shall not apply to any product that is found to have been improperly installed or used in any way not in accordance with the instructions supplied with the product. Anybody, including the agents, distributors or employees, is not in the position to amend the contents of this warranty. Please contact your local distributor for products not covered by this warranty.

This Data Sheet is subject to change without notice. Please contact GST for more information or questions.

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