

# PISO-3

## Fault Isolator Module

### General

PROTECTWELL's intelligent addressable isolator module, the PISO-3 is used with PTW-3300 and PTW-3300S Fire Alarm Control Panels (FACPs) to protect the system against wire-to-wire short circuits on the Signaling Line Circuit loops.

**FlashScan®** is a communication protocol that greatly increases the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices in the group has new information, the panel's CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of earlier designs.

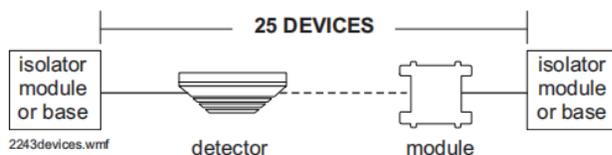
### Features

- Powered by SLC loop directly, no external power required.
- Base mounts on standard junction boxes (4.0"/10.16 cm square by 2.125"/5.398 cm deep).
- Integral LED blinks to indicate normal condition. Illuminates steady when short circuit condition is detected.
- High noise (EMF/RFI) immunity.
- Wide viewing angle of LED.
- SEMS screws with clamping plates for ease of wiring.
- Opens SLC loop automatically on detection of short, preventing the short from causing failure of the entire loop.
- Automatically resets on correction of short.
- Supports Style 4, 6, or 7 wiring.

### Applications

The Fault Isolator Modules should be spaced between groups of sensors in a loop to protect the rest of the loop. Use to isolate short circuit problems within a section of a loop so that other sections can continue to operate normally. The PISO-3 supports a maximum of 25 devices in-between isolators, except when using relay bases or legacy IPX multisensors.

**NOTE: ON LOADS PER RELAY BASE AND LEGACY MULTISENSOR DETECTORS/ISOLATORS/ISOLATOR BASES: the maximum number of addressable devices between isolators (or P224BI isolator bases) is 25 devices.**



### Construction

The face plate is made of off-white plastic. Includes yellow LED indicator that pulses when normal and illuminates steady when a short is detected.

### Operation

Automatically opens circuit when the line voltage drops below four volts. Fault Isolator Modules should be spaced between groups of addressable devices (maximum 25) in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the groups of sensors between them. The remaining units on the loop continue to fully operate.

In Style 4 loops, the PISO-3 is generally used at each T-tap branch, to limit the effect of short circuits on a branch to the devices on that branch. The LED indicator is on continuously during a short circuit condition.

The PISO-3 Fault Isolator Module automatically restores the shorted portion of the communications loop to normal condition when the short circuit condition is removed.

### Installation

- Mount on a standard junction box (4.0"/10.16 cm square) which is at least 2.125"/5.398 cm deep.
- Terminal screws are provided for "in and out" wiring.
- Installation instructions are provided with each module.
- Surface-mount box is available as an option.

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### Specifications

**Normal operating voltage:** 15 – 32 VDC (peak).

**Standby current:** 450 A (not isolating) .

**Maximum current draw:** 17 mA (device in isolation, LED latched in alarm).

**Temperature range:** 32°F to 120°F (0°C to 49°C).

**Relative humidity:** 10% to 93% (non-condensing).

**Weight:** 5 oz. (150 grams).

**Dimensions:** 4.5"H x 4.5"W x 0.25" D (11.43 cm H x 11.43 cm W x 0.635 cm D).

### Product Line Information

**PISO-3:** Fault Isolator Module.

**SMB500:** Surface mounting kit.

### Agency Listings and Approvals

Fault Isolator Modules shall be provided to automatically isolate wire-to-wire short circuits on an SLC loop. The Fault Isolator Module shall limit the number of modules or detectors that may be rendered inoperative by a short circuit fault on the SLC Loop. If a wire-to-wire short occurs, the Fault Isolator Module shall automatically open-circuit (disconnect) the SLC loop. When the short circuit condition is corrected, the Fault Isolator Module shall automatically reconnect the isolated section of the SLC loop.

The Fault Isolator Module shall not require any address-setting, and its operations shall be totally automatic. It shall not be necessary to replace or reset an Fault Isolator Module after its normal operation. The Fault Isolator Module shall mount in a standard 4.0" (10.16 cm) deep electrical box, in a surface-mounted backbox, or in the Fire Alarm Control Panel. It shall provide a single LED which shall flash to indicate that the Isolator is operational and shall illuminate steadily to indicate that a short circuit condition has been detected and isolated.