



Automatic Fire Detectors



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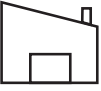








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1. Application Recommendation for Automatic Fire Detectors

1.1. General Notes

In section 1.2 to 1.7 , application recommendations are given for automatic fire detectors included in the current product range of Bosch Security Systems. The recommendations include fire detectors for the Local SecurityNetwork LSN and LSN improved version as well as for conventional technology.

The recommendations include scopes of application as follows:

	Scope of application
	Electrical system, switch cabinet, IT system
	Clean, maintained room (office, theater, museum)
	Conference room, smokers' office
	Cable duct, cable funnel, intermediate ceiling, false floor
	Ventilation duct
	Storage depot and production depot with low dust accumulation
	Production workshops with high dust accumulation (wood and textile processing industry)
	High-board warehouse with low dust accumulation
	High-board warehouse with high dust accumulation
	Garage, multi-storey parking lot
	Room where smoke is generated as a result of general operation (welding shop, forge)
	Room where steam is generated as a result of general operation (laundromat, kitchen)
	Area with a potentially explosive atmosphere; see ATEX approval
	Area subject to increased radiation

Legend for recommended scope of application

The symbols and notes used in the section 1.2 to 1.7 mean:

+++	Particularly suitable for use
++	Suitable for use
+	Use possible
o	Not suitable for use
1	Requires dust filter
2	Only with good ventilation
3	Requires detector base with damproom seal
4	Requires water separator
5	Requires special equipment















**NOTICE!**

Observe product specific specifications and country specific guidelines and standards during the planning phase.















1.2. Multisensor Detectors

Type number	Scope of application (refer to Section 1.1 General Notes)													
FAP-OC 520	+++	+++	+++	o	o	+++	+++	+++	+++	++ 3	+	++ 3	o	o
FAP-OC 520-P	+++	+++	+++	o	o	+++	+++	+++	+++	++ 3	+	++ 3	o	o
FCP-OC 500	+++	+++	+++	o	o	+++	+++	+++	+++	++ 3	+	+	o	o
FCP-OC 500-P	+++	+++	+++	o	o	+++	+++	+++	+++	++ 3	+	+	o	o
FAP-425-DOTC	+++	+++	+++	+++	o	+++	o	++	o	+++ 3	++	++ 3	o	o
FAP-425-DOT	+++	+++	+++	+++	o	+++	o	++	o	++ 3	+	+ 3	o	o
FAP-425-OT	+++	+++	+++	+++	o	+++	o	++	o	++ 3	+	+ 3	o	o
FCP-OC320	+++	+++	+++	+++	o	+++	o	++	o	++ 3	+	+ 3	o	o
FCP-OC320-R470	+++	+++	+++	+++	o	+++	o	++	o	++ 3	+	+ 3	o	o
FCP-OT320	+++	+++	+++	+++	o	+++	o	++	o	+ 3	+	o	o	o
FCP-OT320-R470	+++	+++	+++	+++	o	+++	o	++	o	+ 3	+	o	o	o















1.3. Optical Detectors

Type number	Scope of application (refer to Section 1.1 General Notes)													
														
FAP-O 520	+++	+++	++	o	o	+++	++	+++	++	o	o	o	o	o
FAP-O 520-P	+++	+++	++	o	o	+++	++	+++	++	o	o	o	o	o
FCP-O 500	+++	+++	++	o	o	+++	++	+++	++	o	o	o	o	o
FCP-O 500-P	+++	+++	++	o	o	+++	++	+++	++	o	o	o	o	o
FAP-425-DO	+++	+++	++	++	o	+++	o	++	o	o	o	o	o	o
FAP-425-O	+++	+++	++	++	o	+++	o	++	o	o	o	o	o	o
FCP-O320	+++	+++	++	++	o	+++	o	++	o	o	o	o	o	o
FCP-O320-R470	+++	+++	++	++	o	+++	o	++	o	o	o	o	o	o
FAD-O 420	o	o	o	o	+++ 1	o	o	o	o	o	o	o	o	o
DOW 1171	+++	+++	+++	++	o	+++	o	++	o	o	o	o	o	o
DO1101A-Ex	o	o	o	o	o	o	o	o	o	o	o	o	+++ 5	o
OOH740-A9-EX (default settings)	o	o	o	o	o	o	o	o	o	o	o	o	+++ 5	o















1.4. Heat Detectors

Type number	Scope of application (refer to Section 1.1 General Notes)													
														
