



Optical smoke switch
ORS

Product Catalogue 2026

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1. Introduction



Smoke switches: timely activation for safe escape

Smoke switches are designed to protect your business from financial loss. In the event of a fire or overheating they automatically switch off machinery and installations. For example, they are used in combined heat-and-power stations, wind turbines, switch cabinets, vending machines and ticket dispensers.

The Optical Smoke Switch ORS 142 detects both smouldering and open fires through their smoke emission. An additional temperature sensor reacts at a temperature of about 70 °C. In the event of an alarm, a fault, or a power failure, a relay contact opens.

Main Features

Smoke switch systems are very simple fire alarm systems

The heart of the system is the automatic fire detector(s)

The detector is supplied from a power supply unit and activates a relay contact in case of alarm or fault.

Depending on the application, the smoke switch may control:

- door holders for releasing fire doors in case of fire
- fire dampers in air ducts
- smoke exhaust systems
- many others

2. New specifications for the replacement of smoke and thermal switches

Due to the new test basis of the DIBt, there will be a distinction in future between detectors that are used on the basis of a general building approval (abZ) and detectors that are used on the basis of a general type approval (abG). The reason for the distinction is that fire detectors were approved with a triggering device in general building inspectorate approvals. In general type approvals, the fire detectors are only approved as detectors, no longer with a triggering device. The triggering device is taken over by the control unit, e.g. the FSZ Basis.

In order for hold-open systems to continue to be in conformity with the approval, retrofit AT products must always be used when replacing detectors (see blue info box below).

We provide you with the appropriate products that are approved according to the new specifications, too. This means that you are always legally on the safe side with our products.

Hold-open systems installed in 2019 and earlier:

In order for hold-open systems to continue to be approved in accordance with the DIBt approval notice from before 2020, the retrofit AT products must always be used when replacing detectors. The old systems must not be replaced with a newer detector, otherwise there will be an approval-related (non-technical) incompatibility.

Hold-open systems installed from 2020:

Hold-open systems installed since 2020 are now approved according to the DIBt type approval. This also includes the known replacement detectors.

For hold-open systems according to DIBt approval notice

For hold-open systems in which smoke or thermal switches are installed and which have been approved in accordance with the DIBt approval notice (Z-6.5-xxxx), the following retrofit AT products must be used for replacement. These are specifically approved for this purpose.

The following retrofit AT products are available from us; you can recognise them by the new article number and the marking on the packaging.

- **ORS 142 AT** Art. no. 31-5000017-04-xx
- **TDS 247 AT** Art. no. 31-5100001-01-xx
- **ORS 142W AT** Art. no. 31-5000033-04-xx
- **ORS 142Ex AT** Art. no. 31-5000039-01-xx

Important: If a different AT product is used the system will lose its approval.

For hold-open systems according to DIBt type approval

For hold-open systems in which smoke or thermal switches are installed and which are approved according to DIBt type approval (Z-6.500-xxxx), the following products must be used both for new systems and for replacement.

- **ORS 142** Art. no. 5000552-xxxx
- **TDS 247** Art. no. 5100158
- **ORS 142W** Art. no. 5000572 or Art. no. 31-5000033-xx-xx
- **ORS 142Ex** Art. no. 5000590-xxxx
- **ORS 142Ex E** Art. no. 4000259-xxxx

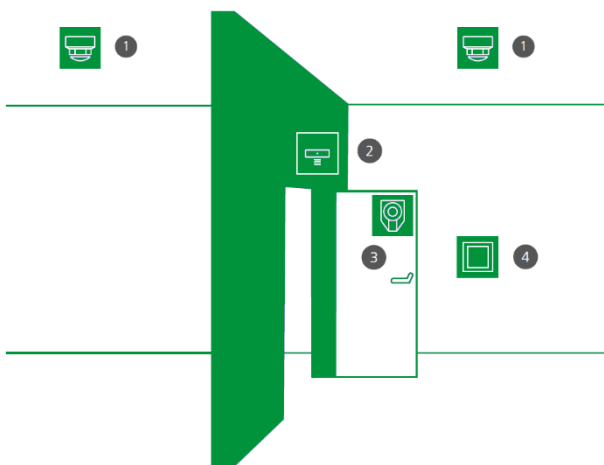
Important: If products other than those mentioned above are used, the hold-open system cannot be approved by the DIBt or will lose its approval.

3. Smoke Switches

Smoke switches are used on fire protect doors and gates. However, use in different applications requires individual additional elements. Our systems cover this wide range of applications, for industrial or design-oriented requirements or even for potentially explosive areas.

