

# PT972

Intrinsically Safe Dual Channel Protocol Translator



## General

The PT972 is a dual channel protocol translator for the 970 series analogue addressable intrinsic safesensors. It must be used with the GBX70 barrier.

## Application

To enable the use of standard control (NON IS) fire panels in intrinsically safe systems, a device to "translate" voltage levels from the loop to levels compatible with the I.S. requirements is required. The PT971 also "boosts" the current pulses returned by the I.S. detectors. The PT971 is a loop-powered device that draws a low quiescent current and is therefore transparent to both the loop driver and the I.S. detectors.

## Construction

The translator is housed in a moulded plastic enclosure that can be either clipped onto a standard 35mm DIN rail (DIN 46277) or panel mounted by using pull-out latches in the base. The PT971 should only be connected to a single intrinsically safe circuit through an appropriate safety barrier. Each channel is thus capable of supplying up to twenty 970 series I.S. devices.

## Details

- 900 Series protocol compatible
- Connects 2 IS zones to a standard fire panel
- DIN or panel mount options
- No configuration required
- Interfaces with the GBX70 IS barrier

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## Technical Specifications

### Electrical

|                                    |                         |
|------------------------------------|-------------------------|
| Operating voltage                  | 19 to 28 V              |
| Modulation voltage at translator   | 5 to 9 V (peak-to-peak) |
| Supply voltage                     | 19 to 28 V              |
| Input current (no load)            | 1 mA max.               |
| Input pulse current (from barrier) | 8 to 12 mA              |
| Output voltage (to barrier)        | 16.5 to 19 V            |
| Output current (to barrier)        | 0.2 to 30 mA            |
| Output pulse current (from loop)   | 17 to 23 mA             |

### Physical

|                     |                                 |
|---------------------|---------------------------------|
| Physical dimensions | 93 x 110 x 20 mm                |
| Net weight          | ± 100 g                         |
| Dimensions          | 92.5 x 110 x 20 mm              |
| Weight              | ± 100g                          |
| Material (housing)  | Makrolon 6485 V-0 rated to UL94 |

### Environmental

|                            |                             |
|----------------------------|-----------------------------|
| Operating temperature      | -20 to +60°C                |
| Relative humidity          | 10 to 95% noncondensing     |
| Environment                | Indoor, IS                  |
| Operating temperature      | -20°C to +60°C              |
| Humidity (no condensation) | 10 to 95% relative humidity |

### Standards & Regulation

|               |                       |
|---------------|-----------------------|
| Certification | CENELEC/ATEX, EN54-18 |
|---------------|-----------------------|

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