incite fire

SECURITON
Heat Detection
SEC-ADW-535
Technical Catalogue

Version 2.0 2019

incite fire

The SEC-ADW-535 is an integrated line type heat detector with a response behaviour based on heat differential and/or maximum heat. Thanks to its self-check feature and the periodic automatic test, the SEC-ADW-535 is particularly suitable for use in applications where the legally prescribed functional and maintenance checks cannot be performed due to the given ambient conditions or only with difficulty.

Line Type Heat Detector

SEC-ADW-535-1   one sensing tube

SEC-ADW-535-2   two sensing tubes

SEC-ADW-535-1

SEC-ADW-535-2

The SecuriSens SEC-ADW-535 line-type heat detector combines a proven functional principle with the latest developments in sensor and processor technology.
A sensing tube filled with normal air is installed in the area to be monitored. A fully electronic pressure sensor permanently records the pressure in the sensing tube and compares it with the alarm criteria.
Commissioning and configuration is done either directly on the device or via the comfortable ADW Config software tool for a perfect adaptation to existing environmental conditions. For planning the ADW HeatCalc software allows an optimized design of any installation.

Technical data

Operating voltage:	9 to 30 VDC
Length of sensing tube:	115 m
Relay contact:	50 VDC/1A (UL 30 VDC)
Operating temperature evaluation unit:	-30°C to +70°C
Operating temperature sensing tube*:	- 40 °C to +180 °C
Dimensions (HxWxD):	160.5 x 250.5 x 134 mm
Protection class of case:	IP65
Case Color:	Light grey (RAL 280 70 05) Charcoal (RAL 300 20 05)
Weight (1 / 2 sensing tube):	1.5 kg / 1.97 kg
Standards:	EN 54-22 Class A1I, A2I,BI … GI UL, FM
VdS-Approval:	G 214076
ActivFire Approved:	AFP-3328

*: Lower or higher temperature ranges are also possible subject to consultation with the manufacturer

Line Type Heat Detector ATEX

SEC-ADW-535-1HDx   one sensing tube

SEC-ADW-535-2HDx   two sensing tubes

SEC-ADW-535-1HDx

SEC-ADW-535-2HDx

The SecuriSens SEC-ADW-535 line-type heat detector combines a proven functional principle with the latest developments in sensor and processor technology.
A sensing tube filled with normal air is installed in the area to be monitored. A fully electronic pressure sensor permanently records the pressure in the sensing tube and compares it with the alarm criteria.
Commissioning and configuration is done either directly on the device or via the comfortable ADW Config software tool for a perfect adaptation to existing environmental conditions. For planning the ADW HeatCalc software allows an optimized design of any installation.
 The HDx versions of the control unit are for installation inside Ex zones 2 and 22 and very harsh ambient conditions.