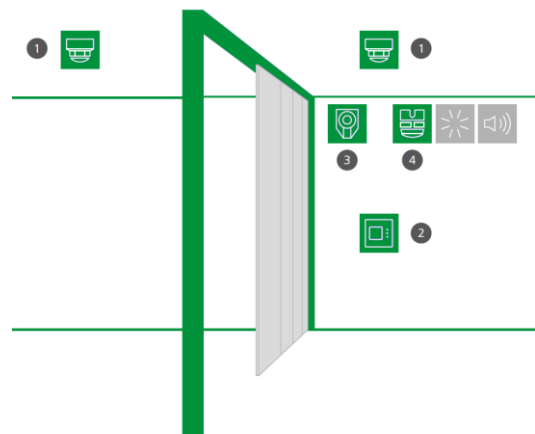
Installation of a hold-open system on the door

1. Smoke or thermal switches
2. Central hold-open control unit
3. Door holding magnet
4. Manual release button



Installation of a hold-open system at the gate

1. Smoke or thermal switches
2. Central hold-open control unit with manual switch
3. Door holding magnet
4. Manual release button
5. signal transmitter (optical and acoustic)



3.1. Smoke and thermal switches for ceiling and wall mounting

Optical smoke switch

DIBt CE



ORS 142

with dust cover

5000552-0501

For early detection of smouldering and open fires.

- Auto contamination compensation
- Optical contamination/status display
- Communications capability for RSBus
- Sensing chamber monitoring
- Potential-free contact
- Extended temperature range for up to minus 30 °C
- Thermocouple for triggering at an ambient temperature above 70 °C
- Optionally, the line monitoring according DIN EN 14637 can be activated by a magnet in the base.
- For new installations according type approval (Z-6.500-xxxx)

Operating voltage:	18 to 28 VDC
Quiescent current:	22 mA
Switching voltage:	30 VDC
Switching current:	1 A
Protection class:	IP42
Operating temperature:	-30°C to +60°C
Weight:	127 g
Dimensions (ØxH):	80 x 33 mm
Material:	ABS/PC
Color:	pure white (RAL 9010)

Accessories and Retrofit		
Optical smoke switch Set, 2 pcs. ORS 142 and 2 pcs. Base 143 A	ORS 142 Set	31-5000017-01-04
Smoke switch replacement type for existing installations according approval notice Z-6.5-xxxx	ORS 142 AT	31-5000017-04-03

Differential heat detector

DIBt CE

5100158

**TDS 247**

The TDS 247 rate-of-rise detector switch detects open fires with and without smoke.

It is used when interfering operational factors, such as dust, smoke or steam, are to be expected.

- Optical status display
- Communications capability for RSBus
- Sensing chamber monitoring
- Potential -free contact
- Fire detection by temperature, class A1
- Trigger temperature 54 °C to 65 °C
- For new installations according type approval (Z-6.500-xxxx)

Operating voltage:	18 to 28 VDC
Quiescent current:	22 mA
Switching voltage:	30 VDC
Switching current:	1 A
Protection class:	IP42
Operating temperature:	-20°C to +80°C
Weight:	60 g
Dimensions (ØxH):	80 x 33 mm
Material:	ABS/PC
Color:	pure white (RAL 9010)

Retrofit

Differential heat detector
replacement type for
existing installations
according approval notice
Z-6.5-xxxx

TDS 247 AT

31-5100001-01-01

Smoke Switches

3.2. Sockets and Accessories for ORS 142 and TDS 247

Mounting socket



143 A



143 W



143 AF

143 A	surface mounting / dry rooms	5000350
143 W	wall mounting	5000513
143 AF	surface mounting / humid rooms	5000356

Mounting socket for smoke and thermo switches

- Cable inlet max. Ø 9 mm
- Includes magnet for activating line monitoring

Protection class:

143 A / 143 W	IP42
143 AF	IP52

Weight:

143 A	45 g
143 W	50 g
143 AF	52 g

Dimensions (HxWxD):

143 A	80 x 33 mm
143 W	100 x 170 x 40 mm
143 AF	80 x 33 mm

Color: pure white (RAL 9010)

3.3. Smoke switch control unit RSZ and smoke switch for wall mounting (door lintel)

Smoke switch control unit

DIBt

CE



RSZ Kompakt Set ws	white	31-5300001-01-01
RSZ Kompakt Set si	white aluminium (silver)	31-5300001-02-01

The RSZ Compact is a compactly designed hold-open control unit suitable for use on fire and smoke protection doors.

- Compact design for mounting on the door lintel or directly on the door frame
- Operating and status display visible from the outside
- Adjustable alarm memory and line monitoring
- Test and reset button integrated and can be operated from the outside
- Potential-free changeover contact 30 VDC / 1 A

Operating voltage:	230 VAC
Output voltage:	24 VDC
Output current:	0,46 A
Protection class:	IP40
Operating temperature:	-20°C to +45°C
Weight:	102 g
Dimensions (HxWxD):	35 x 250 x 31,5 mm
Color:	traffic white (RAL 9016) white aluminium (RAL 9006)

Smoke Switches

Optical smoke switch for wall mounting

DIBt

CE



ORS 142 W ws

white

31-5000033-01-01

ORS 142 W si

white aluminium (silver)

31-5000033-02-01

For early detection of smouldering and open fires.

