SECURITON

ASD 532

Aspirating Smoke Detector

Maintenance

as of firmware version 01.04.xx

Manufacturer:
Securiton AG
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3052 Zollikofen, Switzerland
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Validity

Notice

The following document is valid only for the product described in technical description T 140 421, Sec. 1. The document contains the maintenance instructions for the ASD 532 aspirating smoke detector. Technical description T 140 421 is a component of the maintenance instructions.

In this document only the points necessary for maintenance of the ASD 532 are described. The general specifications of the ASD 532 aspirating smoke detector can be found in technical description T 140 421.

This document[1] is available in the following languages:

German	T 140 425 de
English	T 140 425 en
French	T 140 425 fr
Italian	T 140 425 it
Spanish	T 140 425 es
Korean	T 140 425 ko
Portuguese	T 140 425 pt
Russian	T 140 425 ru
Swedish	T 140 425 sv

Current edition: Index d 13.12.2021 Po/ksa

Notice

The following document is applicable to the ASD 532 aspirating smoke detector with the following production version and firmware version:

Production version	**Firmware version**
from 131221	from 01.04.xx

The validity of older production versions and firmware versions is guaranteed, with the exception of the new functionalities described in this edition. Additional information about the new functionalities can be found in the document history.

Other documents

Data sheet ASD 532		T 140 422	de / en / fr / it / es / ko / pt / ru / sv
Technical description FidesNet		T 140 741	de / en
Material for the sampling pipe		T 131 194	Multilingual (ED / FI)
Commissioning protocol		T 140 423	Multilingual (EDFI)
Data sheets	XLM 35	T 140 088	de / en / fr / it / es / pt / ru / sv
	ML-SFD	T 140 822	de / en / fr / it / es / pt / ru / sv
	RIM 36	T 140 364	de / en / fr / it / es / pt / ru / sv
	SIM 35	T 140 011	de / en / fr / it / es / pt / ru / sv
	SMM 535	T 140 010	de / en / fr / it / es / pt / ru / sv
	NCU 900	T 140 742	de / en
	RCU 700	T 140 743	de / en
Aspirating Fan Unit AFU 32 mounting instructions		T 140 426	Multilingual (EDFI)

[1] Reference document: T 140 421, Index d

Contents

1 General

1.1 Purpose

The ASD 532 aspirating smoke detector has the task of continuously taking air samples via a sampling pipe tube network from a monitored area and feeding the samples to a smoke sensor. Thanks to this detection method and the product's excellent properties under severe ambient conditions, the ASD 532 aspirating smoke detector is used wherever problems are to be expected owing to poorly accessible monitored areas or latent disturbance variables during operation such that optimal protection can no longer be guaranteed with conventional point detectors.

The SSD 532 smoke sensor is used in the ASD 532. It is available in the three following versions and sensitivity ranges:

- SSD 532-1 Alarm sensitivity range 0.5%/m to 10%/m
- SSD 532-2 Alarm sensitivity range 0.1 %/m to 10%/m
- SSD 532-3 Alarm sensitivity range 0.02%/m to 10%/m.

The ASD 532 aspirating smoke detector has two slots for additional modules. The following modules can be fitted:

- XLM 35 SecuriLine eXtended Module (only if no ML-SFD fitted)
- ML-SFD M-Line module (only if no XLM 35 fitted)
- RIM 36 Relay Interface Module with 5 relays
- SIM 35 Serial Interface Module (only if no UIM 35 fitted)
- UIM 35 universal interface module (only if no SIM 35 fitted)

1.2 Safety and the environment

Provided the product is deployed by trained and qualified personnel in accordance with this document, and provided the safety symbols all notices are observed, there is no danger to persons or property under normal conditions and when used properly. The product fulfils the requirements ensuring personal safety and environmental protection during operation. National and state-specific laws, regulations and directives must be observed and adhered to in all cases.

Observe these danger notices. They help prevent accidents and damage.

1.2.1 Notice and warning symbols

The following notice and warning symbols are used to draw attention to hazards and special properties.

Danger

The product may represent an immediate danger with a high level of risk to persons if the notice is not duly observed. If the danger is not avoided, death or serious injury may result.

Warning

The product may represent a possibly imminent danger with a medium level of risk to persons if the notice is not duly observed. If the danger is not avoided, death or serious injury may result.

Caution

The product may represent a possibly imminent danger with a low level of risk to persons if the notice is not duly observed. If the danger is not avoided, a minor injury may result.

Notice

If this notice is not observed, the product may malfunction, may cause property damage, or may be harmful to the environment.

1.2.2 Safety information

Read the user instructions

To ensure safe and proper use, it is absolutely necessary to read the instructions and other documentation accompanying the product before use and to keep such documentation at hand for later reference. It is imperative that the danger information in particular is observed.

