DC-M9503
Loop Isolator Module

Features

- ✧ Isolation of short circuit, automatic restore when short circuit is cleared.
- ✧ Support Class A SLC loop
- ✧ Standard: UL864 NFPA [70.72]

Description

In fire alarm system, such condition often occurs that partial short circuit of loop affects the whole system. DC-M9503 Loop Isolator Module（hereinafter referred to as the isolator）can isolate the shorted circuit from the whole system to ensure normal operation of other devices and help locate the devices in fault. After the short circuit fault is cleared, those devices will be re-introduced into the system.

The isolator is suitable for use in Signaling Line Circuit (SLC) of addressable fire alarm system.

Connection & Cabling

Terminals of the isolator are shown in Fig. 1.

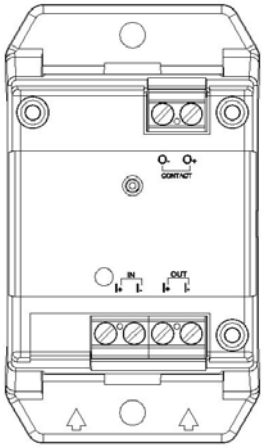

Fig.1

(I+, I-) IN & OUT: input signal loop, I+ is positive and I- is negative.

O+, O-: output signal loop, O+ is positive and O- is negative.

Recommended Wires: minimum 17 AWG twisted pair. Wires should not be laid out in the same conduit or raceway with Class 1 wires such as power cables, high and low voltage distribution cables and so on.

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Installation

1) Before installation, make sure the enclosure is in good condition and markings are complete.
2) The isolator shall either be installed in a North America standard metal electrical box. Minimum size is 4 in. square, 2-1/8 in depth (in this case, standard box cover is required), or in a UL Signaling Listed enclosure that provides minimum wiring entries and spacing as shown on Fig 2 and 3. Minimum mounting space is 67×40.5mm.
3) The isolator can be mounted on a guide rail as shown on Fig 4.
4) The isolator can also be installed in the enclosure by 4 mounting screws as shown in Fig.5.

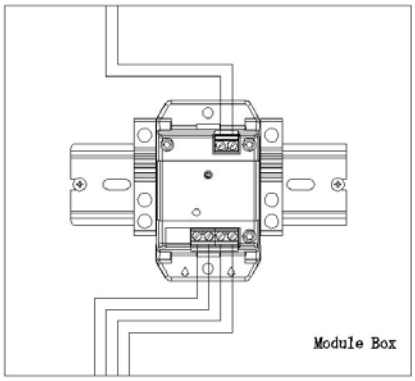

Fig. 2

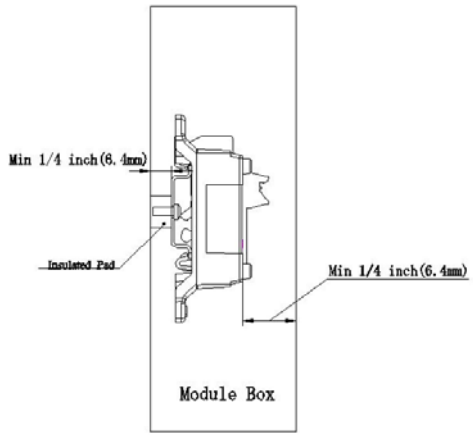

Fig. 3

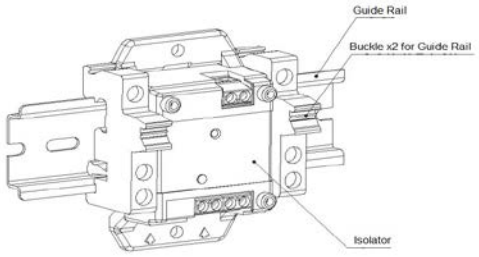

Fig. 4

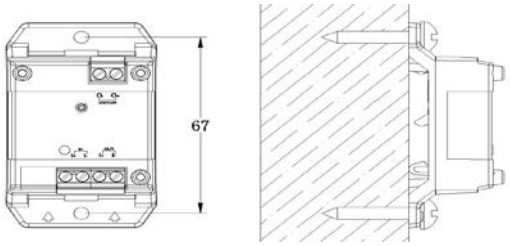

Fig. 5

Application

System connection is shown in Fig. 6. Note: Terminals of the isolator have polarities.

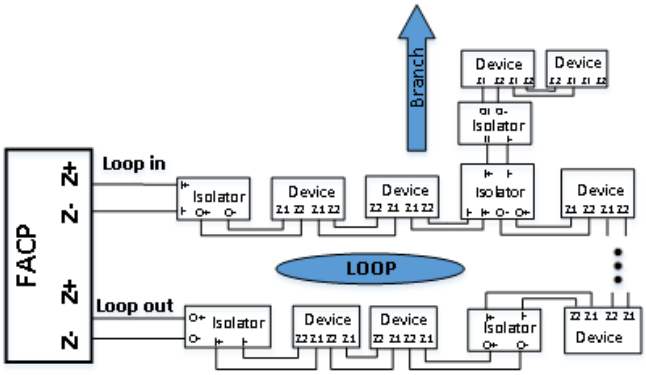

Fig. 6

Specification

Operating Voltage	Loop 24VDC (16VDC - 28VDC) Power Limited
Standby Current	≤ 0.15mA
Action Current	≤ 1.5mA
Capacity	Maximum 128 isolators can be connected to each loop. Maximum 50 devices between two isolators.
Indicator	Yellow, flashes in standby state, steady at fault.
Max closed impedance ($Z_{C\ MAX}$)	0.15Ω
Operating Temperature	0℃ - +49℃
Relative Humidity	≤ 93%, Non Condensing
Ingress Protection Rating	IP30 (not tested by UL)
Material and Color of Enclosure	ABS, white (RAL9016)
Dimension (L×W×H)	78mm×45.3mm×28.5mm (with base)
Weight	About 41.4g (with base)

Appendix

UL-certified GST-M200/ GST-IFP4M control panel can connect the longest loop and the maxi number of isolators as shown in the table below.

When the loop current is maximum 70mA，

Quantity of Isolators	2	50	70	100	128
Max length of 17 AWG loop wire(ft)	4000	3200	2900	2400	2000

The table below is calculated based on 17AWG cables. If 14AWG is used, up to 128 isolators are connected for 4000ft loop.

When the loop current is maximum 200mA，

Quantity of Isolators	2
Max length of 17 AWG loop wire(ft)	1310

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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