



# SecuriSens MHD 535

Product Catalogue 2011

# Contents

<b>1. PROCESSOR UNITS .....</b>	<b>5</b>
<b>2. CABLE MODULES.....</b>	<b>8</b>
<b>3. CABLE.....</b>	<b>10</b>
<b>4. SOFTWARE.....</b>	<b>11</b>
<b>5. ACCESSORIES.....</b>	<b>12</b>
<b>6. DEMO AND TEST EQUIPMENT .....</b>	<b>13</b>
<b>7. INTERFACE.....</b>	<b>14</b>
<b>8. PRODUCT TYPE INDEX .....</b>	<b>15</b>

## Introduction

### «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.

### «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  $-55^{\circ}\text{C}$  and  $+125^{\circ}\text{C}$  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.

### «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 shortcircuit 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 centralized location. typographical errors and obvious mistakes. Please quote the relevant item numbers when making enquiries or placing an order. Delivery conditions are regulated in the "General Terms and Conditions of Securiton AG for Export Deliveries"


### 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 kilometers of cable length!

## Example of a typical entry for an item

**Type & Article Number**  
Please quote this number when making an enquiry or ordering.

Temperature Sensor Cable



**MHD 535-4SD**

**60-1040030-30-05**

Temperature Sensor Cable, 4m sensor distance (1000m)

*Technical data*

Price	per meter
Current consumption per sensor	140 µA
Mechanical protection	IP 65
Ambient temperature continuous	-40 °C to +85 °C
Max. number of sensors	300
Dimensions	5 x 13.5/7 x 15
Colour	red 3000 RAL
Weight	78 g/m

Illustration

Description and technical data

# 1. Processor Units

## Stand-alone Signal Processor



### SSP 535

60-3700120-30-04

The SSP 535 is the basic processor unit of the SecuriSens MHD 535. It features an LED display as well as a group alarm and a fault relay. The alarm and temperature data can also be output via an RS 232, RS 422 or an optional RS 485 modbus interface.

#### Technical data

Operating voltage	10 to 36 V DC
Ambient temperature	-25 °C to +85 °C
Dimensions (H x W x D)	254 x 149 x 73 mm
Protection category of housing	IP 65
Housing colour	light grey RAL 7035
Weight	approx. 910 g
VdS-Number	G 208190

## Stand-alone Response Generator



### SRG 535

60-3600120-30-04

Compared with the SSP 535 the SRG 535 also features 8 group relays, which can be assigned individual sensor groups. For additional group relays up to 6 RCU 535 Relay Control Units with 32 relay outputs and 4 digital inputs each can be connected. In addition 6 digital inputs are available, which can be used to acquire external alarm or status data for alarming purposes

#### Technical data

Operating voltage	10 to 36 V DC
Ambient temperature	-25 °C to +85 °C
Dimensions (H x W x D)	294 x 159 x 90 mm
Protection category of housing	IP 65
Housing colour	light grey RAL 7035
Weight	approx. 1.3 kg
VdS-Number	G 208190

## Relay Control Unit



### RCU 535

60-3200120-00-02

The RCU 535 can be connected to SRG, RXG and RRG to expand the relay outputs. Each RCU 535 has 32 relay outputs and 4 digital inputs.

#### Technical data

Operating voltage	10 to 36 V DC
Ambient temperature	-25 °C to +85 °C
Dimensions (H x W x D)	294 x 159 x 90 mm
Protection category of housing	IP 65
Housing colour	light grey RAL 7035
Weight	approx. 1.27 kg
VdS-Number	G 208190

**Remote Signal Processor**

**RSP 535**
**60-3400120-30-04**

The RSP 535 is the networking variant of the SSP 535 for integration into the FT-NET. Here the alarm readings are also transmitted via the FT-NET. The alarm and temperature information can also be output via the RS 232 interface.

*Technical data*

Operating voltage	10 to 36 V DC
Ambient temperature	-25 °C to +85 °C
Dimensions (H x W x D)	254 x 149 x 73 mm
Protection category of housing	IP 65
Housing colour	light grey RAL 7035
Weight	approx. 920 g
VdS-Number	G 208190

**Remote eXtended Generator**

**RXG 535**
**60-3500120-30-04**

The RXG 535 is the networking variant of the SRG 535 for integration into the FT-NET. Here the alarm readings are also transmitted via the FT-NET. The alarm and temperature information can also be output via the RS232 interface. Compared with the RSP 535 the RXG 535 also features 8 group relays, which can be assigned individual sensor groups. For additional group relays up to 6 RCU 535 Relay Control Units with 32 relay outputs and 4 digital inputs each can be connected. In addition 6 digital inputs are available, which can be used to acquire external alarm or status data for alarming purposes.