Electrostatic discharge

The product includes electronic components that are sensitive to electrostatic discharge (ESD). Contact with persons or objects can cause an electrostatic discharge that damages or destroys the product. ESD bands for preventing electrostatic discharge are used for grounding persons and for equipotential bonding.

1.2.3 Disposal

Electrical and electronic devices and batteries

It is not permitted to dispose of electrical and electronic devices or batteries in the domestic rubbish. As the end user you are legally obliged to return them. Used electrical and electronic devices as well as batteries can be returned to the seller or taken to a designated recycling centre (e.g. a community collection point or dealer) at no cost.

Recycling

The product and its components including their packaging consist of recyclable material and can be disposed of for recycling purposes as described in this document.

1.3 Abbreviations and terms

The following abbreviations and terms are used in this document. The abbreviations for tube material and accessories are listed in a separate document: T 131 194.

ABS	=	Acrylonitrile-butadiene styrene (plastic)
AFS 32	=	Air Flow Sensor
AFU 32	=	Aspirating Fan Unit
AMB 32	=	ASD main board
ASD	=	Aspirating Smoke Detector
ASD PipeFlow	=	Calculation software for the sampling pipe, “ASD PipeFlow” as of Version 2.3
DIN	=	Deutsche Industrie Norm (German industry standard)
EMC	=	Electromagnetic compatibility
EN 54	=	European standards for fire alarm systems (Germany = DIN, Switzerland = SN, Austria = Ö-Norm)
FACP	=	Fire alarm control panel
FidesNet	=	Fire detection systems Net (networking solution, application name)
FW	=	Firmware
GND	=	Supply ground (minus (-) pole)
HW	=	Hardware
IEC	=	International Electrotechnical Commission
Initial reset	=	First start-up on commissioning
IPS 35	=	Insect Protection Screen
LS	=	Airflow
LS-Ü	=	Airflow monitoring
Manufacturer	=	Securiton
ML-SFD	=	M-Line-Special Fire Detector
NCU	=	Network communication unit to the FidesNet “Network Communication Unit” (FidesPort)
NCU Config	=	Web application for configuring the FidesNet
OC	=	Open collector output
OEM	=	Original Equipment Manufacturer (reseller)
PA	=	Polyamide (plastic)
PC	=	Personal computer
PC	=	Polycarbonate (plastic)
PE	=	Polyethylene (plastic)
PVC	=	Polyvinyl chloride (plastic)
RCU	=	FidesNet remote control unit “Remote Control Unit” (FidesControl)
RIM 36	=	Relay interface module
RoHS	=	Restriction of Certain Hazardous Substances (eco-friendly manufacturing processes)
SIM 35	=	Serial Interface Board
SMM 535	=	Serial Master Module
SSD 532	=	Smoke sensor
SW	=	Software
UIM 35	=	universal interface module (RS-485)
UMS 35	=	Universal Module Support
VDC	=	Direct current voltage
VKF	=	Vereinigung Kantonaler Feuerversicherungen (cantonal fire insurance union, Switzerland)
XLM 35	=	eXtended Line Module

1.4 Opening and closing the detector housing

Notice about opening and closing

- To open the detector box, use a **flat-blade screwdriver no. 5** (8 mm). Smaller flat-blade screwdrivers may damage the material of the rotary snap locks.
- To actuate the **rotary snap locks**, **press** them **firmly** with the screwdriver towards the housing base and then **turn** through 90°. The position of the lock slit shows the current status (see **Fig. 1**):
  ⇒ approx. 45° angled toward detector housing corner = closed;
  ⇒ approx. 45° angled toward detector housing edge = open.
  In either position the rotary snap locks **must** snap into place.