FAH-425-T	o	+	+++	o	o	o	+++	o	+	+	++	+ 3	o	o
FCH-T320	o	+	+++	o	o	o	+++	o	+	+	++	+ 3	o	o
FCH-T320-R470	o	+	+++	o	o	o	+++	o	+	+	++	+ 3	o	o
FCH-T320-FSA	o	+	+++	o	o	o	+++	o	+	+	++	+ 3	o	o
OOH740-A9-EX (heat settings)	o	o	o	o	o	o	o	o	o	o	o	o	+++ 5	o















1.5. Flame Detectors

Type number	Scope of application (refer to Section 1.1 General Notes)													
														
016589	o	o	o	o	o	++	++	o	o	+	o	o	o	o
016519 (Ex)	o	o	o	o	o	o	o	o	o	+	o	o	+++ 5	o















1.6. Linear Smoke Detectors

Type number	Scope of application (refer to Section 1.1 General Notes)													
														
Fireray 50RV	o	+++	o	o	o	+++	o	++	o	o	o	o	o	o
Fireray 100RV	o	+++	o	o	o	+++	o	++	o	o	o	o	o	o
Fireray 3000	o	+++	o	o	o	+++	o	++	o	o	o	o	o	o
Fireray 5000-EN	o	+++	o	o	o	+++	o	++	o	o	o	o	o	o

1.7. Aspirating Smoke Detectors

	Scope of application (refer to Section 1.1 General Notes)													
Type number														
FAS-420-TM FAS-420-TM-R(VB)	+++	+++	+++	+++	++	++	++ 1	+++	+++ 1	o	o	++ 4	+ 5	+
FAS-420-TP1(-SL) FAS-420-TP2(-SL)	+++	+++	+++	+++	++	++	++ 1	+++	+++ 1	o	o	++ 4	+ 5	+
FAS-420-TT1(-SL) FAS-420-TT2(-SL)	+++	+++	+++	+++	++	++	++ 1	+++	+++ 1	o	o	++ 4	+ 5	+
FCS-320-TM(-R)	+++	+++	+++	+++	++	++	++ 1	+++	+++ 1	o	o	++ 4	+ 5	+
FCS-320-TP1 FCS-320-TP2	+++	+++	+++	+++	++	++	++ 1	+++	+++ 1	o	o	++ 4	+ 5	+

1.8. Linear Heat Detectors

	Scope of application (refer to Section 1.1 General Notes)														
Type number															
FCS-LHD-2	+	+	++	+++	++	++	+++	++	+++	+++	+++	+++	+++	5	o
N4387 A	+++	o	o	+++	o	+	+++	o	o	+++	+++	+++	+++	++ 5	o

2. Service and Test Equipment for Current Product Range

2.1. General Notes

Service devices

Type number	Product ID	Designation
SOLO200	4.998.112.113	Detector Removal Tool
FAA-RTL-SIEMENS	4.998.120.144	Exchanger Device for DO1101A-Ex and DOW 1171
FAA-500-RTL	F.01U.508.720	Exchanger Device for 500/520 Series
FDUD291	F.01U.335.593	Detector exchanger for OOH740-A9-Ex

Test devices

Type number	Product ID	Designation
SOLO461	4.998.112.072	Heat Detector Tester
SOLO331	4.998.112.071	Smoke Detector Tester
FAA-500-TTL	F.01U.508.725	Test Adapter with Magnet for 500/520 Series

Test aerosols

Type number	Product ID	Designation
FME-TEST-SMOKE	F.01U.301.104	Testing Aerosol for Optical Smoke Detector
FME-TEST-CO	F.01U.301.469	Testing Gas for Smoke Detector with C Sensor

Legend for the recommended service and test equipment

The symbols and notes used in the section 2.2 to 2.8 mean:

+++	Particularly suitable for use
++	Suitable for use
+	Use possible
o	Not suitable for use
1	Use in combination with
2	Optical test has to be made without aerosol
3	Not for locked detectors
4	Hekatron detector exchanger
5	The test equipment is not explosion proof. Tests may only be conducted when no risk of explosion occurs.



NOTICE!