- Auto contamination compensation
- Optical contamination/status display
- Communications capability for RSBus
- Sensing chamber monitoring
- Potential-free contact
- Thermocouple for triggering at an ambient temperature above 70 °C
- For new installations according type approval (Z-6.500-xxxx)

Operating voltage:	18 to 28 VDC
Quiescent current:	22 mA
Potential based change-over contact:	24 VDC
Protection class:	IP40
Operating temperature:	-20°C to +75°C
Dimensions (HxWxD):	31,5 x 123 x 33 mm
Color:	traffic white (RAL 9016) white aluminium (RAL 9006)

Accessories and Retrofit		
Cover, standard version (white)	RNO 02 ws	4300735-0001
Cover, standard version (silver)	RNO 02 si	4300735-0002
Optical smoke switch for wall mounting replacement type for existing installations according approval notice Z-6.5-xxxx	ORS 142 W AT	31-5000033-04-01

3.4. Accessories for ORS 142, RSZ 142 and TDS 247

Indication Unit



RZA 142 AP

5500034

For a clear status display of all connected smoke switches. Based on the RSBus System. With potential-free relays for each status message, for connection to the building management system.

Operating voltage:	18 to 28 VDC
Power consumption at 28 VDC:	max. 120 mA
Switching voltage:	30 VDC
Switching current:	1 A
Protection class:	IP42
Operating temperature:	-20°C to +70°C
Dimensions (ØxH):	80 x 33 mm
Color:	pure white (RAL 9010)

4. Central units for hold-open systems

Central hold-open control unit FSZ Kompakt



FSZ Kompakt ws white **31-5400007-05-01**

FSZ Kompakt si white aluminium (silver) **31-5400007-04-01**

The FSZ Kompakt is a compactly designed hold-open control unit suitable for use on fire and smoke protection doors.

- Adjustable alarm memory and line monitoring
- All-in-one: power supply, triggering device and alarm memory in one unit
- Technically compatible with predecessor products and line networks
- Output for hold-open devices and additional potential-free alarm output
- Operation and status display visible from the outside
- Design-oriented mounting, e.g. below ceilings or in niches
- Potential-free changeover contact 30 VDC / 1 A

Operating voltage:	230 VAC
Output voltage:	24 VDC
Output current:	0,46 A
Protection class:	IP40
Operating temperature:	-20°C to +45°C
Weight:	102 g
Dimensions (HxWxD):	35 x 127 x 36 mm
Color:	traffic white (RAL 9016) white aluminium (RAL 9006)

Approvals

VdS-Approval:	G 217098
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FSZ Basis

The FSZ Basis is power supply, controller, alarm memory and reset button in one.

With approved smoke switches and door holding magnets to form a lock system for the control of fire and smoke protection doors and gates.

- Technically compatible with predecessor products and line networks
- Optional line monitoring in accordance with DIN EN 14637 (no line monitoring for Ex applications)
- Alarm memory
- Individual control options through two separate alarm outputs
- Cable entries at the top, bottom and rear
- Can be used in difficult environmental conditions with humidity, dust, heat and cold
- Short-circuit proof
- Interchangeable labelling
- Built-in reset button
- Operation, alarm and fault indication

Operating voltage:	230 V AC
Output voltage:	24 VDC
Output current:	0,4 A
Protection class:	IP65
Operating temperature:	-10°C to +50°C
Weight:	420 g
Dimensions (HxWxD):	146 x 146 x 60,5 mm
Material:	ABS/PC
Color:	signal white (RAL 9003)

Approvals

VdS-Approval:	G 213091
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Central units for hold-open systems

Central hold-open control unit FSZ Pro



FSZ Pro

31-5400003-01-01

The FSZ Pro is a power supply, controller, alarm memory and reset button in one.

With approved smoke switches and door holding magnets to form a lock system for the control of fire and smoke protection doors and gates.

