

SEC-REK-511

Description

Sector:	FAS
Participant:	SecuriRAS® ASD / RAS
Purpose:	Detector box for installation in sampling pipe
Applicability:	Global
Component of:	SecuriRAS® ASD / RAS
Usable smoke detectors:	SSD 515-0S /-1S /-2S /-3S

The detector box REK 511 is a supplementary unit for the SecuriRAS® ASD 515, ASD 516, RAS 51B, RAS 53B and RAS 54 Aspiration Smoke Detectors. A smoke detector base in which, depending on application, one of the ASD smoke detector inserts SSD 515-0S, -1S, -2S or -3S can be used is installed in the REK 511. The housing contains two possible connections opposite one another for the sampling pipe. Electrical connection is via one or two cable screw unions into the REK housing and is connected there directly to the smoke detector base. The alarm status of the triggered smoke detector (LED) is indicated by means of a Plexiglas rod on the housing surface.

Applications

The REK 511 are used wherever the response sensitivity or the fire localization of an Aspiration Smoke Detector has to meet high requirements. They are installed in each case in the individual tube branches of the ASD sampling pipe. The REK 511 can be used in association with the SecuriRAS® ASD 515, ASD 516, RAS 51B, RAS 53B and RAS 54 Aspiration Smoke Detectors, both for room monitoring and for equipment monitoring.

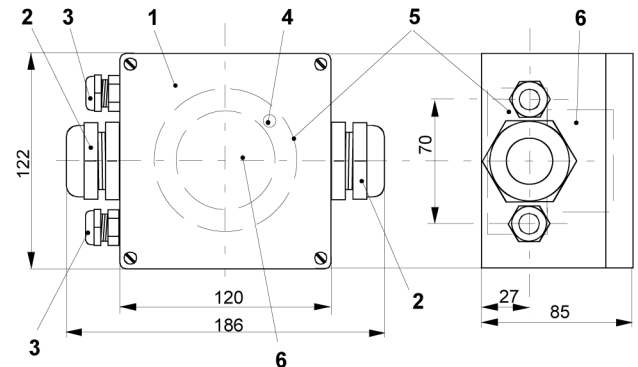
Planning

The ASD sampling pipe should be designed in accordance with the current planning guidelines of the type of device used. The restrictions or limits relating to maximum tube length, symmetry, number of sampling openings, etc. which are described in the guidelines also apply when REK 511 is used.



Danger information

- The ASD/RAS detector box must always be equipped with a Smoke Detector. The RAS detector box may not be used only as a fan housing.
- The national guidelines for the planning of Aspiration Smoke Detectors must be complied with.
- The **SSD 515-0S** may be used only in applications with extremely high dust content (no VdS / CEA approval).



Legend

- | | |
|-------------------------|----------------------------------|
| 1 REK 511 housing | 4 Alarm indicator |
| 2 M32 tube connection | 5 Base for smoke detector insert |
| 3 M12 cable screw union | 6 Smoke detector |