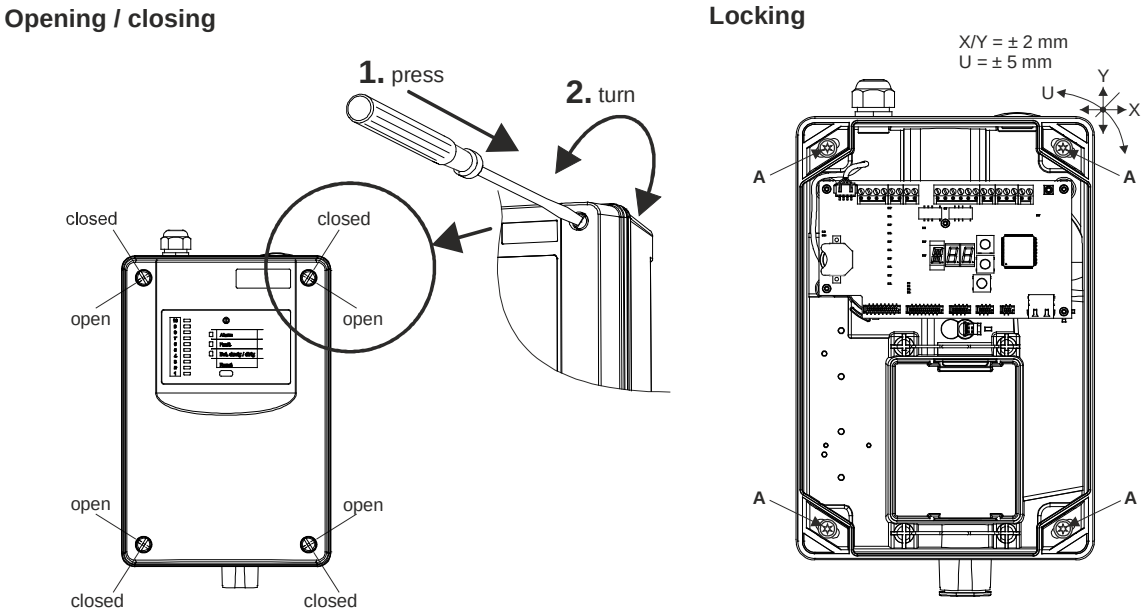

Fig. 1 Open, closing and securing the detector housing

The detector housing has to be opened for commissioning the ASD 532 (see T 140 421, Sec. 5.4.1).

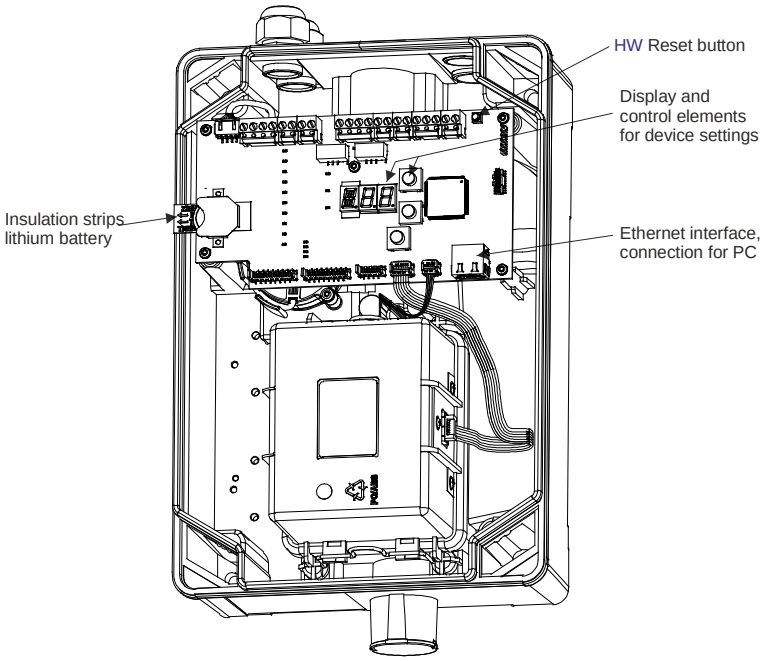

Fig. 2 Detector housing opened for commissioning

1.5 Removing and mounting the smoke sensors

Check the installation position when installing the smoke sensor. The connector plug of the smoke sensor must be face away from the slots of the additional modules. The anti-twist rib on the smoke sensor case prevents an incorrect installation position.

The smoke sensor is secured inside the ASD housing using the two lock clamps. Connect the ribbon cable supplied with the smoke sensor to the smoke sensor (large ribbon cable connector) and to the AMB 32 main board (small ribbon cable connector).