- Technically compatible with predecessor products and line networks
- Optional line monitoring in accordance with DIN EN 14637 (no line monitoring for Ex applications)
- Alarm memory
- Individual control options through additional inputs and outputs
- Integrated, 60 seconds buffered sounder (65 dB(A) @1 m)
- Interchangeable labelling
- Built-in reset button
- Operation, alarm and fault indication
- Optional energy storage via additional module
- Possibility to connect external reset and manual release button

Operating voltage:	230 V AC
Output voltage:	24 VDC
Output current:	0,9 A
Protection class:	IP65
Operating temperature:	-10°C to +45°C
Weight:	420 g
Dimensions (HxWxD):	146 x 146 x 60,5 mm
Material:	ABS/PC
Color:	signal white (RAL 9003)

Approvals

VdS-Approval:	G-No. pending
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Accessories		
Energy storage module	ESM Pro	31-5400004-01-01

5. Door holding magnets and anchor plates

5.1. Door holding magnets

Door holding magnet

DIBt CE



THM 413 (490 N / 63 mA)

6500002

Door holding magnet with covered connection terminals. The THM 413 is provided with a spark-suppression diode (free wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support ASS 55.
- No remanence
- Integral spark-suppression diode
- Polarity reversal protection
- For floor mounting
- Holding force: 490N
- Magnet Ø: 50mm

Operating voltage:	24 VDC
Power consumption:	63 mA
Protection class:	IP40
Operating temperature:	0°C to +50°C
Weight:	800 g
Dimensions (HxWxD):	120 x 121 x 86 mm
Color:	pure white (RAL 9010)

Approvals

Declaration of Performance (DoP):	CPR-31-13-500
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Door holding magnets and anchor plates

Door holding magnet

DIBt CE



THM 425



THM 425-1

THM 425 (686 N / 63 mA)

6500016

THM 425-1 (1372 N / 63 mA)

6500020

Door holding magnet with covered connection terminals. The THM 425 is provided with a spark-suppression diode (free-wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- THM 425 compatible to the door magnet support ASS 65
- THM 425-1 compatible to the door magnet support ASS 75
- For floor mounting

- Holding force:

THM 425 686 N

THM 425-1 1372 N

- Magnet Ø

THM 425 60 mm

THM 425-1 70 mm

Operating voltage:	24 VDC
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Power consumption:	63 mA
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Protection class:	IP40
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Operating temperature:	0°C to +50°C
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Weight:

THM 425	500 g
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THM 425-1	1000 g
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Dimensions (HxWxD):

THM 425	65 x 93 x 26 mm
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THM 425-1	75 x 97 x 43 mm
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Color:	silver / black
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Approvals

Declaration of Performance (DoP):

THM 425	CPR-32-13-502
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THM 425-1	CPR-31-13-501
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Door holding magnet

DIBt CE



THM 433



THM 433-1

THM 433 (490 N / 63 mA)

6500096

THM 433-1 (1372 N / 63 mA)

6500097

Door holding magnet with covered connection terminals. The THM 433 is provided with a spark-suppression diode (free-wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support ASS 55
- For floor mounting
- Holding force:

THM 433	490 N
THM 433-1	1372 N
- Magnet Ø:

THM 433	50 mm
THM 433-1	70 mm

Operating voltage:	24 VDC
Power consumption:	63 mA
Protection class:	IP40
Operating temperature:	0°C to +50°C
Weight:	
THM 433	500 g
THM 433-1	1000 g
Dimensions (HxWxD):	
THM 433	85 x 105 x 38 mm
THM 433-1	85 x 105 x 42,5 mm
Color:	pure white (RAL 9010)

Approvals

Declaration of Performance (DoP):	
THM 433	CPR-31-13-500
THM 433-1	CPR-31-13-501

Door holding magnets and anchor plates

Door holding magnet

DIBt CE



THM 439/185	(490 N / 63 mA)	6500127
THM 439/335	(490 N / 63 mA)	6500128
THM 439/485	(490 N / 63 mA)	6500129

The head of the THM 439 can be turned and tilted, making it possible to arrange the pole face parallel to the mounting surface or at right angles to it. The length of the THM 439/... can be adjusted to suit local conditions by shortening its tubular support.

The THM 439/... is provided with a spark-suppression diode (free-wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support ASS 55
- For floor, wall and ceiling mounting
- Holding force: 490 N
- Magnet Ø: 50 mm

Operating voltage:	24 VDC
Power consumption:	63 mA
Protection class:	IP40
Operating temperature:	0°C to +50°C
Weight:	
THM 439/185	630 g
THM 439/335	960 g
THM 439/485 / 450 mm	1200 g
Dimensions (length / height tilted):	
THM 439/185	185 / 150 mm
THM 439/335	335 / 300 mm
THM 439/485	485 / 450 mm
Color:	silver

Approvals

Declaration of Performance (DoP):	CPR-31-13-500
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Door holding magnet

DIBt CE



THM 440 (490 N / 63 mA)

6500109

Door holding magnet with covered connection terminals. The THM 440 is provided with a spark-suppression diode (free-wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support ASS 55
- For floor mounting
- Holding force: 490 N
- Magnet Ø: 50mm

Operating voltage:	24 VDC
Power consumption:	63 mA
Protection class:	IP40
Operating temperature:	0°C to +50°C
Weight:	420 g
Dimensions (HxWxD):	70 x 70 x 65 mm
Color:	black

