SecuriHeat ADW 535

Product Catalogue 2024

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1. Introduction

Where conventional fire detectors reach their physical limits, the SecuriHeat ADW 535 line-type heat detector comes into play. This intelligent line-type heat detector offers high performance even under the most difficult conditions. It offers fully automatic monitoring of large areas while being resistant to corrosive gases, extreme humidity and high temperatures. A state-of-the-art line-type heat detector, the ADW 535 also has the ability to differentiate between false alarms and real danger.

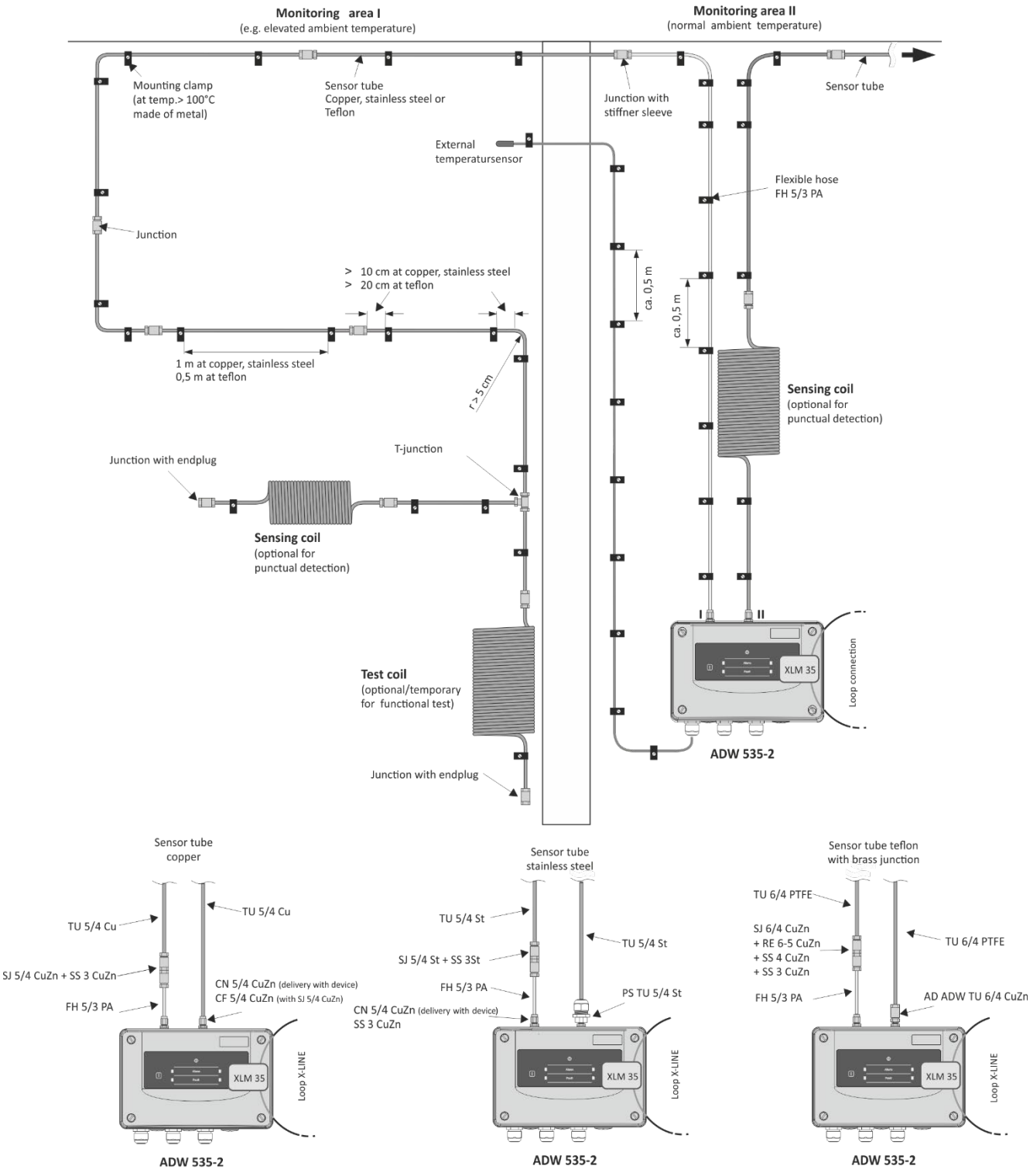
Design and function
The integrated SecuriHeat ADW 535 line-type heat detector combines a proven functional principle with the latest developments in sensor and processor technology. A sensing tube filled with normal air is installed in the area to be monitored. A fully electronic pressure sensor permanently records the pressure in the sensing tube. This is monitored constantly in the processing electronics and compared with the alarm criteria. Diverse setting options are offered directly on the device via EasyConfig or using the comfortable ADW Config tool for perfect adaptation to change environmental conditions. Dynamic Heat Watch (DHW) technology ensures that a brief temperature increase caused by the ambient conditions does not result in a false alarm.