Technical data
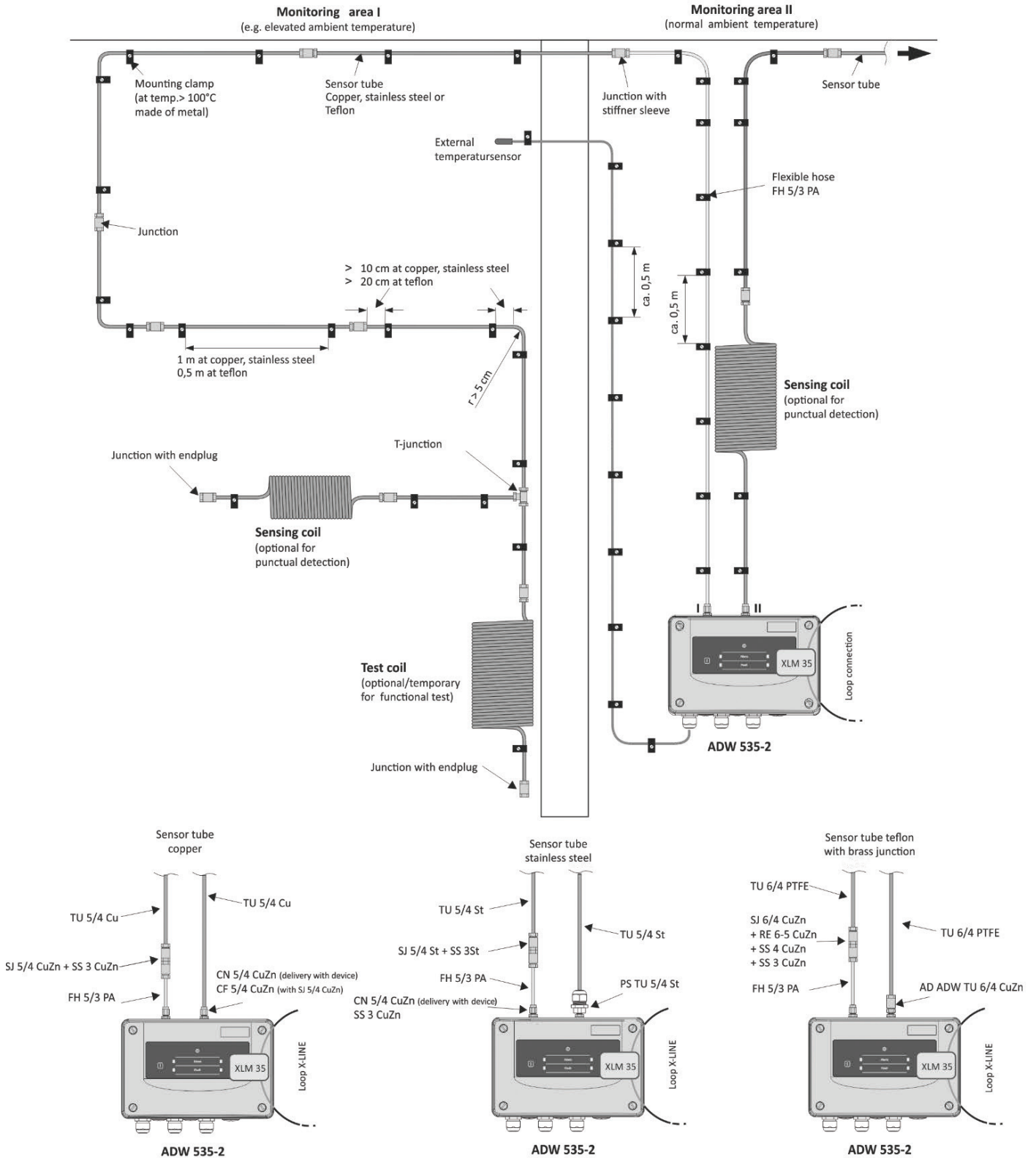
Operating voltage:	9 to 30 VDC
Length of sensing tube:	115 m (NFPA 72 200 m)
Relay contact:	50 VDC/1A (UL 30 VDC)
Operating temperature evaluation unit:	-30°C to +70°C
Operating temperature sensor tube*:	-40°C to +180°C
Dimensions (HxWxD):	260 x 160 x 134 mm
Protection class of case:	IP66
Case Color:	graphite black (RAL 9011) platinum grey (RAL 7036)
Weight: ADW 535-1HDx ADW 535-2HDx	3,05 kg 3,42 kg
Standards:	EN 54-22 Class A1I, A2I,BI … GI UL, FM
VdS-Approval:	G 214076
ATEX-Approval: ⟨Ex⟩	II 3G Ex nA nC IIC T4 Gc II 3D Ex tc IIIC T135°C Dc
ActivFire Approved:	AFP-3328

*: Lower or higher temperature ranges are also possible subject to consultation with the manufacturer