Approvals

Declaration of Performance (DoP):	CPR-31-13-500
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Door holding magnet

DIBt CE



THM 441 (650 N / 330 mA)

6500130

A built-in heating system makes the THM 441 suitable for extremely low temperatures and it is therefore used in cold stores (refrigerated and deep-frozen products). The THM 441 is provided with a spark-suppression diode (free wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support ASS 55
- Magnet and counter plates are nickel-plated.
- For floor mounting
- Holding force: 650 N
- Magnet Ø: 50mm

Operating voltage:	24 VDC
Power consumption:	330 mA
Protection class:	IP65
Operating temperature:	-40°C to +20°C
Weight:	450 g
Dimensions (HxWxD):	70 x 106 x 65 mm
Color:	black

Door holding magnets and anchor plates

Door holding magnet



THM 442



THM 443

THM 442 (700 N / 63 mA)

6500131

THM 443 (1372 N / 63 mA)

6500132

This electromagnetic door holder/closer with its IP 65 ingress protection is therefore suitable for use in humid environment and in Zone 2 hazardous areas. It is provided with a spark-suppression diode (free wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support ASV 65
- For wall mounting
- Holding force:

THM 442	700 N
THM 443	1372 N
- Magnet Ø:

THM 442	60 mm
THM 443	70 mm

Operating voltage:	24 VDC
Power consumption:	63 mA
Protection class:	IP65
Operating temperature:	0°C to +50°C
Weight:	
THM 442	600 g
THM 443	900 g
Dimensions (HxWxD):	
THM 442	75 x 106 x 38 mm
THM 443	75 x 119 x 43 mm
Color:	black

Approvals

Declaration of Performance (DoP):	
THM 442	CPR-31-13-503
THM 443	CPR-31-13-501

Door holding magnet

DIBt CE



THM 444

(1800 N / 330 mA)

6500133

The THM 444 is suitable for use under arduous conditions. It is used principally for outdoor applications and in Zone 2 hazardous areas.

The THM 444 is provided with a spark-suppression diode (free wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support AFV 75
- For wall mounting
- Holding force: 1800 N
- Magnet Ø: 75mm

Operating voltage:	24 VDC
Power consumption:	330 mA
Protection class:	IP65
Operating temperature:	-25°C to +50°C
Weight:	950 g
Dimensions (HxWxD):	91 x 116 x 80 mm
Color:	black

Door holding magnet

Ex DIBt CE



THM 455 Ex

(1568 N / 125 mA)

31-6500001-01-01

The THM 455 Ex is suitable for Ex conditions in Zone 1/2/21/22 of hazardous areas.

The THM 455 Ex is provided with a spark-suppression diode (free wheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support AFV 75
- For wall mounting
- Holding force: 1568 N
- Magnet Ø: 70 mm

Operating voltage:	24 VDC
Power consumption:	125 mA
Protection class:	IP65
Operating temperature:	-20°C to +40°C
Weight:	1260 g
Dimensions (HxWxD):	105 x 75 x 52 mm
Color:	silver

Approvals

Ex Approval:	II 2G Ex mb IIC T6
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Door holding magnets and anchor plates

Door holding magnet

DIBt CE



THM 446 (700 N / 63 mA)

6500146

THM 447 (1372 N / 63 mA)

6500145

The THM 446 and THM 447 electromagnetic door retainers are equipped with a hall sensor which monitors the magnetic flux and signals whether the door is retained by the magnet, via an additional output (open collector). This signal can be forwarded to a superior station.

The THM 446 is provided with a spark-suppression diode (freewheeling diode) to protect the contacts against premature erosion and voltage surges, plus a reverse polarity protection diode.

- Compatible to the door magnet support ASV 65
- Electronic monitoring of magnetic flux
- For wall mounting
- Holding force:
 - THM 446 700 N
 - THM 447 1372 N
- Magnet Ø:
 - THM 446 60 mm
 - THM 447 70 mm

Operating voltage:	24 VDC
Power consumption:	63 mA
Protection class:	IP65
Operating temperature:	0°C to +50°C
Weight:	
THM 446	600 g
THM 447	900 g
Dimensions (HxWxD):	
THM 446	75 x 106 x 38 mm
THM 447	75 x 119 x 43 mm
Color:	black

Approvals

Declaration of Performance (DoP):	
THM 446	CPR-31-13-503
THM 447	CPR-31-13-501

5.2.Anchor plates

Door Magnets Supports

Flexible door magnet support (galvanized) Slewing range of 20°

	Door magnet support for THM 413, 433, 439, 440, BX-MDH Dimensions (øxH): 55 x 18 mm	ASS 55	6500023
	Door magnet support for THM 425 Dimensions (øxH): 65 x 23 mm	ASS 65	6500024
	Door magnet support THM 425-1 und 433-1 Dimensions (øxH): 75 x 26 mm	ASS 75	6500025