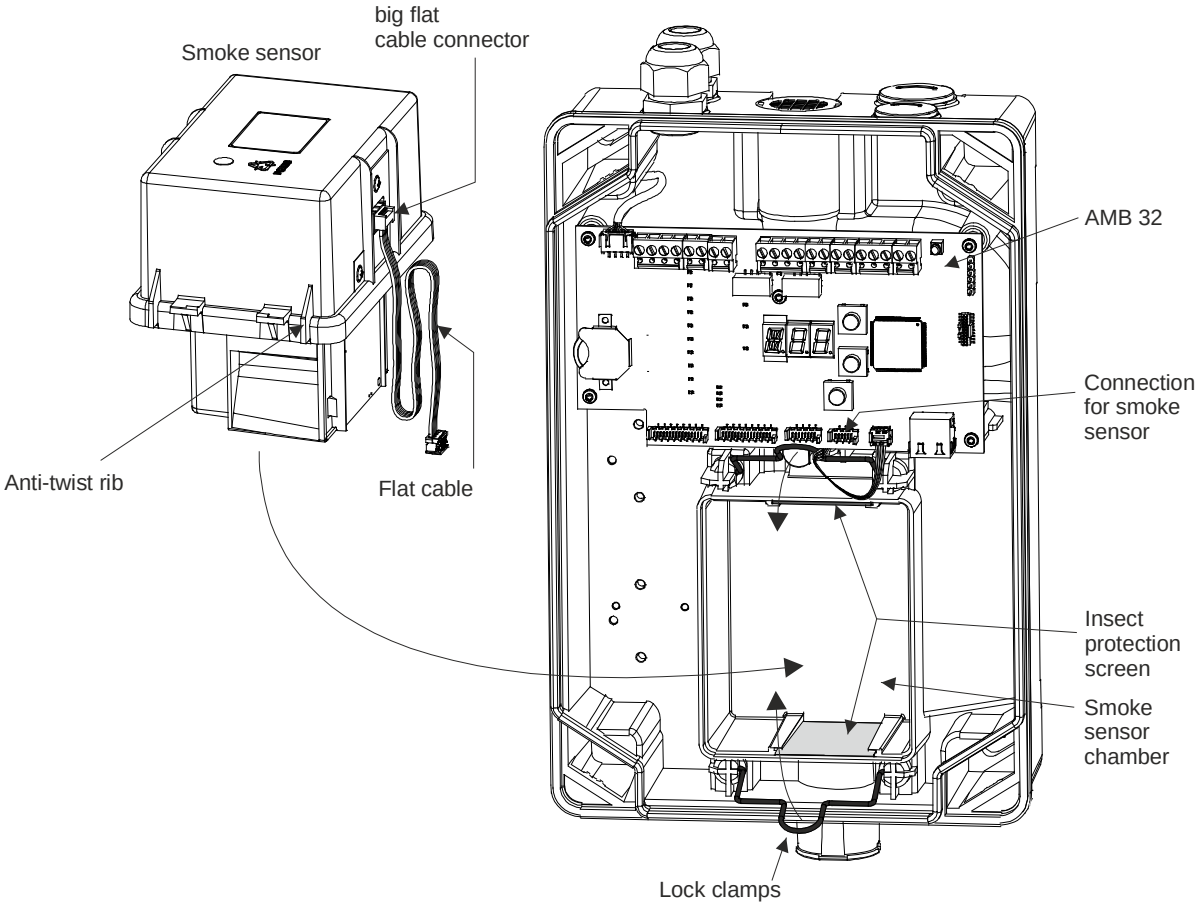

Fig. 3 Removing and mounting the smoke sensors

2 Maintenance and service

2.1 General

Notices

- Maintenance and service work on fire alarm systems are subject in part to country-specific laws and directives.
- Maintenance and service work may be performed only by persons trained and authorised by the manufacturer of the ASD 532.
- Depending on application, the ASD 532 must be serviced at least once a year by the manufacturer or by qualified personnel authorised and trained to do so by the manufacturer. If required (e.g. significant dirt hazard), the service interval is reduced to guarantee functional reliability. If filter boxes and/or filter units are used, the service life of the filter inserts play a role in the service interval. Depending on the level of dust and dirty in the object, filter service may vary greatly. The optimum filter service life is to be determined on site on a case by case basis. When using the filter monitoring according to Sec. “Filter monitoring” (T 140 421), the filter service life is set to 6 months by default, but it can be parameterised from 1 to 24 months.
- When using a DFU 911 dust filter unit, refer to Data Sheet T 140 705 for the application-specific specifications of the filter service life.

The operator is obligated to conclude a service agreement with the manufacturer or with an installer authorised by the manufacturer if the operator does not have the required service personnel trained by the manufacturer.

The statutory national directives (DIN VDE 0833-1, VKF) governing maintenance must be observed.

Servicing, maintenance or inspection work on the ASD 532 may be necessary after an event (fire, fault).

If a detector housing has to be replaced due to a defect, the new ASD 532 is to undergo the same procedure as a first-time commissioning (initial reset required). All the customer-specific configurations have to be carried out once again on the replaced ASD 532.

For maintenance work and function checks, observe the relevant information set out in Sec. 2.3 below.

If filter-boxes or dust filter units are installed in applications with a high level of soiling risk, a “simplified” maintenance can be performed on the filter-boxes or dust filter boxes as described in Sec. 2.3.1.

2.2 Cleaning

Clean the detector housing with a **non-aggressive** cleaning agent (e.g. soap suds or similar).

Normally only the sampling holes need to be cleaned on the sampling pipe tube network. In applications where dirt is a major issue, it may be necessary to clean inside the sampling pipe (blow out with compressed air or nitrogen). Only **non-aggressive** cleaning agents may be used when cleaning the sampling pipe (e.g. soap and water or similar).

Notice

Aggressive cleaning agents (such as solvents, pure petrol or other alcohol-based agents) must not be used for cleaning.

2.3 Maintenance checks and function checks

Notice

To avoid triggering fire incident controls, remote alerting and extinguishing areas when carrying out maintenance work, it is **essential** to block or switch off those systems beforehand.

For maintenance and function checks, carry out the following points:

1. Block or switch off fire incident control and remote alerting on superordinate FACPs.

2. Check that the supply voltage on the FACP is set in compliance with maintenance instructions for the control panel.

3. Check that the sampling pipe inlet is correctly seated.

4. Check the air outlet for any dirt or dirt and clean if necessary.

5. If the ASD 532 is used for equipment monitoring and plug-in transitions from rigid to flexible pipe sections are in place, check that the transitions are correctly seated (no leakage).