Overview of the linear heat detector SEC-ADW-535

The illustrated components are examples

Line Type Heat Detector ATEX Zone 1

SEC-ADW-535-1-ATEX

Line-type heat detector with one sensor for the use in explosive atmosphere of the zone 1. (Category 2G) according to directive 94/9/EG (ATEX 100a).
Approval according to EN 54-22, heat sensor response class A1I, A2I, BI ... GI
- Max. monitoring area = 800 m²
- Max. sensor tube length per connection channel =115 m
  (Copper and stainless steel sensor tube)
- Max. sensor tube length per connection channel =105 m
  (Teflon sensor tube)
- One stub line per sensor tube possible
- Service PC interface (Ethernet)
- Surface-mounted housing

Technical data

Operating voltage:	9 to 30 VDC
Power consumption quiescent:	35 mA at 24 VDC
Operating temperature evaluation unit:	-20°C to +40°C
Operating temperature sensor tube:	-40°C to +800°C
Dimensions (HxWxD):	679 x 325 x 190 mm
Protection class of case:	IP65
Case Color:	umbra grey (RAL 7022) pebble grey (RAL 7032)
Weight:	27 kg
Type of protection:	II G 2 Ex d e IIC T6
ATEX-Approval: Ⓔx Case: Detonation guard:	PTB 99 ATEX 1057 IBExU 06 ATEX 2003 X

External Temperature Sensor

SEC-ART-535-10

For the temperature compensation the external temperature sensor SEC-ART-535 is to be used and placed in the monitored area. For temperature ranges and for EX applications a special version is to be used.
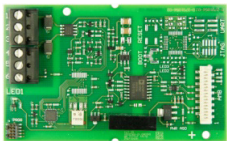(SC-ART-535-30 Ex 400°C)

Technical data

Temperature range:	- 50°C to 200°C
Length cable:	10 m

Loop I/F module for Special Fire Detectors

SEC-XLM-35

With the installation of an SEC-XLM-35, special fire detectors like ADWs can be ideally connected via the addressable loop to the SecuriFire fire alarm systems. The normative alarm transmission to the superordinate FACP is then accomplished via the SEC-XLM-35. The module comes with mounting brackets, screws and ribbon cable.
The XLM 35 module allows also central configuration of special fire detectors with the Config Over Line function.
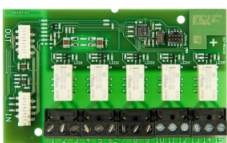
Technical data

Operating Voltage from AMB 35:	5 VDC
Maximum power consumption :	20 mA
Dimensions (HxWxD):	95 x 58 x 17 mm
Weight:	62 g

Relay I/F module for Special Fire Detectors

SEC-RIM-36

The SEC-RIM-36 brings five (5) additional relay outputs to your Special Fire Detector.
Expansion limit is two (2) SEC-RIM 36 / 10 relays. Each relay can be assigned to any ADW event by programming with the ADW Config software. The module comes with mounting brackets, screws and ribbon cable.
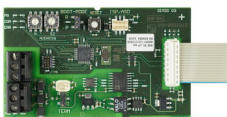
Technical data

Max. relay output load:	50 / 1 / 30 VDC/A/W
Dimensions (HxWxD):	95 x 58 x 17mm
Weight:	85 g

Serial I/F Module networking of Special Fire Detectors

SEC-SIM-35

For the RS 485 networking of up to 250 Special Fire Detectors like SEC-ADW-535.
Using the "ADW Config" configuration software, all ADWs in the network can be visualised and configured from a PC. The module comes with mounting brackets, screws and ribbon cables.

Technical data

Dimensions (HxWxD):	95 x 58 x 17 mm
Weight:	56 g

Serial Master Module for networking of Special Fire Detectors

SEC-SMM-535

This interface connects the RS485 (over SEC-SIM-35) networked ADWs to a USB port of a PC.
It is powered by the USB port.

