

IU955

950 Series Intelligent Loop Isolator

General

The IU955 intelligent isolator is designed to protect a 900 series fire detector loop in the event of a short circuit fault. The isolator divides a loop into groups of 20 devices as a rule, so that in the event of a short circuit, no more than 20 devices will be affected and become inoperable.

Design

The IU955 has particularly low non-isolating resistance to allow for more isolators to be installed per loop without affecting the overall cable length of that loop.

Requirement for Isolation

Addressable fire detection systems are normally designed as loops, with the connecting wires starting and finishing at the control panel. Detectors and interfaces are connected at intervals along these cables.

When short circuits occur on a loop, the consequences can be serious, in worst case making the affected loop entirely inoperative. The purpose of isolating circuits is to protect the loop in the event of a short circuit by disconnecting the part of the loop where the short circuit has occurred, thereby isolating the short circuit and only rendering a small part of the loop inoperative. The remainder of the loop continues to function normally. When the short circuit fault has been rectified, the isolating circuitry reconnects the affected section of the loop.

The more isolators that are installed on the loop, the smaller part of the loop is affected by a short circuit condition. By regulation there should never be more than 32 devices between isolators, but it is recommended that isolation is placed at least at every entry and exit point to a zone.



Details

- No addressing required
- Automatic reset
- Visual "Isolated" indication

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Technical specifications

Electrical

Operating voltage	17 to 28 VDC
Supply voltage	17 to 28 VDC
Protocol pulses	5 to 9 V
Power up time (max)	10 ms
Continuous loop current (max)	1 A
Short circuit switching (max)	3 A
Quiescent current (max)	45 µA
On resistance (max)	0.2 ohm

Isolation

Isolation voltage	13.6 - 14.8 V
Re-connect voltage	12.9 - 17.5 VDC
Test current	35 - 50 mA
Isolation current (max)	6.4 mA

Physical

Physical dimensions	32 x 100 mm (H x D)
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Environmental

Operating temperature	-20 to +60°C
Storage temperature	-30 to +80°C
Relative humidity	0 to 95% noncondensing
Environment	Indoor
Operating temperature	-20°C to +60°C
Storage temperature	-30°C to +80°C
Humidity (no condensation)	0 - 95 % RH

Regulatory

Certification	EN54-17
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Size (h x d)

32 x 100 mm