*Technical data*

Operating voltage	10 to 36 V DC
Ambient temperature	-25 °C to +85 °C
Dimensions (H x W x D)	294 x 159 x 90 mm
Protection category of housing	IP 65
Housing colour	light grey RAL 7035
Weight	approx. 1.35 kg
VdS-Number	G 208190

**Remote Response Generator**

**RRG 535**
**60-3300120-00-03**

The RRG 535 is a relay output unit that can be operated in the FT-NET. The RRG 535 is used to output alarm data centrally from SecuriSens MHD 535 line type heat detectors that are also connected in the FT-NET, to a fire alarm system. The RRG 535 has 8 group relays, which can be assigned individual sensor groups. For additional group relays up to 6 RCU 535 Relay Control Units with 32 relay outputs and 4 digital inputs each can be connected. In addition 6 digital inputs are available, which can be used to acquire external alarm or status data for alarming purposes

*Technical data*

Operating voltage	10 to 36 V DC
Ambient temperature	-25 °C to +85 °C
Dimensions (H x W x D)	294 x 159 x 90 mm
Protection category of housing	IP 65
Housing colour	light grey RAL 7035
Weight	approx. 1.20 kg
VdS-Number	G 208190

**Remote Access Point**

**RAP 535**
**60-3100120-00-03**

The RAP 535 and RSS 535 are central transfer points for system data (pre-signals, alarms, sensor and group status, error messages) and can be operated in the FT-NET.

*Technical data*

Operating voltage	10 to 36 V DC
Ambient temperature	-25 °C to +85 °C
Dimensions (H x W x D)	232 x 149 x 73 mm
Protection category of housing	IP 65
Housing colour	light grey RAL 7035
Weight	approx. 920 kg
VdS-Number	G 208190

**Remote System Server**

**RSS 535**
**60-3150120-00-03**

Same as RAP 535.

## 2. Cable Modules

### Cable Terminator Module



#### CTM 535

60-2100110-30-03

The CTM 535 is used on a stub line to terminate the extremity of the sensor cable.

##### Technical data

Operating voltage	10 to 20 V DC
Ambient temperature	-40 °C to +85 °C
Dimensions (H x W x D)	75 x 138 x 56 mm
Protection category of housing	IP 65
Housing colour	grey RAL 7000
Weight	approx. 380 g
VdS-Number	G 208190

### Connection and Filter Module



#### CFM 535

60-2200110-30-01

The CFM 535 is used as a connection module to ensure that two sensor cables are connected properly. It can be used when installing longer cable sections and for repairs.

##### Technical data

Operating voltage	10 to 20 V DC
Ambient temperature	-40 °C to +85 °C
Dimensions (H x W x D)	75 x 165 x 56 mm
Protection category of housing	IP 65
Housing colour	grey RAL 7000
Weight	approx. 420 g
VdS-Number	G 208190

### Protection and Filter Module



#### PFM 535

60-2300110-30-01

The PFM 535 is installed at the start of the sensor cable to protect it against overvoltage, e.g. in the event of a lightning strike.

##### Technical data

Operating voltage	10 to 20 V DC
Ambient temperature	-40 °C to +85 °C
Dimensions (H x W x D)	75 x 165 x 56 mm
Protection category of housing	IP 65
Housing colour	grey RAL 7000
Weight	approx. 420 g
VdS-Number	G 208190



**Sensor Separator Module**

**SSM 535**
**60-2400110-30-02**

The SSM 535 is used to separate the sensor cable into sections. This means that if a fault occurs in a particular section the rest of the system remains fully operational.

*Technical data*

Operating voltage	10 to 20 V DC
Ambient temperature	-40 °C to +85 °C
Dimensions (H x W x D)	75 x 165 x 56 mm
Protection category of housing	IP 65
Housing colour	grey RAL 7000
Weight	approx. 420 g
VdS-Number	G 208190

**Double SSM connection cable SD incl. Assembly**
**DSM 535**
**60-6000141-00-00**

Connecting cable for double Sensor Separator Module SSM 535

**Earth Connecting Box**

**ECB 535**
**60-2500110-00-02**

The ECB 535 is used to define the earth connection of the Secur-iSens MHD 535, thereby minimising the influence of electromagnetic interference and protecting the processor unit against voltage peaks.

*Technical data*

Operating voltage	10 to 20 V DC
Ambient temperature	-40 °C to +85 °C
Dimensions (H x W x D)	106 x 165 x 56 mm
Protection category of housing	IP 65
Housing colour	grey RAL 7000
Weight	approx. 460 g
VdS-Number	G 208190

### 3. Cable

#### SD Sensor Cable



#### MHD 535-2SD

60-1020030-30-05

Temperature Sensor Cable, 2m sensor distance  
max. length 250m

#### Technical data

Current consumption per sensor	140 µA
Mechanical protection	IP 65
Ambient temperature continuous	-40 °C to +85 °C
Max. number of sensors	125
Dimensions	5 x 13.5/7 x 15
Colour	red 3000 RAL
Weight	78 g/m

#### SD Sensor Cable

#### MHD 535-4SD

60-1040030-30-05

Same as MHD 535-2SD except:  
Temperature Sensor Cable with 4m sensor distance  
max. length 1'000 m / max. number of sensors 250

#### SD Sensor Cable

#### MHD 535-7SD

60-1070030-30-05

Same as MHD 535-2SD except:  
Temperature Sensor Cable with 7m sensor distance  
max. length 1'750 m / max. number of sensors 250

#### SD Sensor Cable

#### MHD 535-10SD

60-1100030-30-05

Same as MHD 535-2SD except:  
Temperature Sensor Cable with 10m sensor distance  
max. length 2'000 m / max. number of sensors 200

#### SD Sensor Cable

#### MHD 535-20SD

60-1200030-30-05

Same as MHD 535-2SD except:  
Temperature Sensor Cable with 20m sensor distance  
max. length 2'000 m / max. number of sensors 100

## 4. Software

Configuration Software Basic

MHD Config

60-5200001-00-03

## 5. Accessories

### CCA Access Cable



#### CCA 535

60-6000010-00-00

To connect a Processor unit with the sensor cable.

