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SECURITON
For your safety

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«Ultra-fast fire detection – even in aggressive environments.»

The SecuriSens MHD 535 line type heat detector

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«Rely on ultra-fast fire detection and pinpoint accuracy.»

The SecuriSens MHD 535 (Multipoint Heat Detector) line type heat detector from Securiton detects incipient fires in record time. With its unique HS (high-speed) bus system the evaluation time is more than 50% quicker than that of comparable systems. Inside the measurement cable is a multitude of highly sensitive sensors which signal any notable temperature rises and any increases in infrared radiation with lightning-fast accuracy. And do so with an optimum response: indeed, you can address each sensor individually and adapt its response behaviour to circumstances in its immediate vicinity. You yourself specify the spacing between the sensors: these intelligent sentries can be spaced at intervals of between 2 and 20 metres.

The MHD 535 stands out from other line type heat detector systems through its many advantages. It boasts faster response times; its sensor positions are clearly defined and do not have to be recalibrated; and the installation is simplicity itself thanks to a particularly flexible sensor cable. What's more it requires only a minimum of expenditure on maintenance work.

The MHD 535 – fast, precise and flexible:

lightning-fast alarming: infrared sensor sensitivity, individual threshold for each sensor, thin cable sheathing, and very fast evaluation time
patented HS (high-speed) bus system
precise alarm localisation: freely selectable sensor spacing between 2 and 20 m, individual sensor data readable via serial interface
flexible installation: extremely flexible sensor cable, individual configuration of each sensor

«Comprehensive security right down the line.»

The MHD 535 line type heat detector consists essentially of three elements: the sensor cable, the cable terminal processor and the software. The sensor cable – with a maximum length of 2000 m – is installed as a spur or ring circuit. Depending on the situation a connecting cable is inserted between the sensor cable and the cable terminal processor. The cable terminal processor continually analyses the measured data fed through by the sensors. Based on its programming it decides whether it should trigger a pre-alarm or an alarm. The temperature values can also be transmitted to a management system via a serial interface.

With the MHD Config Software you can program the cable terminal processor in no time at all – just as the circumstances in the monitored environment demand. For instance you can specify the maximum and differential temperature limits per sensor or group of sensors. And with the visualisation functions for alarms and temperature profiles you can obtain an instant overview of the current situation at any time – at the click of a mouse.

The MHD 535 is a tough customer – and ideally suited to environments with extreme conditions. It operates just as reliably in a temperature range of –55°C and +125°C as in 100% relative humidity. The system complies with standard EN 54-5 (classes A1, A2, B, C) and is also designed in accordance with EN54-22, the future standard for line type heat detectors.

The MHD 535 keeps you safe in:

tunnels: on roads, railways, underground railways, at airports, in industry
industrial premises such as conveyor plants or production lines
refineries, gas and district heating lines
power plants, incineration plants, waste disposal plants
multi-storey car parks, car park silos, cold stores
saw mills, farms
and countless other premises

«Peak performances for maximum availability.»

Good is never good enough when it comes to protecting human life. That's why Securiton has just made fire detection even more reliable with the MHD 535. Sensor Separator Modules (SSM) divide the sensor cable into sections. In the event of a malfunction such as a short-circuit resulting from mechanical damage these modules simply isolate the defective section of cable. The remaining sections continue to operate reliably. Two cable terminal processors are used at both extremities of the sensor cable to ensure enhanced availability in this area, too.

This structure is also used to implement installations across fire sections in which no more than one section is allowed to fail. This is important for instance in multi-storey car parks or building installations as it allows you to make use of the maximum system length and achieve a cost benefit.

For installations with lengths in excess of 2000 m or installations with several systems we recommend the use of the newly developed error-tolerant network FT-NET. Here several cable terminal processors are grouped together. All the information such as alarms, pre-alarms, error messages or the system status flows through the fail-safe network and can be transmitted to the fire alarm control panel or to the control technology in a centralised location.

«High speed – to help save lives.»

With its patented HS (high-speed) bus system Securiton is setting the standard when it comes to detection speed. Unlike other systems the HS bus system uses analogue addressing instead of digital addressing. With analogue addressing the evaluation time can be significantly reduced compared with systems with digital addressing. The MHD 535 with HS bus system takes only around five seconds to read 250 sensors – or two kilometres of cable length!

MHD 535 – pioneering technology for even more safety:

Sensor Separator Modules (SSM) for isolating damaged cable sections
two cable terminal processors guarantee greater availability
error-tolerant network FT-NET for large-scale installations
HS bus system provides current temperature values in a matter of seconds

«The most effective safety line in tunnels.»

A tunnel fire can have extremely serious consequences. Fast and reliable fire detection is the best way of ensuring that the safety of tunnel users is guaranteed at all times. It triggers the right measures at the right time, measures such as early warning information, activating fire ventilation systems or closing down the structure concerned. With its swift response time and other outstanding characteristics the MHD 535 is ideally suited for use in tunnels.

For fire detection inside tunnels line type heat detectors are used almost exclusively for automatic triggering. They alone have an adequately low false-alarm rate – plus they are largely impervious to outside interferences. In official tests the MHD 535 has demonstrated that in tunnels it responds more than twice as fast as other line type heat detectors even in high flow speeds. Thanks to this performance more people are able to reach safety in an emergency.

MHD 535 – peak performances inside tunnels:

- **resistant to aggressive environments**
- **locates fires with precision to actuate ventilation systems accordingly**
- **visualises the temperature profile on the control system**
- **high level of availability and damage resistance**
- **stands out by virtue of its minimal false-alarm rate**

«Because industrial hazards do not obey rules.»

High atmospheric humidity, very dusty environments, aggressive gases or fluctuating temperatures: there are many factors in industrial plants that can affect the reliability of fire detection. While conventional point detectors quickly reach their performance limits, the SecuriSens MHD 535 heat detector is perfectly suited for virtually any «mission impossible». One particular variant of the detector is even approved for use in areas subject to explosion hazards. This means that the sensor cable is ideally suited for fire protection in chemical or other ATEX applications.

The MHD 535 fulfils the requirements of reliable and prompt fire detection in industry in many respects. With its adaptable networking capability the detector is also capable of monitoring large premises and facilities. What's more, a single sensor cable can be used to keep different hazard potentials at bay since over a cable length of 2000 m each one of up to 250 sensors can be assigned a specific response behaviour. This means there is virtually no situation the MHD 535 would be unable to handle. And, not least, the MHD 535 offers you lots of safety for your money. Installation, configuration and commissioning are simple, and the system itself has a long service life. And it requires only a minimum of expenditure on maintenance work.

The MHD 535 – an all-rounder:

- **all the components are industry compatible**
- **ATEX approval**
- **recognised as compliant with EN 54-5 (classes A1, A2, B, C)**
- **also suitable for exceptional applications, e.g. outdoors**
- **can also be used as a temperature sensor**