Adjustable door magnet support (galvanized) Slewing range of 2x60°

	Adjustable door magnet support for THM 413, 433, 439, 440, BX-MDH Dimensions (øxH): 55 x 50 mm	AFS 55	6500102
	Adjustable door magnet support for THM 425 Dimensions (øxH): 65 x 55 mm	AFS 65	10-0000004-01-01
	Adjustable door magnet support for THM 425, 425-1, 433-1 Dimensions (øxH): 75 x 56 mm	AFS 75	6500103

Telescope door magnet support (galvanized) Slewing range of 20°

	Telescope door magnet support for THM 413, 433, 439, 440, BX-MDH Dimensions (øxH): 55 x 79 mm	ATS 55	6500100
	Adjustable door magnet support for THM 425, 425-1, 433-1 Dimensions (øxH): 75 x 84 mm	ATS 75	6500101

Door magnet support (galvanic nickel plated) Slewing range of 20°

	Door magnet support for THM 441 Dimensions (øxH): 55 x 18 mm	ASV 55	6500134
	Door magnet support for THM 442, 446 Dimensions (øxH): 65 x 23 mm	ASV 65	6500136
	Door magnet support for THM 443, 445Ex, 447 Dimensions (øxH): 75 x 26 mm	ASV 75	6500137

Adjustable door magnet support (galvanic nickel plated) Slewing range of 2x60°

	Adjustable door magnet support for THM 441 Dimensions (øxH): 55 x 50 mm	AFV 55	6500135
	Adjustable door magnet support for THM 442/3/4/5 Ex/6/7 Dimensions (øxH): 75 x 56 mm	AFV 75	6500138

Door magnet support (galvanic nickel plated) Slewing range of 20°

	Telescope door magnet support for THM 442/3/4/5 Ex/6/7 Dimensions (øxH): 75 x 84 mm	ATV 75	6500140
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6. Push and manual release buttons

Manual release button



HAT 02



HAT 03

HAT 02

6500143

HAT 02 GB

English

6500182

HAT 03

for humid areas

6500142

The HAT02 Manual Actuation Buttons allow manual triggering of hold-open devices, e.g. permanent door magnets on fire doors.

Switching voltage:	30 VDC
Switching current:	1 A
Protection class:	
HAT 02	IP20
HAT 03	IP44
Operating temperature:	-20°C to +75°C
Dimensions (HxWxD):	250 x 135 x 100 mm
Color:	
HAT 02	pure white (RAL 9010) / red (RAL 3000)
HAT 03	light grey (RAL 7035) / red (RAL 3000)

Manual release button



DKT 01 ge

yellow

6200106

The DKT 01 provides manual control for mechanical smoke evacuation and smoke alarm systems as well as for hold-open systems. It is used wherever inadvertent activation of the alarm button shall be prevented.

- Potential-free changeover contact 30 VDC / 1 A

Operating voltage:	24 VDC
Power consumption:	10 mA
Protection class:	IP20
Operating temperature:	-20°C to +75°C
Dimensions (HxWxD):	130 x 130 x 34 mm
Color:	yellow (RAL1018)

Spare parts

Key for MCP 520-1, 530-1 and 535 X delivery unit: 5 pcs.	KEY MCP 5xx VE5	30-6800093-01-01
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7. Hold-open systems in potentially explosive areas

Optical smoke switch, ATEX approved



ORS 142 Ex

5000590-0201

For early detection of smouldering and open fires.

- Auto contamination compensation
- Optical contamination/status display
- Sensing chamber monitoring
- Potential-free contact
- Cable length 15 cm
- Standard explosion-hazard zones 1, 2 and 22
- For new installations according type approval (Z-6.500-xxxx)

Operating voltage:	20 to 28VDC
Quiescent current:	12 mA
Switching voltage:	30 VDC
Switching current:	1 A
Protection class:	
Smoke switch:	IP42
Connection box:	IP54
Operating temperature:	-20°C to +70°C
Weight:	1300 g

Approvals

Ex Approval:	IBExU 04 ATEX 1106 (Smoke switch) EPS 18 ATEX 1 124 (Connection box)
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Accessories and Retrofit		
Detector for ORS 142 Ex (Detector only)	ORS 142 Ex E	4000259-0201
Optical smoke switch, ATEX approved replacement type for existing installations according approval notice Z-6.5-xxxx	ORS 142 Ex AT	31-5000039-01-01

8. Accessories

Gate signalling device TSG 100

DIBt CE

31-6300002-01-02



TSG 100

The TSG 100 gate signaling device is a buffered, acoustic and optical signalling device. It has an integrated buffering through the a signalisation of the closing process of fire and smoke protection gates guaranteed both in case of alarm and power failure can be.

