



## TUN-38EX UNIVERSAL HEAT DETECTOR

### Overview

The TUN-38Ex heat (temperature) detector is designed to detect a fire hazard in rooms, where during the first phase of a fire a rapid rise of temperature may occur, or where temperature may exceed a defined danger level.

The TUN-38Ex is a universal heat detector, which can be programmed to operate as a fixed temperature or fixed/rate-of-rise heat detector. It is also possible to change the class of these detectors adapting them to specific applications. The PN-EN 54-5 European standard allows a choice of one of the following classes of detector sensitivity: A1R, A1S, BR or BS.

The TUN-38Ex is a spark proof detector, due to which it can be used in explosion hazard areas. These detectors operate in POLON-ALFA manufactured fire alarm system detector lines behind a proper spark proof separator.

### Principles of operation

The TUN-38Ex heat detector reacts to a rise of temperature occurring during an open fire. The detector operates as a fixed temperature detector after exceeding its preset operation threshold, per its given class, and as a rate-of-rise detector during a sudden rise of temperature. It is possible to programme it to operate only as a fixed temperature detector. Changes in temperature in the detector's surroundings are controlled by its electronic unit with a measuring thermistor, which, after differentiating the said changes, transmits an appropriate alarm signal to the interoperating fire alarm control panel and initiates the LED diode in the detector.

The detectors are produced in an independent casing equipped with two cable glands through which detection line wires of the monitoring line are directly connected. The detectors do not require additional mounting bases. There is a free access (after removing the top from the detector casing) to contacts to enable connecting wires and jumpers allowing setting the class of the detector.

The TUN-38Ex detector casing is made of black plastic.

An additional optical alarm signal of a detector or a group of detectors in an event they are installed in a hard to reach space can be obtained by connecting the WZ-31 alarm indicator.

### Technical specifications

|   |   |
|---|---|
| Operating voltage                                     | 17 ÷ 24 V   |
| Quiescent current                                     | < 100 µA  |
| Alarm current by 20 V                                 | 20 mA   |
| Class of the detector pursuant to PN-EN 54-5 standard | A1R, A1S, BR, BS  |
| Static operating temperature                          | 54 °C ÷ 65 °C (class A1)<br>69 °C ÷ 85 °C (class B)                       |
| Normal operating temperature                          | 25 °C (class A1)<br>40 °C (class B)                                       |
| Operation temperature range                           | from -25 °C up to +50 °C (class A1)<br>from -25 °C up to +65 °C (class B) |
| Relative humidity                                     | up to 95 % at 40 °C   |
| Ingress protection                                    | IP44  |
| Dimensions  | 112 x 72 x 55 mm  |
| Spacing of the installation holes                     | 72 mm   |
| Colour  | black   |
| Mass  | 0.3 kg  |

### Additional information

The TUN-38Ex detector has the ATEX certificate of the Central Mining Institute No. KDB 04ATEX190X and has been granted a spark proof feature - II 2G EEx ib IIC T6.