Applications
Thanks to its extremely tough sensing tube, the SecuriHeat ADW 535 can be deployed in many applications where conventional fire detectors cannot work. With its long service life and maintenance-free design, the ADW 535 is also ideal in applications where detection properties must remain constant over the entire product service life.

Typical applications:
- Tunnels: road tunnels, metro and railway tunnels, utility and cable tunnels
- Underground garages, vehicle silos
- Food industry, industrial kitchens, large commercial bakeries
- Alcohol processing, distilleries
- Chemical industry, refineries, oil tanks
- Waste incineration plants
- Outdoor applications: loading platforms (flying roofs), historical bridges, fuel warehouses, towers
- High-temperature applications such as: paint shops, steel plants, kilns, climate chambers, gas turbines, engine test benches
- And many other applications, e. g. underfloor monitoring in rolling stock, marine applications

Sensing tubes
Depending on the application, various sensing tubes are available (all of which have VdS approval):
- PTFE (Teflon): Standard material and for aggressive ambient conditions (e.g. chemical industry)
- Copper: standard applications, property surveillance
- Stainless steel: food industry and high temperature applications

2. Overview of Line type heat detector ADW 535



The illustrated components are examples and can be combined within the scope of the technical possibilities.
The technical documentation, installation instructions and regional standards must be observed.

3. Line type heat detector

Line Type Heat detector

ADW 535-1

ADW 535-2

ADW 535-1	one sensing tube	**11-1000000-01-02**
ADW 535-2	two sensing tube	**11-1000000-02-02**

The SecuriHeat 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 are 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.

Operating voltage:	9 to 30 VDC
Protection class:	IP65
Operating temperature:	-30°C to +70°C
Operating temperature sensing tube*:	please see page 11
Weight: 1 sensing tube	1,5 kg
2 sensing tubes	1,97 kg
Dimensions (HxWxD):	160.5 x 250.5 x 134 mm
Color:	light grey (RAL 280 70 05) charcoal (RAL 300 20 05)

Approvals

VdS-Approval:	G 214076
UL-Approval:	S7197
FM-Approval:	3056227

Note:
*: Temperature range depends on the sensing tube material used.

Line Type Heat detector HDx

ADW 535-1HDx

ADW 535-2HDx

ADW 535-1HDx	One Sensing tube	**11-1000001-01-02**
ADW 535-2HDx	Two sensing tubes	**11-1000001-02-02**

The SecuriHeat 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 are 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.

Operating voltage:	9 to 30 VDC
Protection class:	IP66
Operating temperature:	-30°C to +70°C
Operating temperature sensing tube:	please see page 11
Weight: 1 sensing tube	3,05 kg
2 sensing tubes	3,42 kg
Dimensions (HxWxD):	160.5 x 250.5 x 134 mm
Color:	graphite black (RAL 9011) platinum grey (RAL 7036)

Approvals

VdS-Approval:	G 214076
ATEX-Approval:	II 3G Ex ec nC IIC T4 Gc II 3D Ex tc T130°C Dc
UL-Approval:	S7197
FM-Approval:	3056227

Note:

*: Temperature range depends on the sensing tube material used.