Technical data

Power Supply:	USB powered / 5 VDC
Operating temperature:	-30°C to +60°C
Dimensions (HxWxD):	82 x 89 x 55 mm
Weight:	165 g

	Copper tube	Stainless steel tube	Teflon tube	Flexible polyamide hose
Application areas	Standard environments	High temperature environments	Standard and aggressive environments	For the flexible connection between ADW and copper/stainless steel tube
Properties	Temperature resistance + + Chemical resistance – – Corrosion resistance +	Temperature resistance + + + Chemical resistance – Corrosion resistance + +	Temperature resistance + + Chemical resistance + + + Corrosion resistance + + +	Temperature resistance + Chemical resistance + + Corrosion resistance + +
Application areas	standard industrial applications Car park halls Loading platforms Road tunnels railway tunnels underground railway tunnels	Fertiliser industry Rubber industry Plastics processing industry Food processing industry Textile industry cellulose industry	Standard industrial applications Bioengineering Chemical industry Semiconductor industry Laboratory Engineering Medical engineering Pharmaceutical industry	As supply line to the detction area or for the thermal decoupling
Diameter outside (mm)	5	5	6	5
Diameter inside (mm)	4	4	4	3
Tube length (depending on application)	10 to 115 m (200 m not acc. EN)	10 to 115 m (200 m not acc. EN)	10 to 105 m (150 m not acc. EN)	0 to 20 m
Max. distance between pipe clamps	0,8 m to 1,2 m	0,8 m to 1,2 m	0,5 m	0,5 m
Distance between pipe clamps and Screw-junction piece	≥ 10 cm each side	≥ 10 cm each side	≥ 20 cm each side	≥ 20 cm each side
Operating temperature	-40°C to +180°C	-40°C to +300°C (higher temperatures on demand)	-40°C to + 260°C (PVDF -40 to +150°C)	-40°C to +100°C
Applicable in heat classes	A1-G	A1-G	A1, A2 and C	A1-G
Material	Cu-DHP R250	Stainless steel (1.4571)	Polytetrafluorethylen (PTFE)	Polyamide PA 12
Screw junction piece	Brass	Stainless steel (1.4571)	PVDF or Brass	-
End plug	Brass	Stainless steel (1.4571)	PVDF or Brass	-
Stiffener sleeve	-	-	Brass when used with Brass-junctions	Brass or Stainless steel (1.4571)
Test coil	Cu-DHP R250	Stainless steel (1.4571)	-	-
Pipe clamp	Polyamide (max. 85°C) Polypropylen (max. 100°C) or Brass	Polyamide (max. 85°C) Polypropylen (max. 100°C) or Stainless steel (1.4571)	Polyamide (max. 85°C) Polypropylen (max. 100°C) Brass or Stainless steel (1.4571)	Polyamide (max. 85°C) Polypropylen (max. 100°C)
Sensing tube connection ADW (standard delivery brass)	Brass	Brass (First part of tube Polyamide)	Brass; special adapter available AD ADW TU 6/4	Brass
Necessary accessories				
Connection set	-	-	1	-
Screw-junction piece	– Same number as pipes – Per test coil +2 (If test coil connected at ADW +1)	– Same number as pipes – Per test coil +2 (If test coil connected at ADW +1)	- Same number as hoses -1	-1 per hose (If test coil connected at ADW +1)
End plug	1 per sensing tube	1 per sensing tube	1 per sensing tube	-
Stiffener sleeve	-	-	2 per tube part (only for brass junctions)	2 per hose part
Pipe clamps	Ca. 1 clamp per m depending on clamp distance (0.8-1.2m)	1,25 clamps per m depending on clamp distance (0.8-1.2m)	2 clamps per m	Ca. 1 clamp per m depending on clamp distance (0.8-1.2m)

Software

ADW HeatCalc		Type	Art.Nr.
ADW calculation& planning tool, Configuration and test software. Download from the Storebox / Partnerdata.		ADW-HeatCalc	11-1300005-01-01
Dongle for Securiton Applications (without license)		Type	Art.Nr.
Dongle for Securiton Applications (without license)		ULM-DP	VE100450
ADW Dongle (User Level, Limited access rights)		Type	Art.Nr.
ADW Config Basic License		LIC ADW	VE100418
ADW Config Programming full access (only in combination with Basic License ADW available)		LIC ADW Prog	VE100419
ADW Config Networking to configure and visualize		LIC ADW Net	VE100420

Standard sensing tube for applications with normal operating temperatures.
–40°C– +180°C (When used at 85°C and above, use metallic pipe clamps).