#### *Technical data*

Type	7 x 0.5mm <sup>2</sup> RF (flame retardant)
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### Processor unit Connection Cable RS232



#### PCC 935-2

60-6000015-00-00

To connect a Processor unit with the computer

### Mounting Clips "Securiton"



#### CMC 535

60-4700970-00-01

The CMC 535 mounting clip is used to firmly secure the sensor cable to ceilings, walls or other surfaces. The sensor cable itself can be mounted both flat or upright. The maximum interval between individual mounting clips is 1 m. Elements with a diameter of up to 6 mm such as CMS 511 cable mounting screws can be used to secure the clips.

#### *Technical data*

Colour	black
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### Fixing plug with nail MEA



#### CMS 535

60-6000022-00-00

Special stainless steel screw (V4A) to install clips CMC 535 incl. nail dowel.

#### *Technical data*

Material	stainless steel
Head	Philips head

### Flat Cable Connector



#### CON 511

223891

flat cable connector for sensor cable

#### *Technical data*

Nr. of pins	8
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**Mounting Set MHD 535**

**MST 911**
**218693**

Mounting Set for MHD 535

Consisting of:

- Crimp tool for sensor cable MHD 535
- CON 511
- CMS 535
- Tools for fixing and connecting units and cables

## 6. Demo and Test Equipment

**Demonstration Unit**

**DSC**
**60-3250060-19-03**

The DSC is a demonstration case. Containing a SSP Processor Unit, 2 sensors and a CTM. For sales demonstration,

*Technical data*

Operating voltage	230 V AC
Dimensions (H x W x D)	17.5 x 37 x 44 mm
Weight	7 kg

**Sensor Test Equipment**

**STE 515-1**
**231223**

Sensor Test Equipment complete without pole. Heating tool to test individual heat sensor on cable (connectable with telescopic pole, for example: UTP7 (5600073)).

Includes:

- Battery (rechargeable)
- Standard battery charger
- Battery charger to connect to a car battery
- Halogen lamp for repair exchange

## 7. Interface

### Modbus Interface



#### **MBI 535-2 Full-Duplex**

**60-4450000-00-01**

As an option the SSP 535 and SRG 535 processor units can be expanded by a Modbus card for data output via RS 485 Modbus RTU.

- Printed circuit board for mounting in SSP 535 and SRG 535
- Max. length 1'200m
- Capable of networking max. 32 devices

### Modbus Interface



#### **MBI 535-1 Half-Duplex**

**60-4451000-00-01**

As an option the SSP 535 and SRG 535 processor units can be expanded by a Modbus card for data output via RS 485 Modbus RTU.

- Printed circuit board for mounting in SSP 535 and SRG 535
- Max. length 1'200m
- Capable of networking max. 32 devices

### Fiber Optic Option



#### **FOO 535**

**60-4350000-00-00**

As an option the RSP 535, RXG 535, RRG 535, RAP 535 and RSS 535 processor units can be expanded by one or two FOO cards for connection in the FT-NET for data transmission via fibre optics. This is mandatory for distances in excess of 1200 m and recommended in the case of an increased EMC load

## 8. Product Type Index

<b>C</b>			
CCA 535 .....	12		
CFM 535 .....	8		
CMC 535 .....	12		
CMS 535 .....	12		
CON 511 .....	12		
CTM 535 .....	8		
<b>D</b>			
DSC .....	13		
DSM 535 .....	9		
<b>E</b>			
ECB 535 .....	9		
<b>F</b>			
FOO 535 .....	14		
<b>M</b>			
MBI 535-1 Half-Duplex ..	14		
MBI 535-2 Full-Duplex ..	14		
MHD 535-10SD .....	10		
MHD 535-20SD .....	10		
MHD 535-2SD .....	10		
MHD 535-4SD .....	10		
MHD 535-7SD .....	10		
MHD Config .....	11		
MST 911 .....	13		
<b>P</b>			
PCC 935-2 .....	12		
PFM 535 .....	8		
<b>R</b>			
RAP 535 .....	7		
		RCU 535 .....	5
		RRG 535 .....	7
		RSP 535 .....	6
		RSS 535 .....	7
		RXG 535 .....	6
		<b>S</b>	
		SRG 535 .....	5
		SSM 535 .....	9
		SSP 535 .....	5
		STE 515-1 .....	13