Line Type Heat detector ATEX Zone 1

ADW 535-1 ATEX

50-0500259-01-01

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

Operating voltage:	9 to 30 VDC
Protection class:	IP65
Operating temperature:	-20°C to +40°C
Operating temperature sensing tube*:	- 40 °C to +800 °C
Weight:	27 kg
Dimensions (HxWxD):	679 x 325 x 190 mm
Color:	umbra grey (RAL 7022) pebble grey (RAL 7032)

Approvals

ATEX-Approval: -	II G 2 Ex d e IIC T6
Case:	PTB 99 ATEX 1057
Detonation guard:	IBExU 06 ATEX 2003 X

External Temperature Sensor

ART 535-10

11-1000002-10-01

For the temperature compensation the external temperature sensor 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. (ART 535-30 Ex 400°C)

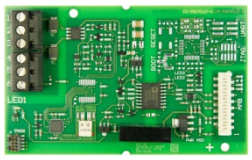
- Cable length: 10m

Operating temperature:	-50°C to +200°C

3.1. Modules for Line type heat detectors

The ADW 535 has four slots for expansion modules.
All Modules for Line type heat detectors are listed in the VdS G 214076 certificate.

Loop I/F module for Special Fire Detectors

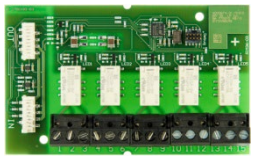


XLM 35 **11-2200003-01-03**

With the installation of an XLM 35, special fire detectors like ASDs 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 XLM 35.
The XLM 35 module is coated and allows also central configuration of special fire detectors with the Config Over Line function.
The module comes with mounting brackets, screws and ribbon cable.

Power consumption:	20 mA
Weight:	56 g
Dimensions (HxWxD):	95 x 58 x 17 mm

Relay I/F module for Special Fire Detectors

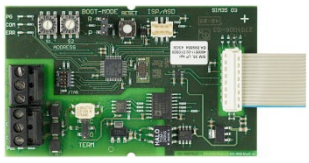


RIM 36 **11-2200005-01-03**

The RIM 36 brings five (5) additional relay outputs to your Special Fire Detector. Expansion limit is two (2) 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.

Weight:	85 g
Power consumption:	15 mA
Dimensions (HxWxD):	95 x 58 x 17 mm

Serial I/F module networking of Special Fire Detectors



SIM 35 **11-2200000-01-04**

The SIM 35 module is coated and is for the RS 485 networking of up to 250 Special Fire Detectors like ADW 535.
Using the “ADW Config” configuration software, all ADWs in the network can be visualized and configured from a PC.

The module comes with mounting brackets, screws and ribbon cables.Weight:	56 g
Power consumption:	20 mA
Dimensions (HxWxD):	95 x 58 x 17 mm

Serial master Module for networking of Special Fire Detectors

SMM 535

11-2200001-01-02

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

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

4. Dongle license and HeatCalc

Basic license:	**Limited access** for ADW Config software. Available with or without networking* visualization. Only read functions and the following write functions are possible: - Change the current program (e.g. X01-X03, A11, B11 etc.) - No change of parameters in the X01-X03 programs. - Project texts - FW-download - RTC clock adjustment - Change the tool language
Programming license:	**Full access** to all available ADW Config software functions. Only available after Securiton training.
Networking license:	**Networking** Up to 250 ADW 535 can be networked between each other, to configure and visualize devices from one central location. The networking takes place via RS 485 with SIM 35 and SMM 535 or Ethernet. A combination of both transmission media is possible. The networking can be added to the Basis license and Programming licenses

Dongle order form available on the Securiton Homepage:

http://www.securiton.com

ADW HeatCalc		
ADW calculation& planning tool, Configuration and test software. **Download from the Storebox / Partnerdata.**	ADW-HeatCalc	11-1300005-01-01

ADW Dongle (User Level, Limited access rights)		
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

Dongle for Securiton Applications		
Dongle for Securiton Applications (without license)	ULM-DP	VE100450
Dongle for Securiton Applications (without license) Pack of 5 Dongles	ULM-DP 5	VE100451
Dongle for Securiton Applications (without license) Pack of 10 Dongles	ULM-DP 10	VE100452

5. Accessories

	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 detection area or for the thermal decoupling
Diameter outside (mm)	5	5	6	5
Diameter inside (mm)	4	4	4	3
Max. tube length **EN 54-22:** **NFPA 72:**	10 to 140 m 10 to 200 m	10 to 140 m 10 to 200 m	10 to 125 m 10 to 150 m	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 +300°C	-40°C to +300°C (higher temperatures on demand)	-40°C to + 85°C	-40°C to +100°C
Applicable in heat classes **EN 54-22:** **NFPA 72:**	A1-G Ordinary, Intermediate, High	A1-G Ordinary, Intermediate, High	A1, A2 and B Ordinary	-
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)	Polytetrafluorethylen (PTFE)	-