Fig. 1 Dimensioned drawing

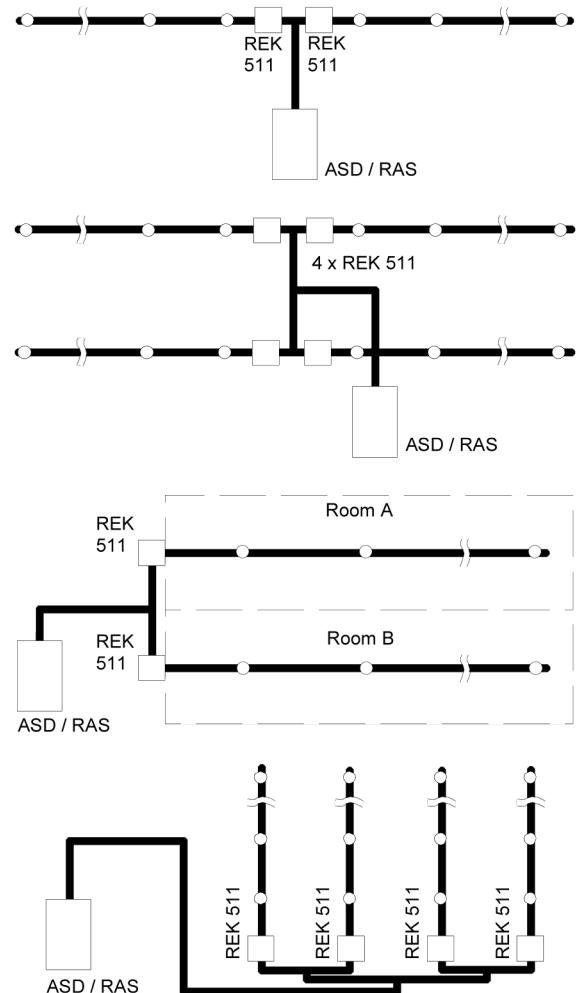


Fig. 2 Examples of room monitoring

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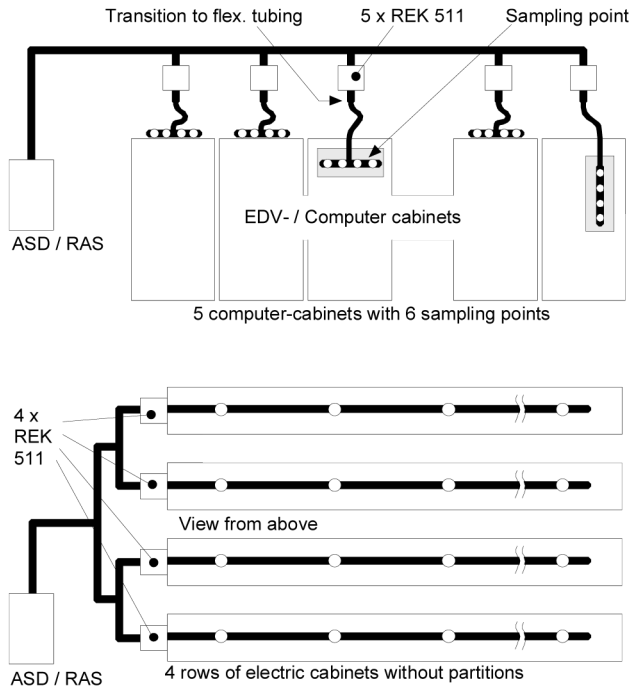


Fig. 3 Examples of equipment monitoring

Assembly / Installation

The REK 511 is fastened by means of four screws. When assembling the REK 511, it is particularly important to ensure that the alarm indicator (LED) is readily visible from the required direction and distance. If necessary, an additional Room Indication Lamp **RAL 720** can be connected to the REK 511.

Connection of sampling pipe

The REK 511 is provided with two M 32 screw unions for connection of a rigid sampling pipe Ø 25 mm. If installation with flexible tubing is necessary after the REK 511 (equipment monitoring), a short rigid 25 mm pipe section with corresponding transition should be used on the output side (see Fig. 3, socket with adapter and connection nipple).

Use of the smoke detector

The following detector types can be used in the REK 511:

- SSD 515-0S Insensitive 1.8 %/m (black)
- SSD 515-1S Standard 1.2 %/m
- SSD 515-2S Sensitive 0.6 %/m (yellow)
- SSD 515-3S Highly sensitive 0.3 %/m (red)

Danger Information

In the ASD/RAS detector boxes, a smoke detector must always be provided.

- The **SSD 515-0S** may be used only in applications with extremely high dust content (no VdS / CEA approval).

Electrical connection

Two M 12 cable screw unions are present in the REK for the electric cable entry. One of these screw unions is equipped with a dummy plug in the standard version.

Depending on the type of use, the smoke detector in the REK 511 can be connected from the fire detector zone of the ASD system or from a separate fire detector zone (REK subzone). ASD-REK combinations where several zones are formed must be made dependent in the FACP by means of hardware or software so that, when the ASD main zone is switched off and on, the REK subzones automatically follow.

Information

The Aspiration Smoke Detector has **no** connection facilities for connecting external smoke detectors. In the REK 511, the smoke detector is therefore connected from an intermediate distributor in the case of the ASD or directly from the FACP.

The smoke detector base contains a relay print MRP 915 which is wired to the terminals of the smoke detector base. The connection from the fire alarm control panel is made on the MRP 915. 2 terminals (+ / GND) for the supply and 6 terminals for the potential-free changeover contact of the alarm and fault relay are present. The fault relay is actuated in the quiescent condition so that, in addition to the fault state of the smoke detector, the absence of the smoke detector and of the supply line is also reported as a fault.

Owing to the increased current consumption, the REK 511 cannot be supplied directly from the fire detector zone. The supply line of the REK 511 from the FACP should be switched at "BM group Off/On" and "Reset" so that the REK 511 can be switched off and on or can be reset in the event of an alarm.

Safety information

An RAL connected to the REK 511 may not exceed a maximum current consumption of **5 mA**. RAL 720 should preferably be used.