The above-mentioned service and test equipment is not suitable for the following fire detectors:

- Section 2.5 Flame Detectors
- Section 2.6 Linear Smoke Detectors
- Section 2.7 Aspirating Smoke Detectors
- Section 2.8 Linear Heat Detectors

2.2. Multisensor Detectors

Type number	Manu- facturer	Removal tool				Test tool			Testing aerosol	
		SOLO 200	FAA-RTL- Siemens	FAA- 500- RTL	FDUD 291	SOLO 461	SOLO 331	FAA- 500- TTL	FME- TEST- SMOKE	FME- TEST- CO
FAP-OC-500(-P) FAP-OC-520(-P)	Bosch	o	o	+++	o	o	+++ 1	+++ 1	o 2	+++
FAP-425-DOTC	Bosch	+++	o	o	o	+++	+++	o	+++	+++
FAP-425-DOT FAP-425-OT	Bosch	+++	o	o	o	+++	+++	o	+++	o
FCP-OC320 FCP-OC320-R470	Bosch	+++	o	o	o	o	+++	o	+++	+++
FCP-OT320 FCP-OT320-R470	Bosch	+++	o	o	o	+++	+++	o	+++	o

2.3. Optical Detectors

Type number	Manu- facturer	Removal tool				Test tool			Testing aerosol	
		SOLO 200	FAA-RTL- Siemens	FAA- 500- RTL	FDUD 291	SOLO 461	SOLO 331	FAA- 500- TTL	FME- TEST- SMOKE	FME- TEST- CO
FAP-O 520(-P) FCP-O 500(-P)	Bosch	o	o	+++	o	o	+++ 1	+++ 1	o 2	o
FAP-425-DO FAP-425-O FCP-O320 FCP-O320-R470	Bosch	+++	o	o	o	o	+++	o	+++	o
FAD-O 420	Bosch	o	o	o	o	o	+++	o	+++	o
DOW 1171	Siemens	o	+++	o	o	o	+++	o	+++	o
OOH740-A9-EX (default settings)	Siemens	o	o	o	+++	o	+++ 1,5	o	+++	o

2.4. Heat Detectors

Type number	Manu- facturer	Removal tool				Test tool			Testing aerosol	
		SOLO 200	FAA-RTL- Siemens	FAA- 500- RTL	FDUD 291	SOLO 461	SOLO 331	FAA- 500- TTL	FME- TEST- SMOKE	FME- TEST- CO
FAH-425-T FCH-T320 FCH-T320-R470 FCH-T320-FSA	Bosch	+++	o	o	o	+++	o	o	o	o
OOH740-A9-EX (heat settings)	Siemens	o	o	o	+++	+++ 5	o	o	o	o

2.5. Flame Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
016589	Fire Fighting Enterprises	Special infrared test lamp by the manufacturer Alternative (not for ex-areas!): Cigarette lighter	Hold the switched on test lamp towards the detector's sensor openings. Alternative (not for ex-areas!): Hold a cigarette lighter with a large flame in front of the detector's sensor openings.
016519	Fire Fighting Enterprises	Special infrared test lamp by the manufacturer	Hold the switched on test lamp towards the detector's sensor openings.

2.6. Linear Smoke Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
Fire ray 50RV	Fire Fighting Enterprises	Special test foil by the manufacturer	Cover the detector's receiver part with the test foil.
Fire ray 100RV			
Fire ray 3000			
Fire ray 5000-EN			

2.7. Aspirating Smoke Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
FAS-420-TM FAS-420-TM-R FAS-420-TM-RVB FAS-420-TP1(-SL) FAS-420-TP2(-SL) FAS-420-TT1(-SL) FAS-420-TT2(-SL) FCS-320-TM FCS-320-TM-R FCS-320-TP1 FCS-320-TP2	Wagner	Acid-free smoke rods (2.799.320.762) Retainer for smoke rods FAS-ASD-DIAG Diagnostic software (F.01U.033.505): <ul style="list-style-type: none"> Mandatory setup and testing equipment for all FCS-320 variants and for FAS-420-TM-R/-RVB Recommended for any other variant Test pipe (4.998.148.848): Recommended in case of air flow trouble in the pipe system. Test adapter (4.998.148.849): Installation is recommended in fixed pipe systems.	Hold retainer with smoldering smoke rods in front of an aspiration hole.

2.8. Linear Heat Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
FCS-LHD-2	Kidde	heat-gun	Heat circa 1 m sensor cable evenly, afterwards reduce the alarm temperature to 54°C.
N4387 A	Securiton	Test coil by the manufacturer	Connect test coil and immerse in hot water.

3. Service and Test Equipment for Fire Detectors No Longer Available

For service and test devices overview, refer to Section 2.1 General Notes



NOTICE!

