



# TUN-4046

## ADDRESSABLE

## MULTI-STATE UNIVERSAL

## HEAT DETECTOR

### Overview

The TUN-4046 universal addressable multi-state microprocessor based heat (temperature) detector is designed to detect a fire hazard in indoor premises where during an initial stage of a fire a rapid rise of temperature may occur or the temperature may exceed a pre-set danger level.

The TUN-4046 heat detector is universal. It can be programmed from the control panel level to operate as a fixed or fixed/rate-of-rise heat detector. It is also possible to change the class of the detector adapting it to specific operating applications. The choice of classes is as follows: A1, A2, B, A2S, BS, A1R, A2R, or BR according to the PN-EN 54-5 European standard.

The universal TUN-4046 detector can operate only in addressable lines/loops of the POLON 4000 system fire alarm control panels.

### Principle of operation

The universal TUN-4046 heat detector reacts to a rise of temperature occurring during a fire. The detector operates as a fixed temperature detector after exceeding its operation threshold appropriate to a given class, and as a rate-of-rise detector during a sudden rise of temperature. Changes of temperature in the vicinity of the detector are controlled by the detector's electronic unit equipped with measuring thermistors, which react to these changes and transmit an alarm signal to the fire control panel.

The built-in microprocessor element and the appropriate software of the detector guarantee that the entire phenomenon accompanying a fire in a close vicinity to the detector will be analysed quickly and false alarms will be eliminated.

After selecting a suitable alarm variant (from the level of the control panel), the detectors can operate in an interactive mode, one detector can communicate with others within the same zone. They can also provide measurements of the current fire factor analogue value.

Besides its own address, code type, alarm, and operation modes, the detector also transmits (into the detection loop) information about the servicing mode, a fault of internal devices, and operation of a short circuit isolator. The alarm mode is indicated by a flashing red light of a two-colour LED diode. The fault status of the detector, service alarm, and operation of the short circuit isolator is indicated by the same (two-colour) LED diode flashing a yellow light.

Coding of the detector address can be done automatically at the control panel level – the address code is saved in its non-volatile memory.

The detectors are equipped with internal short circuit isolators.

The detectors are connected to the non-addressable G-40 bases.

An additional optical alarm signal of a detector or a group of detectors can be obtained by connecting the WZ-31 alarm indicator.

### Technical specifications

Operation voltage	16.5 ÷ 24 V
Quiescent current	< 120 µA
Class of the detector (acc. to the PN-EN 54-5 standard)	A1, A2, B, A2S, BS, A1R, A2R, BR
Programming of detector address	from the control panel level
Operation temperature range:	
- class A1, A1R, A2, A2R, A2S	from -25 °C up to +50 °C
- class B, BR, BS	from -25 °C up to +65 °C
Static temperature of alarm	
- class A1, A2	+54 °C ÷ +65 °C
- class B	+69 °C ÷ +85 °C
Dimensions (with base)	∅ 115 x 54 mm
Mass	0.2 kg