Accessories

	Copper tube	Stainless steel tube	Teflon tube	Flexible polyamide hose
Pipe clamp	Polyamide (max. 85°C) Brass	Polyamide (max. 85°C) Stainless steel (1.4571)	Polyamide (max. 85°C) Brass or Stainless steel (1.4571)	Polyamide (max. 85°C)
Sensing tube connection ADW (standard delivery brass)	Brass	Brass (First part of tube Polyamide)	Brass; special adapter available AD 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)

5.1. Copper

Standard sensing tube for applications with normal operating temperatures.
-40°C– +300°C ➔ (When used at 85°C and above, use metallic pipe clamps).

Copper 5/4mm			
Tubes			
	Sensing tube cooper delivery unit: 3m	TU 5/4 Cu 3m	11-1300034-01-01
	Sensing tube cooper delivery unit:50m	TU 5/4 Cu 50	11-1300009-01-01
Fittings brass			
	Screw Junction straight for TU 5/4 Cu delivery unit: 10 pcs	SJ 5/4 CuZn	11-1300010-01-01
	End plug for Junction straight for SJ 5/4 CuZn delivery unit: 5 pcs	EP 5/4 CuZn	11-1300011-01-01
	T-Junction for TU 5/4 Cu	TJ 5/4 CuZn	11-1300012-01-01
Coils			
	Sensing coil of TU 5/4 Cu length 5m	SC 5/4 Cu 5	11-1300013-01-01
	Test coil of TU 5/4 Cu length 10m	TC 5/4 Cu 10	11-1300014-01-01

5.2. Stainless steel

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).

Stainless steel 5/4mm			
Tubes			
	Sensing tube stainless steel delivery unit: 3m	TU 5/4 St 3m	11-1300035-01-01
Fittings			
	Screw Junction straight for TU 5/4 St delivery unit: 5 pcs	SJ 5/4 St	11-1300016-01-01
	End plug for Junction straight for SJ 5/4 CuZn delivery unit: 5 pcs	EP 5/4 St	11-1300017-01-01
	T-Junction for TU 5/4 St	TJ 5/4 St	11-1300018-01-01
	Protection screw for the direct connection of sensing tube TU 5/4 St to the ADW 535 evaluation unit.	PS TU 5/4 St	11-1300043-01-01
Coils			
	Sensing coil of TU 5/4 St length 5m	SC 5/4 St 5	11-1300044-01-01
	Test coil of TU 5/4 St length 10m	TC 5/4 St 10 Set	11-1300050-01-01

5.3. Teflon

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 +120°C the screw-junction pieces must be outside of the monitored area).
When using **Teflon sensing tubes**, only classes **A1I** to **BI** are possible according to EN 54-22.

Teflon 6/4mm			
Tubes			
	Sensing tube teflon 6/4mm delivery unit: 100m	TU 6/4 PTFE 100	11-1300020-01-01
	Sensing tube teflon 6/4mm delivery unit: 50m	TU 6/4 PTFE 50	11-1300019-01-01
	Sensing tube teflon red 6/4mm Delivery unit 100m	TU6/4 PTFE/R 100	11-1300068-01-01
	Sensing tube teflon red 6/4mm Delivery unit 50m	TU 6/4 PTFE/R 50	11-1300067-01-01
Fittings			
	Adapter ADW TU 6/4 PTFE, AD TU 6/4 CuZn	AD TU 6/4 CuZn	11-1300021-01-01
	Screw junction straight PVDF for TU 6/4 PTFE	SJ 6/4 PVDF	11-1300022-01-01
	Endplug for TU 6/4 PTFE, EP 6/4 PVDF	EP 6/4 PVDF	11-1300023-01-01
	T-Junction for TU 6/4 PTFE, TJ 6/4 PVDF	TJ 6/4 PVDF	11-1300024-01-01
	Reduction SJ6/4CuZn-FH5/3PA, RE 6-5 CuZn	RE 6-5 CuZn	11-1300026-01-01
Mounting sets			
	Adapter-Set PA-Teflon (incl SJ 6/4 CuZn, SS4 CuZn, SS3 CuZn)	AD 5/6 CuZn-Set	11-1300036-01-01
	T-Junction-Set Teflontube (incl. TJ 6/4 CuZn, SS4 CuZn)	TJ 6/4 CuZn-Set	11-1300051-01-01
	Screw junction-Set Teflontube (incl SJ 6/4 CuZn, SS4 CuZn)	SJ 6/4 CuZn-Set	11-1300045-01-01
	End plug-Set Teflontube (incl SJ 6/4 CuZn, EP 6/4 CuZn, SS4 CuZn)	TS 6/4 CuZn-Set	11-1300053-01-01
Coils			
	Sensing-Coil 6/4PTFE with mounting clip Screw junction to connect the coil to the Teflon tube must be ordered separately	SC 6/4 PTFE 5m Set	30-4100029-01-01
Stiffener			
	Stiffener sleeve for Teflon sensing tube delivery unit: 10 pcs	SS 4 CuZn	11-1300047-01-01