The service and test equipment listed in Section 2.1 General Notes is not suitable for the following fire detectors:

- Section 3.5 Flame Detectors
- Section 3.6 Linear Smoke Detectors
- Section 3.7 Aspirating Smoke Detectors
- Section 3.8 Linear Heat Detectors
- Section 3.9 Heat Measurement Detector

Legend for the recommended service and test equipment

The symbols and notes used in the section 3.1 to 3.9 mean:

+++	Particularly suitable for use
++	Suitable for use
+	Use possible
o	Not suitable for use
1	Use in combination with
2	Optical test has to be made without a aerosol
3	Not for locked detectors
4	Exchanger devices from Hekatron
5	The test equipment is not explosion proof. Tests may only be conducted when no risk of explosion occurs.

3.1. Multisensor Detectors

Type number	Manu- facturer	Removal tool			Test tool			Testing aerosol	
		SOLO 200	FAA-RTL Siemens	FAA- 500-RTL	SOLO 461	SOLO 331	FAA- 500-TTL	FME- TEST- SMOKE	FME- TEST-CO
FAP-OC 500(-P)	Bosch	o	o	+++	o	+++ 1	+++ 1	o 2	+++
OT 200 LSN	Bosch	+++	o	o	+++	+++	o	+++	o
OTC 410 LSN	Bosch	+++	o	o	+++	+++	o	+++	+++
OC 410 E LSN	Bosch	+++	o	o	o	+++	o	+++	+++
OT 410 E LSN	Bosch	+++	o	o	+++	+++	o	+++	o
OT 400 LSN KKW /FSA	Bosch	+++	o	o	+++	+++	o	+++	o
FAP-DOTC420 FAP-OTC 420	Bosch	+++	o	o	+++	+++	o	+++	+++
FAP-DOT420 FAP-OT420	Bosch	+++	o	o	+++	+++	o	+++	o

3.2. Optical Detectors

Type number	Manu- facturer	Removal tool			Test tool			Testing aerosol	
		SOLO 200	FAA-RTL- Siemens	FAA- 500-RTL	SOLO 461	SOLO 331	FAA- 500-TTL	FME- TEST- SMOKE	FME- TEST-CO
O 400 E LSN	Bosch	+++	o	o	o	+++	o	+++	o
O 400 LSN KKW/LSN	Bosch	+++	o	o	o	+++	o	+++	o
FAP-O 500	Bosch	o	o	+++	o	+++ 1	+++ 1	o 2	o
FAP-O 500-P	Bosch	o	o	+++	o	+++ 1	+++ 1	o 2	o
FAP-DO420	Bosch	+++	o	o	o	+++	o	+++	o
FAP-O420	Bosch	+++	o	o	o	+++	o	+++	o
FAP-O420 KKW	Bosch	+++	o	o	o	+++	o	+++	o
OM 200 LSN	Bosch/ Ziton	+++	o	o	o	+++	o	+++	o
GOM 120	Bosch/ Ziton	+++	o	o	o	+++	o	+++	o
NOM 100 LSN	Detectomat	++ 3	o	o	o	+++	o	+++	o
NOM K 100 LSN	Detectomat	++ 3	o	o	o	+++	o	+++	o
BD 102 O	Detectomat	+++	o	o	o	+++	o	+++	o
ORM 130/A (Y)	Hekatron	o	o	o	o	+++	o	+++	o
ORM 130/8 Ex	Hekatron	o	o	o	o	+++	o	+++	o
ORM 140/Z	Hekatron	o	o	o	o	+++	o	+++	o
BR12	Siemens	+++	o	o	o	+++	o	+++	o
BR12 Ex	Siemens	+++	o	o	o	+++	o	+++	o
DO1101A-Ex	Siemens	o	+++	o	o	+++	o	+++	o