- Acoustic and optical signalling
- Alarm and power failure signaling
- Limit switch evaluation for premature switch-off
- 39 adjustable tones (DIP switch)
- Adjustable volume (potentiometer) 67 to 100 dB(A)
- Internal buffer for appx. 120 seconds operation
- Attractive design

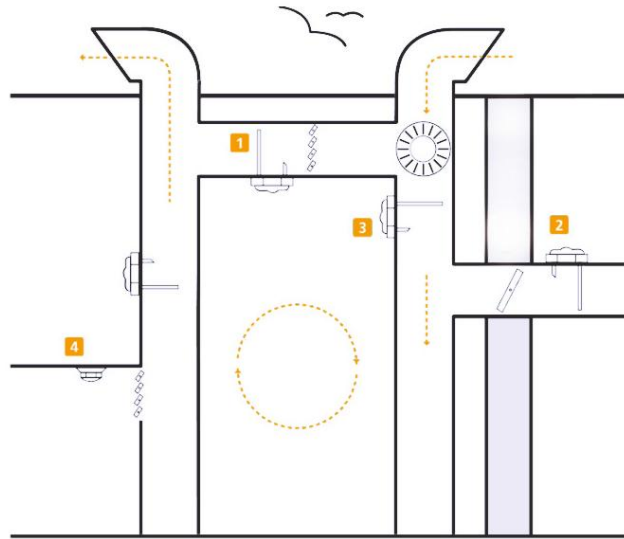
Operating voltage:	24 VDC
Operating current:	max. 50 mA
Protection class:	IP65
Operating temperature:	-20°C to +65°C
Weight:	270 g
Dimensions (ØxH):	90 x 67 mm
Material:	ABS FR
Color:	red (RAL 3001)

➔ Please check Securiton SecuriFire Catalogue for Back-up Batteries and signalling devices.

9. LRS Ventilation Duct Smoke Switch System

The ventilation smoke switch system LRS is used for the timely detection of smoke in ventilation systems and thus prevents the spread of fire smoke. It is characterised by the earliest possible detection, simple installation and high ease of maintenance.

1. LRS 03 and LRS 230 V for monitoring and controlling smoke dampers
2. LRS 03 and LRS 230 V for monitoring and control of fire dampers
3. LRS 01/LRS 02, LRS 03 and LRS 230 V for controlling ventilation and air-conditioning systems
4. ORS 142 and ORS 144 K for monitoring overflow openings



LRS Ventilation Duct Smoke Switch System

9.1. Early smoke detection in ventilation systems

Ventilation Duct Smoke Switch System



LRS 01

with ORS 210

5000605-0401

The relay contacts of the ORS 210 optical smoke switch in the LRS 01 open when there is an alarm, heavy contamination, a fault or a power failure.

Operating voltage:	18 to 28 VDC
Quiescent current:	22 mA
Protection class:	IP54
Operating temperature:	-20°C to +75°C
Weight:	470 g
Dimensions (HxWxD):	250 x 135 x 100 mm
Color:	blue

Approvals

VdS-Approval:	G 207083
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Accessories

Detector for LRS01/02 (Replacement)	ORS 210	5000614-0401
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Ventilation Duct Smoke Switch System



LRS 02

with ORS 210

5000619-0401

The relay contacts of the ORS 210 optical smoke switch in the LRS 02 open when there is an alarm, heavy contamination, a fault or a power failure.

- Alarm reset button

Operating voltage:	21,6 to 28 VDC
Quiescent current:	30 mA
Protection class:	IP54
Operating temperature:	-20°C to +60°C
Weight:	483 g
Dimensions (HxWxD):	370 x 370 x 100 mm
Color:	blue

Approvals

VdS-Approval:	G 207084
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Accessories

Detector for LRS01/02 (Replacement)	ORS 210	5000614-0401
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9.2. Early smoke detection and control of Fire and smoke dampers

Ventilation Duct Smoke Switch System



LRS 03

with ORS 220

5000618-0401

The relay contacts of the ORS 210 optical smoke switch in the LRS 02 open when there is an alarm, heavy contamination, a fault or a power failure.

- Alarm reset button

Operating voltage:	16 to 28 VDC
Quiescent current:	30 mA
Protection class:	IP54
Operating temperature:	-20°C to +60°C
Weight:	483 g
Dimensions (HxWxD):	250 x 135 x 100 mm
Color:	blue

Approvals

VdS-Approval:	G 207085
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Accessories		
Detector for LRS03 (Replacement)	ORS 220	5000615-0401

Ventilation Duct Smoke Switch System



LRS 03 230V

with ORS 220

31-5000007-01-03

The relay contacts of the ORS 220 optical smoke switch in the LRS 03 230V open when there is an alarm, heavy contamination, a fault or a power failure.