Sensing tube copper 5/4mm

SEC-TU 5-4 Cu

Tube to create the sensor part (straight piece 5.5m)

Technical data

Diameter outside:	5 mm
Diameter inside:	4 mm
Length:	5,5 m
Material:	copper

Sensing tube copper 5/4mm

SEC-TU 5-4 Cu 50

Tube to create the sensor part, 1 pcs. (coil 50m)

Technical data

Diameter outside:	5 mm
Diameter inside:	4 mm
Length:	50 m
Material:	copper

Sensing tube copper 5/4mm

SEC-SJ 5-4 CuZn

Screw junction straight for SEC-TU 5/4 Cu

Technical data

For pipe diameter:	5 mm
Material:	brass
Packaging unit:	10 pieces

Sensing tube copper 5/4mm

SEC-EP 5-4 CuZn

End plug for SEC-SJ 5/4 CuZn

Technical data

Material:	brass
Packaging unit:	5 pieces

T-Junction for SEC-TU 5/4 Cu

SEC-TJ 5-4 CuZn

T-Junction for SEC-TU 5/4 Cu

Technical data

Material:	brass

Sensing-Coil of SEC-TU 5/4 Cu 5 m

SEC-SC 5-4 Cu 5

Sensing coil of SEC-TU 5/4 Cu

Technical data

Length:	5 m
Material:	copper

Test-Coil of SEC-TU 5/4 Cu 10 m

SEC-TC 5-4 Cu 10

Test coil of SEC-TU 5/4 Cu

Technical data

Length:	10 m
Material:	copper

Sensor tube for applications in corrosive environments and in the food industry for hygienic reasons.
–40 – +300°C (when used at 85°C and above, use metal pipe clamps).

Sensing tube stainless steel 5/4mm

SEC-TU 5-4 St
Tube to create the sensor part (straight piece 6m)

Technical data	
Diameter outside:	5 mm
Diameter inside:	4 mm
Length:	3 m
Material:	stainless steel

Screw Junction straight for SEC-TU 5/4 St

SEC-SJ 5-4 St
Screw junction straight for SEC-TU 5/4 St

Technical data	
For pipe diameter:	5 mm
Material:	stainless steel

End plug for SEC-SJ 5/4 St

SEC-EP 5-4 St
End plug for SEC-SJ 5/4 St

Technical data	
Material:	stainless steel

T-Junction for SEC-TU 5/4 St

SEC-TJ 5-4 St
T-Junction for SEC-TU 5/4 St

Technical data	
Material:	stainless steel

Protection screw

SEC-PS TU 5-4 St
Protection screw for the direct connection of sensing tube SEC-TU 5/4 St to the SEC-ADW-535 evaluation unit.

Sensing-Coil of SEC-TU 5/4 St

SEC-SC 5-4 St 5
Sensing coil of SEC-TU 5/4 St

Technical data	
Length:	5 m
Material:	stainless steel

Test-Coil of SEC-TU 5/4 St

SEC-TC 5-4 St 10
Test coil of SEC-TU 5/4 St

Technical data	
Length:	10 m
Material:	stainless steel

Sensor tube for standard applications and for very corrosive and aggressive environments.
–40 – +200°C (when used at more than 85°C, metal pipe clamps and brass screw-junction pieces must be used; if more than 130 C the screw-junction pieces must be outside of the monitored area).
When using Teflon sensing tubes, only classes A1l to Bl are possible according to EN 54-22.

Sensing tube teflon 6/4mm

SEC-TU 6-4 PTFE 50
Tube to create the sensor part.
(reel 50m). When used together with metal junctions, an according stiffener sleeve is necessary.