3.3. Heat Detectors

Type number	Manu- facturer	Removal tool			Test tool			Testing aerosol	
		SOLO 200	FAA- RTL- Siemens	FAA- 500-RTL	SOLO 461	SOLO 331	FAA- 500-TTL	FME- TEST- SMOKE	FME- TEST- CO
T 400 E LSN	Bosch	+++	o	o	+++	o	o	o	o
T 400 LSN KKW/FSA	Bosch	+++	o	o	+++	o	o	o	o
FAH-T 420	Bosch	+++	o	o	+++	o	o	o	o
FAH-T 420 KKW	Bosch	+++	o	o	+++	o	o	o	o
TM 200 LSN	Bosch/Ziton	+++	o	o	+++	o	o	o	o
GTM 120	Bosch/Ziton	+++	o	o	+++	o	o	o	o
NTM 100 LSN	Detectomat	++ 3	o	o	+++	o	o	o	o
BD 101 D Typ 88	Detectomat	+++	o	o	+++	o	o	o	o
WDM 215/8 Ex	Hekatron 4)	o	o	o	+++	o	o	o	o
WDM 240	Hekatron 4)	o	o	o	+++	o	o	o	o
WDM 241	Hekatron 4)	o	o	o	+++	o	o	o	o
BD 857	Siemens	+++	o	o	+++	o	o	o	o
BD 957	Siemens	+++	o	o	+++	o	o	o	o
BM 857	Siemens	+++	o	o	+++	o	o	o	o

3.4. Ionization Detectors

Type number	Manu- facturer	Removal tool			Test tool			Testing aerosol	
		SOLO 200	FAA- RTL- Siemens	FAA- 500-RTL	SOLO 461	SOLO 331	FAA- 500-TTL	FME- TEST- SMOKE	FME- TEST- CO
GIM 120	Bosch/Ziton	+++	o	o	o	+++	o	+++	o
NIM 100 LSN	Detectomat	++ 3	o	o	o	+++	o	+++	o
BD 102 IA	Detectomat	++ 3	o	o	o	+++	o	+++	o
IRM 136 A	Hekatron 4)	o	o	o	o	+++	o	+++	o
IRM 146	Hekatron 4)	o	o	o	o	+++	o	+++	o
BR 910	Siemens	++	o	o	o	++	o	++	o
F 600	Siemens	++	o	o	o	++	o	++	o
F 6A Ex	Siemens	++	o	o	o	++	o	++	o
F 911 Ex	Siemens	++	o	o	o	++	o	+++	o
BR 800	Siemens	++ 3	o	o	o	++	o	+++	o
BR 716	Siemens	++ 3	o	o	o	++	o	+++	o

3.5. Flame Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
UFM 840	Hekatron	Special infrared test lamp by Siemens	Hold the switched on test lamp towards the detector's sensor openings. Alternative (not for ex-areas!): Hold a cigarette lighter with a large flame in front of the detector's sensor openings.
S 2406	Siemens	Alternative (not for ex-areas!): Cigarette lighter	
DF 1192			
S 2406 Ex		Special infrared test lamp by Siemens	Hold the switched on test lamp towards the detector's sensor openings.
DF 1001 A-Ex			

3.6. Linear Smoke Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
Fireray 1401	Fire Fighting Enterprises	Special test foil by the manufacturer	Cover the detector's receiver part with the test foil.
FRAY-5000-EN-50			
Fireray 2000			
FRAY5000-EN			

3.7. Aspirating Smoke Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
RAS 51	Securiton	Acid-free smoke rods(2.799.320.762) Retainer for smoke rods	Hold retainer with smoldering smoke rods in front of an aspiration hole.
RAS 54			
RAS 100 LSN-1			
RAS 100 LSN-2			
RAS-XL			
TITANUS: • PROSENS TP-1 • PROSENS TP-1 A • PROSENS TP-2 • PROSENS TP-2 A • TOPSENS TT-1 • TOPSENS TT-2	Wagner	Acid-free smoke rods (2.799.320.762) Retainer for smoke rods FAS-ASD-DIAG Diagnostic software (optional) Test pipe (4.998.148.848): Recommended in case of air flow trouble in the pipe system. Test adapter (4.998.148.849): Installation is recommended in fixed pipe systems.	Hold retainer with smoldering smoke rods in front of an aspiration hole.

3.8. Linear Heat Detectors

Type number	Manu- facturer	Required test equipment	Testing notes
Alarmline LHD4	Kidde	Test coil from device manufacturer, alternatively via test keys on the device	Clip on test coil and immerse in hot water. Alternatively, use the test keys TEST FAULT and TEST ALARM.
FCS-LWM-1			
Transafe ADW 511	Securiton	Test coil from device manufacturer	Connect test coil and immerse in hot water.
Transafe ADW 53 A			
ADW 511A			

3.9. Heat Measurement Detector

Type number	Manu-facturer	Required test equipment	Testing notes
Heat Measurement Detector	Fenwall	Hot water, adjustable hot air blower	Heat up heat measuring stick using hot water or hot air.

Bosch Sicherheitssysteme GmbH

Robert-Bosch-Ring 5

85630 Grasbrunn

Germany

www.boschsecurity.com

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