- Alarm reset button
- External alarm button
- Including external power supply NAG 03

Operating voltage:	230 VDC
Quiescent current:	5 A
Protection class:	IP54
Operating temperature:	-20°C to +60°C
Weight:	2100 g
Dimensions (HxWxD):	520 x 135 x 105 mm
Color:	blue

Approvals

VdS-Approval:	G 207085
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Accessories		
Detector for LRS03 (Replacement)	ORS 220	5000615-0301

LRS Ventilation Duct Smoke Switch System

9.3. Early smoke detection in ventilation and air-conditioning systems in the Ex-Area

Ventilation Duct Smoke Switch, ATEX approved



LRS 04 Ex

with ORS 221 Ex

31-5000006-01-01

The relay contacts of the ORS 210 optical smoke switch in the LRS 02 open when there is an alarm, heavy contamination, a fault or a power failure.

- Alarm reset button
- ATEX approved for Zones 1 and 2

Operating voltage:	20 to 28 VDC
Quiescent current:	12 mA
Protection class:	IP54
Operating temperature:	-20°C to +70°C
Weight:	2740 g
Dimensions (HxWxD):	520 x 135 x 105 mm
Color:	blue

Approvals

Ex-Approval:	PTB 01 ATEX 1104
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Accessories		
Detector for LRS04 Ex (Replacement)	ORS 221 Ex	31-5000005-01-01

9.4. Early smoke detection in walkable or very small ventilation ducts

Optical smoke switch for ventilation ducts



ORS 144 K

5000580-0401

Optical smoke switch reacts promptly to smouldering fires as well as to flaming fires that develop smoke.

- Auto contamination compensation
- Optical contamination/status display
- Communications capability for RSBus
- Sensing chamber monitoring
- Potential-free contact
- Thermocouple for triggering at an ambient temperature above 70 °C

Operating voltage:	18 to 28VDC
Quiescent current:	21 mA
Switching voltage:	30 VDC
Switching current:	1 A
Protection class:	IP42
Operating temperature:	-20°C to +60°C
Weight:	120 g
Dimensions (ØxH):	80 x 33 mm
Material:	ABS/PC
Color:	pure white (RAL 9010)

Approvals

VdS-Approval:	G 203018
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LRS Ventilation Duct Smoke Switch System

Optical smoke switch for ventilation ducts



ORS 142 K

alarm latching

5000558-0401

Optical smoke switch reacts promptly to smouldering fires as well as to flaming fires that develop smoke.

- Auto contamination compensation
- Optical contamination/status display
- Communications capability for RSBus
- Sensing chamber monitoring
- Potential-free contact
- Thermocouple for triggering at an ambient temperature above 70 °C
- Alarm latching

Operating voltage:	18 to 28 VDC
Power consumption:	21 mA
Output voltage:	30 VDC
Output current:	1 A
Protection class:	IP42
Operating temperature:	-20°C to +75°C
Weight:	120 g
Dimensions (ØxH):	80 x 33 mm
Material:	ABS/PC
Color:	pure white (RAL 9010)

Approvals

VdS-Approval:	G 205139
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Accessories ORS 142/144 K

Special sockets

	Mounting socket for ORS 142/144 K (for air ducts up to 500 mm)	163 KA	5000585-0201
	Mounting socket for ORS 144 (for air ducts up to 500 mm)	164 K	5000584-0201

9.5. Ventilation smoke switch control panel

Ventilation smoke switch control panel

DIBt

CE

31-5400002-01-02



LRZ Basis

The LRZ Basis is used for the secure power supply for all LRS systems.

The DIBt-approval covers the control of fire and smoke protection smoke dampers as well. The short-circuit-proof switched-mode power supply is specially designed for high starting currents.

The operating status of the connected LRS system is evaluated and stored.

After a power failure the LRZ base automatically switches back to the original operating state.

The system can be switched off manually and reset with the integrated manual reset button.

Due to the high protection class and the high operating temperature range, a individually mounting is possible individually, as well as a top-hat rail mounting in the control cabinet.

Designed for ventilation systems.

- Built-in reset button
- Operation, alarm and fault indication
- Selectable alarm storage
- Selectable line monitoring
- Attractive design
- DIBt-Approval Z-78.6-177

Rated voltage (input):	230 VAC
Rated voltage (output):	24 VDC
Output current:	400 mA
Switched magnet exit:	24 VDC
Potential-free changer:	230 V AC / 5 A 30 V DC / 3 A
Mounting:	surface mounting
Operating temperature:	-10°C to +50°C
Color:	signal white (RAL 9003)
Dimensions (HxWxD):	146 x 146 x 60,5 mm

Note:

Included in delivery: LRZ base, mounting instructions, fixing material, 4 cable entries

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