5.4. Polyamide

Supply line to copper, stainless steel or Teflon sensor tubes:
- 40°C - +100°C for applications above 100°C the transition from the flexible hose to the sensor tube (screw connection) must be outside the monitoring area.

Polyamide 5/3mm			
Tubes			
	Flexible Hose Polyamid 5/3mm (Price per 25m) delivery unit: 25m	FH 5/3 PA 25	11-1300028-01-01
Stiffner			
	Stiffener sleeve brass for FH 5/3 PA delivery unit: 10 pcs	SS 3 CuZn	11-1300029-01-01
	Stiffener sleeve for FH 5/3 PA delivery unit: 10 pcs	SS 3 St	11-1300031-01-01

5.5. Installation material

Installation			
Pipe clamp			
	Pipe clamp black Temperature resistance: -40°C to +85°C delivery unit: 100 pcs	PC 5/6 PA	11-1300032-01-01
	Pipe Clamp brass delivery unit: 10 Pipe clamps and 10 brass stiffeners	PC 5/6 StG	11-1300056-01-01
	Pipe clamp stainless steel Temperature resistance: -25°C to +90°C delivery unit: 10 Pipe clamps	PC 5/6 St	11-1300033-01-01
Maintenance			
	ADW Sensing tube cleaning and maintenance set	ACMS 535	50-0500239-01-01
Installation			
	A pressing machine with pressing jaws is required for joining copper and steel suction pipes and their various connecting parts. This tool is available in any specialized market.		
Spare parts			
	Stiffener sleeve for Pipe Clamp PC 5/6 StG	SS 8 St	11-1300049-01-01

6. Accessories for Ex-Zones

Ex-Zones accessories

Tubes

	Sensing tube teflon 6/4mm for EX applications delivery unit: 100m	TU 6/4 PTFE/Ex	11-1300055-01-01
	Sensing tube teflon 6/4mm for EX applications delivery unit: 50m	TU 6/4 PTFE/Ex50	11-1300070-01-01

Grounding Clamp

GC 5/6 EX **11-1300042-01-01**

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

Material:	copper tin-plated

External Temperature Sensor for EX-zones

ART 535-30 400 Ex 1 **11-1300062-01-01**

ART 535-30 400 Ex 21 **11-1300063-01-01**

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.
- Sensor diameter 6mm

Protection class:	IP65
Operating temperature:	-50°C to +400°C
Dimensions (length):	30 m
Material:	stainless steel

Approvals

Ex-Approval:	
ART 535-30Ex 1:	Zone 1, 2 (II 2G Ex em T6)
ART 535-30Ex 21:	Zone 21, 22 (II 2D Ex mbD A21 IP65 80°C X)

7. Spare Parts

Spare parts and repair			
Boards for repair exchange only			
	Main Board for ADW 535-1 and -2	LMB 35	11-1200001-01-03
	Extension Board for ADW 535-2	LEB 35	11-1200002-01-01
	Supervising Unit for ADW 535	LSU 35	11-1200003-01-01
Various spare parts			
	SD-card Industrial 2GB	SD-Industrial	11-4000007-01-01
	Lithium Battery (high temperature range)	BR20322	11-4000008-01-01
	M20 Cable Screw Union delivery unit: 10 pcs	M20 VE10	11-4000003-01-02
	M25 Cable Screw Union delivery unit: 10 pcs	M25 VE10	11-4000004-01-02
	Connection nut for ADW	CN 5/4 CuZn	11-1300041-01-01
	Compression ferrule	CF 5/4 CuZn	11-1300040-01-01

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