6. Open the cover of the detector housing. Carry out the following measurements:

- Measure the operating voltage on terminal 1 **(+)**, 2 **(-)** ➔ target value = 17.6 to 27.6 VDC.
- Readout sampling pipe airflow value in switch setting ***V*** and compare with commissioning protocol. If there is a deviation of more than half the set sensitivity (see examples ① and ②), check the sampling pipe as follows:
  - An **increase** in the value (more than 100%) tends to indicate **pipe breakage** ➔ check the sampling pipe for leaks (junctions, fittings, etc.)
  - A **decrease** in the value (less than 100%) tends to indicate a **pipe blockage** ➔ check the sampling pipe for pipe blockage, clean as described under **Item 9** or **Item 10**.

① Set LS-Ü sensitivity = ±20% (default); half of that = ±10%. The sampling pipe should therefore be checked if the value is below 90% or above 110%.

② Set LS-Ü sensitivity = ±50% (non-compliant with EN 54-20), half of that = ±25%. The sampling pipe should therefore be checked if the value is below 75% or above 125%.

7. Switch off the ASD (pull terminal block 1/2 and if necessary 3/4 on the AMB 32). After disconnecting the ribbon cable from the smoke sensor, carefully remove the sensor from the ASD.

8. Use a soft, dry paintbrush to clean the inside of the smoke sensor chamber and the insect protection screen. Oil-free compressed air or nitrogen can also be used for cleaning.

Notice

Do not use compressed air either to blow out or open the smoke sensor. Improper handling can affect the response characteristics. Only the manufacturer is authorised to clean dirty smoke sensors. The smoke sensors are monitored for dust and dirt; their states are displayed on the control unit. If required the smoke sensor must be replaced.

After cleaning the smoke sensor chambers, re-insert the smoke sensor into the ASD.

➔➔

Continuation:

9. If it is necessary to clean the sampling pipe as indicated under **Item 6**, carry out the following measures (possibly also according to **Item 10**):

- Clean all sampling holes in the entire sampling pipe tube network. Tobacco pipe cleaners can be used for this purpose.
- If the sampling holes are not accessible, the entire sampling pipe tube network can be blown out from the detector housing using oil-free compressed air or nitrogen. This is done via the manual ball valve or from the loosened screw-junction piece (pipe connection) of the last accessory part in the direction of the sampling pipe network.

Notice

Blowing out from inside the smoke sensor chamber (through the fan) can damage the fan and is therefore not permitted.

- If present, open the accessory parts (water retaining box, dust filter unit, detector boxes) and clean with a soft dry brush. Oil-free compressed air or nitrogen can also be used for cleaning. Replace the filter element in the dust filter unit (see also Data Sheet T 140 705). When finished, close the accessory parts again.
- After cleaning the sampling pipe, re-connect it correctly to the ASD 532.

10. In applications where dirt is a major issue, it may be necessary to clean the air-flow sensor. For this purpose (see Sec. 2.4.3) take it out of the holder and clean with a soft, dry brush ➔ **Caution: Do not clean or touch the sensor surface with your fingers.** Then re-insert the air-flow sensor as indicated in Sec. 2.4.3 ➔ make sure it is correctly seated inside the holder.

11. Switch the ASD back on again and wait until the fan has reached its optimal speed (at least 2 min).

12. Check fault triggering, alarm release and correct alarm transmission to the FACP. Log the completed tests in the commissioning protocol.

13. Read out the air-flow values ***v*** once again. If the values set out under **Item 6** are still outside the tolerance range, the airflow monitoring will have to be readjusted (initial reset as described in Sec. “Commissioning”, T 140 421).

Notices

- A new initial reset is not usually necessary after cleaning work on the sampling holes (cleaning restores the commissioning state). If an initial reset is necessary nonetheless after the work set out under **Item 13**, it may **only** be carried out once it has been ensured that all possible measures for cleaning the sampling pipe have been carried out (incl. a new filter element).
- If an initial reset is carried out with blocked sampling holes, there is the danger that insufficient air samples or no air samples will be aspirated and hence the ASD 532 can no longer trigger an alarm.

14. If maintenance or repair work was carried out on the ASD 532 (including the sampling pipe) as a result of servicing check, a new initial reset may be necessary.

15. All measurements and tests carried out are to be entered and signed for in the commissioning protocol. The completed commissioning protocol is to be stored with the ASD. If required, a copy can be made and stored in the system dossier.

16. After completion of the servicing check, close the detector housing once again.

2.3.1 Filter replacement on dust filter units

If a “Filter fault (service life exceeded)” fault trigger occurs when filter monitoring is activated and after expiry of the configured filter service life, the filter element in a dust filter unit must be replaced. When the expired filter service life (read out via *Easy-Config* switch position ***d*** > ***RE***) is periodically checked, the replacement can take place before the fault is triggered.