Technical data

Diameter outside:	6 mm
Diameter inside:	4 mm
Length:	50 m
Material:	teflon

Sensing tube teflon 6/4mm

SEC-TU 6-4 PTFE 100
Tube to create the sensor part.
(reel 100m). When used together with metal junctions, an according stiffener sleeve is necessary.

Technical data

Diameter outside:	6 mm
Diameter inside:	4 mm
Length:	100 m
Material:	teflon

Adapter SEC-ADW-TU 6/4 CuZn

SEC-AD ADW TU 6-4 CuZn
For the connection of a Teflon sensor tube with the ADW detection unit.
Including 1 stiffener sleeve SS 4 CuZn.

Technical data

Material:	brass

Stiffener sleeve for SEC-TU 6/4 PTFE

SEC-SS 4 CuZn
Stiffener sleeve for TU 6/4 PTFE

Technical data

Material:	brass

Screw junction straight PVDF for SEC-TU 6/4 PTFE

SEC-SJ 6-4 PVDF
Screw junction straight PVDF for SEC- TU 6/4 PTFE

Technical data

For pipe diameter:	6 mm

End plug PVDF for SEC-SJ 6/4 PVDF

SEC-EP 6-4 PVDF
End plug for SEC-SJ 6/4 PVDF.
SEC-SJ 6/4 PVDF is not included and has to be ordered separate.

Technical data

Material:	polyvinylidene fluoride

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T-Junction PVDF for SEC-TU 6/4 PTFE

SEC-TJ 6-4 PVDF
T-Junction for SEC-TU 6/4 PTFE

Technical data	
Material:	polyvinylidene fluoride

Reduction compression ferrule for SEC-SJ 6/4 CuZn, SEC-FH 5/3 PA

SEC-RE 6-5 CuZn
Reduction compression ferrule for SEC-FH 5/3 PA. To be used together with SEC-SJ 6/4 CuZn or SEC-TJ 6/4 CuZn.

Technical data	
Material:	brass

Adapter-Set PA-Teflon (incl. SJ 6/4 CuZn, SS4 CuZn, SS3 CuZn)

SEC-AD 5-6 CuZn-Set
Adapter set to connect the flexible hose SEC-FH 5/3 PA 25 from the ADW with the teflon sensing tube.
Set includes: SJ 6/4 CuZn, SS4 CuZn, SS3 CuZn

Technical data	
Material:	brass:

T-Junction-Set Teflontube (incl. TJ 6/4 CuZn, SS4 CuZn)

SEC-TJ 6-4 CuZn-Set
T-Junction set to connect 3 teflon tubes together.
Set includes: TJ 6/4 CuZn, 3x SS4 CuZn

Technical data	
Material:	brass

Screw junction-Set Teflontube (incl. SJ 6/4 CuZn, SS4 CuZn)

SEC-SJ 6-4 CuZn-Set
Screw junction set to connect 2 teflon tubes together.
Set includes: SJ 6/4 CuZn, 2x SS4 CuZn

Technical data	
Material:	brass

End plug-Set Teflontube (incl SJ 6/4 CuZn, EP 6/4 CuZn, SS4 CuZn)

SEC-TS 6-4 CuZn-Set
End plug set to close the end of the Teflontube.
Set includes: SJ 6/4 CuZn, EP 6/4 CuZn, SS4 CuZn

Technical data	
Material:	brass

Sensing-Coil 6/4PTFE with mounting clip

SEC-SC 6-4 PTFE 5 Set
For installation in sensing tubes for the monitoring of critical sources (facility or object monitoring) or for easy installation of at least 10 m sensor tubes in small rooms. Mounting material for the sensing coil is included (material polyamide) Support anchor, plate and bracket.

Technical data	
Length:	5 m
Material:	teflon

Flexible Hose Polyamide 5/3mm

SEC-FH 5-3 PA 25
Flexible Hose to connect the ADW detection unit with the
sensor part (Cu, St, PTFE) of the sensing tube.
(reel 25m). To be used together with stiffener sleeve
SEC-SS 3 CuZn or SEC-SS 3 St.