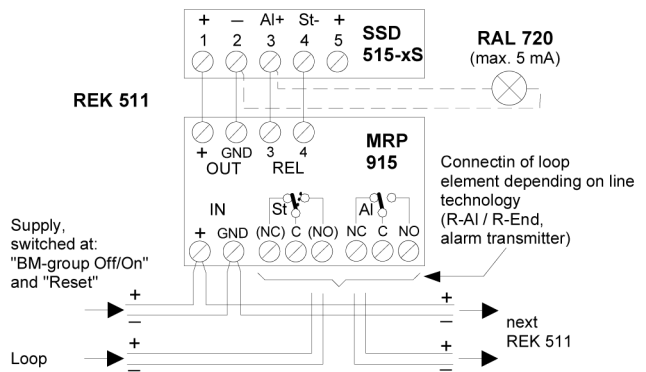


Fig. 4 Connection of the REK 511


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Commissioning / Maintenance

During *commissioning*, the function of all REK 511 should be checked. For this purpose, the housing cover of the REK must be removed and the smoke detector brought into the alarm state with test gas. Any RAL room indication lamps present should be checked. All screw unions (tubes and cables) should be checked for leaks (tightened). Any flexible tubes used should be checked for correct fit in the connection nipples (correctly snapped in).

During the system-specific *maintenance checks*, the REK 511 too should be checked. Proceed as described under *Commissioning*.

Depending on the degree of soiling, the open REK 511 should be cleaned with a soft, dry brush. It is also possible to use oil-free compressed air or nitrogen for cleaning. In the event of severe soiling or after seven years of operation at the latest, the smoke detector insert must be subjected to a factory overhaul, during which the insert is replaced.

	Safety information
After commissioning or maintenance work, it is necessary to check that the four screws of the Plexiglas cover have been fully tightened.	

Technical data for REK 511

Operating voltage range	18 to 28	V-DC
Operating current		
• Silence	18 to 20	mA
• Alarm	25 to 30	mA
• Fault	20 to 22	mA
Sensitivity of the smoke detectors		
• SSD 515-0S "black"	Insensitive 1.8	%/m
• SSD 515-1S	Standard 1.2	%/m
• SSD 515-2S "yellow"	Sensitive 0.6	%/m
• SSD 515-3S "red"	Highly sensitive 0.3	%/m
Protection according to IEC 529 / EN 60529 (1991)	53	IP
Ambient conditions according to IEC 721-3-3 / EN 60721-3-3 (1995)	3K5 / 3Z1	Class
Extended ambient conditions:		
• Temperature range	0 - +50 ①	°C
• Ambient humidity (briefly without condensation)	95 ①	% rel. h.
• Ambient humidity (continuous)	70 ①	% rel. h.
Terminals	1.5	mm ²
Cable entry for cable Ø	to Ø 6	mm
Housing material	ABS, UL 94-V0	
Housing colour	light grey, similar to 7035	RAL
Dimensions (W x H x D)	186 x 122 x 85	mm
Weight	approx. 580	g

① After consultation with the manufacturer, lower or higher temperature ranges are also possible.

	Safety information
Use in the region of the dew point is permitted only after consultation with the manufacturer.	

Article numbers and spare parts

Type / Article / Component	Art. No. HEKATRON ①	Art. No. SECURITON
Individual identification for RAS, REK 511	5700106	022.199 443
Smoke detector SSD 515-0S , 1.8 %/m (black)	5000604-0300	022.236 179
Smoke detector SSD 515-1S , 1.2 %/m	5000604-0X01	022.233 765
Smoke detector SSD 515-2S , 0.6 %/m (yellow)	5000604-0X02	022.233 773
Smoke detector SSD 515-3S , 0.3 %/m (red)	5000604-0X03	022.233 781
Spare smoke detector SSD 515-0S , 1.8 %/m (black)	95000604-0300	022.613 541
Spare smoke detector SSD 515-1S , 1.2 %/m	95000604-0X01	022.612 260
Spare smoke detector SSD 515-2S , 0.6 %/m (yellow)	95000604-0X02	022.612 278
Spare smoke detector SSD 515-3S , 0.3 %/m (red)	95000604-0X03	022.612 286
Room Indication Lamp RAL 720	6900212	019.209 708
Relay print MRP 915	---	115.233 803

① X = Customer variants: 1 = Securiton-CH 2 = Hekatron 3 = Securiton-D 4 = Securiton-Export 5 = Schrack