To replace the filter element, the “Filter replacement” function must be activated on the ASD (via the “Reset” key, *EasyConfig* or “ASD Config”). When filter replacement is activated, the aspirating smoke detector is set to the “Isolate” state. This insures that during the replacement work falling dust particles from the filter element do not cause a false alarm. After the filter has been replaced, the “Filter replacement” procedure is completed by pressing the “Reset” key on the ASD. This cancels the “Isolate” state and resets the fault on the ASD. The “Filter service life” monitoring is restarted at 0.

2.4 Replacing units

Notice

Defective units such as the AMB 32, smoke sensor, airflow sensor and fan may can only be replaced in the de-energised state (with terminal block 1/2 and possibly 3/4 unplugged from the AMB 32).

2.4.1 Replacing the smoke sensor

The smoke sensor must be replaced if defective or if there is a dirt message.

To replace the smoke sensor proceed according to Sec. 1.5. It is important to ensure that the new smoke sensor has the same alarm sensitivity range as the old one (SSD 532-1, -2, -3).

2.4.2 Replacing the aspirating fan unit

To replace the AFU 32 aspirating fan unit, the AMB 32 main board must be removed. To do so, carefully unplug all the internal cable connections (including fan connection). The plug-in terminals 1 to 21 do not necessarily have to be unplugged. After removing the retainer screws on the AMB 32 using a **Torx T10 screwdriver**, the AMB 32 can be lifted up toward the cable infeeds and the retaining screws on the aspirating fan unit are then accessible. To dismantle the aspirating fan unit, remove the two screws **A** using a **Torx T15 screwdriver** (see **Fig. 4**).

To mount the new fan, proceed in the reverse sequence. **Important**: Before screwing on the replacement fan, the supplied spacers must be inserted into their fastening holes.
The connection cable must be placed in **B**.

Notice

After replacing the aspirating fan unit, it is imperative to carry out a new initial reset (see Sec. “Commissioning”, T 140 421).

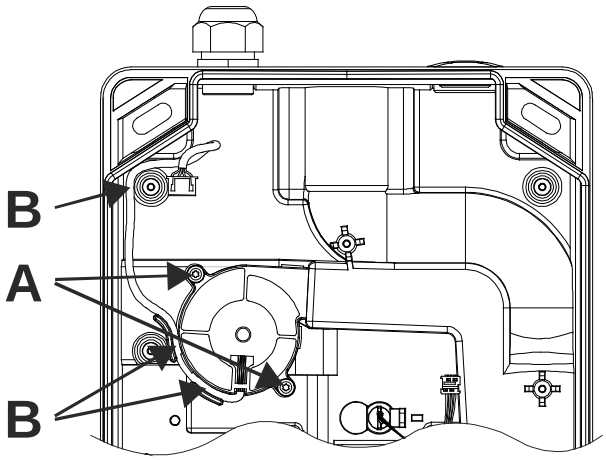

Fig. 4 Removing the aspirating fan unit

2.4.3 Replacing the airflow sensor

Notices

- When removing and mounting the airflow sensor, make sure that the sensor element is not damaged (i.e. does not break). Do not pull on the connection wires.
- After replacing an airflow sensor (new sensor), it is imperative to carry out a new initial reset.

Remove connector **A** of the airflow sensor on the AMB 32. To remove an airflow sensor, gently press lock tab **B** towards the connector plug. The airflow sensor can then be carefully pulled out of its holder by gripping tab **C** with thumb and index finger ➔ **Attention: do not pull on the connection wires of the airflow sensor.** To install the new airflow sensor proceed in the reverse sequence. It is important to note the installation position (anti-twist safeguard) of the airflow sensor and that it is correctly seated in its holder. To do so, press the airflow sensor on grip tab **C** towards the housing base until the lock tab snaps over the airflow sensor ➔ **Attention: do not press on the connection wires of the airflow sensor.**