Technical data	
Diameter outside:	5 mm
Diameter inside:	3 mm
Length:	25 m
Material:	polyamide

Stiffener sleeve brass for FH 5/3 PA

SEC-SS 3 CuZn
Stiffener sleeve for SEC-FH 5-3 PA

Technical data	
Material:	brass
Packaging unit:	10 pieces

Stiffener sleeve stainless steel for FH 5/3 PA

SEC-SS 3 St
Stiffener sleeve for FH 5/3 PA

Technical data	
Material:	stainless steel

INSTALLATION MATERIAL

Pipe clamp

SEC-PC 5-6 PA
To mount the sensing tube.

Technical data	
For pipe diameter:	5 mm
Temperature range:	-40 to +85°C
Material:	polyamide
Packaging unit:	100 pieces

Pipe clamp

SEC-PC 5-6 St
To mount the sensing tube.

Technical data	
For pipe diameter:	5 mm
Material:	stainless steel
Packaging unit:	10 pieces

Pipe clamp

SEC-PC 5-6 StG
To mount the sensing tube. With brass stiffener.
(delivery unit 10 Pipe clamps and 10 brass stiffener)

Technical data	
For pipe diameter:	5 mm
Material:	brass
Packaging unit:	10 pieces

ADW Sensing tube cleaning and maintenance set

SEC-ACMS 535
ADW Sensing tube cleaning and maintenance set.

SensTube Teflon 6/4mm Ex

SEC-TU 6-4 PTFE-Ex
Tube to create the sensor part for Ex applications.
Without connection and termination parts.
(price per 100)

Technical data

Diameter outside:	6 mm
Diameter inside:	4 mm
Length:	100 m
Explosion group:	IIA
Material:	Teflon

Grounding Clamp

SEC-GC 5-6 Ex
Grounding Clamp with ATEX certification.
To ground the sensing tube in Ex-zone applications.

Technical data

Material:	Copper tin-plated

External Temperature Sensor for EX-zones

SEC-ART 535-30Ex 1
SEC-ART 535-30Ex 21
The ART 535 external temperature sensor is to be used in
the following cases:
- Applications compliant with EN 54-22, Class CI to GI
- Always (for all response grades), as soon as the application
  temperature in the monitored area deviates more than
  20°C from the temperature of the evaluation unit.

Technical data

Diameter of sensor:	6 mm
Operating temperature	-50°C to +400°C
Cable length:	30 m
Protection type:	IP65
ATEX Approval: ART 535-30Ex 1:	Zone 1, 2 (II 2G Ex em T6)
ART 535-30Ex 21: ⟨Ex⟩	Zone 21, 22 (II 2D Ex mbD A21 IP65 80°C)
Material:	stainless steel

SPARE PARTS

Main Board for ADW 535

SEC-LMB 35
Repair exchange for the SEC-ADW 535-1 and -2

Technical data

Operating Voltage:	3.3 to 6 VDC
Dimensions (HxWxD):	148 x 120 x 15 mm
Weight:	85 g

Extension Board for ADW 535

SEC-LEB 35
Repair exchange for the second Sensor tube
of SEC-ADW 535-2

Technical data

Dimensions (HxWxD):	75 x 54 x 35 mm
Weight:	39 g

Supervising Unit for ADW 535

SEC-LSU 35
The LSU 35 consists of a fully electronic differential
pressure sensor, a pressure pump and a step motor.

SD-Card Industrial 2GB

SEC-SD-Industrial
SD memory card (industrial) 2GB for on-board
(SEC-LMB 35) use in SEC-ADW 535.

Lithium battery

SEC-BR2032
Replacement battery for SEC-LMB 35

M20 Cable Screw Union

SEC-M20 VE10
Cable screw union for SEC-ASD 531/532/535

Technical data

Packaging unit:	10 pieces

M25 Cable Screw Union

SEC-M25 VE10
Cable screw union for SEC-ASD 531/532/535

Technical data

Packaging unit:	10 pieces

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