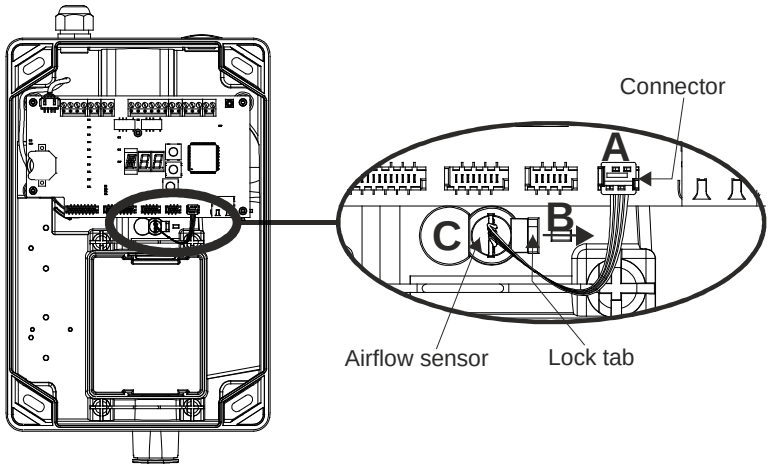

Fig. 5 Removing the airflow sensors

2.4.4 Replacing the AMB 32 Main Board

To replace the AMB 32 Main Board, unplug all the plug-in terminals with installation wires. Likewise, all internal cable connections (ribbon cable connectors) must also carefully be unplugged. Once the 5 fastening screws of the AMB 32 have been removed using a **Torx T10 screwdriver**, the AMB 32 can be replaced. To install the new AMB 32, proceed in the reverse sequence.

Notices

- When connecting the new AMB 32, take note of the correct assignment of the terminals and ribbon cable connectors.
- After replacing the AMB 32 it is imperative to carry out a new initial reset. Likewise, all customer-specific configurations and project-specific settings from the “ASD PipeFlow” configuration software must be carried out once again. To do so, proceed according to Sec. “Commissioning”, T 140 421.

2.5 Disposal

The ASD 532 aspirating smoke detector and its packaging consist of recyclable material that can be disposed of as described in Sec. 2.5.1.

2.5.1 Materials used

Recycling

All raw materials and other materials used in the ASD 532 and all the technologies used in manufacturing are ecologically and environmentally friendly in compliance with ISO 14000.

All waste resulting from assembly (packaging and plastic parts) can be recycled and should be disposed of accordingly.

Devices, sampling pipes or parts thereof that are no longer used should be disposed of in an environmentally-friendly manner.

The manufacturer of the ASD 532 is obliged to take back any devices and sampling pipes that are defective or no longer used, for eco-friendly disposal. For this purpose the manufacturer has implemented a monitored and approved disposal system. This service is available worldwide at cost price.

Materials used in the ASD 532:

Detector housing	PC / ABS
Smoke sensor SSD 532	Lexan (PC)
Fan housing / fan wheel	PBTP / PBTP
Fan electric motor	PU / Cu / barium ferrite powder
Circuit boards, general	Epoxy resin hard paper
Soldering process	Environmentally-friendly manufacturing compliant with RoHS
Foil on control unit	PE
Sampling tubes	ABS / PA
Fittings	ABS / PA
Pipe clamps	PA
ABS adhesives	ABS / solvent MEK (methyl, ethyl, ketone)

Notice with PVC plastics

Because PVC plastics when burned produce toxic, corrosive and environmentally damaging combustion products, the use of PVC is not permitted in many applications. The relevant construction regulations must be observed.

Ecology:

PVC plastics cannot be manufactured and disposed of without environmental impact. The recycling of PVC is possible only up to a limited degree. Please refer to the danger notice above.

Sampling tubes	PVC, see danger notice above
Fittings	PVC, see danger notice above
PVC adhesives	PVC / solvent tetrahydrofurane, cyclohexanone

3 Article numbers and spare parts

3.1 Detector housings and accessories

Designation	Article no.
Aspirating Smoke Detector ASD 532-1	11-2000003-01-XX
Smoke sensor SSD 532-1, 0.5%/m to 10%/m	11-2000004-01-XX
Smoke sensor SSD 532-2, 0.1%/m to 10%/m	11-2000004-02-XX
Smoke sensor SSD 532-3, 0.02%/m to 10%/m	11-2000004-03-XX
SecuriLine eXtended Module XLM 35 incl. mounting set	11-2200003-01-XX
M-Line module ML-SFD incl. mounting set	11-2200015-01-XX
RIM 36 Relay Interface Module incl. mounting set	11-2200005-01-XX
SIM 35 Serial Interface Module incl. mounting set	11-2200000-01-XX
SMM 535 Serial Master Module	11-2200001-01-XX
SD memory card (industrial version)	11-4000007-01-XX
Printed circuit board AMB 32 main board	11-2200013-01-XX
Aspirating Fan Unit AFU 32, complete	11-2200008-01-XX
Air Flow Sensor AFS 32	11-2200007-01-XX
Insect Protection Screen IPS 35 (set of 2)	11-2300012-01-XX
Lithium battery	11-4000002-01-XX
Cable screw union M20 (set of 10)	11-4000003-01-XX
Cable screw union M25 (set of 10)	11-4000004-01-XX
Adapters for US cable screw unions AD US M-Inch	11-2300029-01-XX
UMS 35 Universal Module Support	4301252.0101

3.2 Sampling pipe and accessories

The article numbers of all the available parts for the sampling pipe (tubes, fittings, etc.) are listed in a separate document (T 131 194).

4 Technical data

Type			ASD 532	
Supply voltage range			14 to 30 (**UL/FM = 16.4 to 27**)	VDC
Max. power consumption, measured in			typical	
Fan speed level III and at ➔		14 VDC ①	24 VDC	
ASD 532-1	Quiescent/fault	approx. 170	approx. 100	mA
	Alarm	approx. 200	approx. 115	mA
additionally with 1x RIM 36 (all relays triggered)		approx. 30	approx. 15	mA
additionally with 2x RIM 36 (all relays triggered)		approx. 60	approx. 30	mA
additionally with XLM 35 / ML-SFD		approx. 15	approx. 5	mA
additionally with SIM 35		approx. 15	approx. 5	mA
SMM 535 (not from ASD but rather from PC via USB connection)			max. 100	mA
Switch-on current peak ② (caused by EMC protection elements on the ASD supply input)			approx. 5 A for max. 1 mx	
Sampling pipe length			see T 140 421	
Sampling pipe diam., typical (inner/outer)			Ø 20 / 25	mm
Max. number of sampling holes			see T 140 421	
Sampling hole diameter		Ø 2 / 2.5 / 3 / 3.5 / 4 / 4.5 / 5 / 5.5 / 6 / 6.5 / 7		mm
Response range			EN 54-20, class A, B, C	
Protection type compliant with IEC 60529 / EN 60529			54	IP
Ambient conditions compliant with IEC 60721-3-3 / EN 60721-3-3			3K5 / 3Z1	class
Extended ambient conditions:				
• Detector housing temperature range			–20 – +60 (**UL max. +40**)	°C
• Sampling pipe temperature range			–20 – +60 ③	°C
• Max. permissible temperature fluctuation in detector housing and sampling pipe operation			20 ③	°C
• Max. permissible storage temperature for detector housing (without condensation)			–30 – +70	°C
• Ambient pressure difference between detector housing and sampling pipe (sampling holes)			must be identical	
• Humidity ambient condition for detector housing (transient without condensation)			95 ③	% rel. h
• Humidity ambient condition (continuous)			70 ③	% rel. h
Max. loading capacity, relay contact			50 (**UL max. 30**)	VDC
			1	A
			30	W
Max. loading capacity per OC output (dielectric strength 30 VDC)			100	mA
Plug-in terminals			2.5	mm²
Cable entry for cable Ø			Ø 5 – 12 (M20) / Ø 9 – 18 (M25)	mm
Sound pressure level for fan speed level I / II / III			25 / 31 / 39	dB (A) / 1 m
Housing	material		ABS blend, UL 94-V0	
	colour		grey 280 70 05 / anthracite violet 300 20 05	RAL
Approvals		EN 54-20 / EN 54-27 / FM 3230 – 3250 / UL 268 7th Ed / UL 268A 4th Ed / ULC-S529 4th Ed		
VdS approval			G 215101	
Dimensions	ASD 532-1 (W x H x D)		195 x 333 x 140	mm
Weight	ASD 532-1 (incl. SSD 532-x)		2,000	g

Notices

① Power consumption at maximum permitted voltage drop in the electrical installation (decisive value for calculating the conductor cross-section).

② May cause the protective circuit to trigger immediately in the case of power supplies with overload protective circuits (primarily in devices with no emergency power supply and output current of < 1.5 A).

③ Lower or higher temperature ranges are also possible subject to consultation with the manufacturer. The manufacturer must be consulted if the device is used in the condensation range.

5 List of figures

Document history

First edition Date 15.10.2015

Index “a” Date 31.10.2016

Most important changes compared with previous issue:

Section / Fig.	New (n) / changed (c) / deleted (d)		What / Reason
2.1		Maintenance on dust filter units	Extension
2.3.1		new Section	Extension
3.1	n	New accessory: AD US M-Inch	New UL use
4	n	Note about UL use concerning supply voltage range, temperature range, relay contact, approvals	New UL use

Index “b” Date 30.04.2018

Most important changes compared with previous issue:

Section / Fig.	New (n) / changed (c) / deleted (d)		What / Reason
4	c	“Sound pressure level” instead of “noise level“, value specification corrected	Correction

Index “c” Date 20.06.2019

Most important changes compared with previous issue:

Section / Fig.	New (n) / changed (c) / deleted (d)		What / Reason
2.1 / 2.3, point 9	n	Notice about filter service lives in DFU 911 Data Sheet	Addition
4	c	RIM current consumption (all relays triggered)	Addition
	c	Name of standard for protection type/ambient conditions	Correction

Index “d” Date 13.12.2021

Most important changes compared with previous issue:

Section / Fig.	New (n) / changed (c) / deleted (d)		What / Reason
1.1 / 1.4	n	Inclusion of UIM additional module	Extension
	n	Notice about FidesNet	Addition
1.1 / 1.4 / 3.1 / 4	n	Inclusion of ML-SFD additional module	Extension
2.3 / 2.3.1	c	Filter FBL, FBX omitted	Correction
2.5.1	c	“Clamp” omitted (pipe clamp)	Correction
4	n	Addition of the VdS G number	Addition