SIEMENS

Sinteso™ S-LINE

Automatic fire detectors

FDOOT241-9, FDOOT241-A, FDO241, FDT241

For the automatically addressed detector bus FDnet

- The ideal fire detector for every application
- Line separators for uninterrupted alarm function (FDOOT241-A, FDO241 and FDT241)
- Signal processing with **ASA***technology*™ (Advanced Signal Analysis)
- Event-controlled detection behavior
- Early and reliable detection when fires occur
- Highly developed immunity to deceptive phenomena
- FDOOT suitable for wind speeds of 1…20 m/s
- Prepared for future requirements thanks to its programmability
- Supports disturbance-free function testing with **DFT***technology*™ (Disturbance-Free Test) as well as scan and test of external alarm indicator (FDOOT241-A, FDO241)

Properties

Features

- Resistant to environmental and interfering influences such as dust, fibers, insects, moisture, extreme temperatures, electromagnetic interference, corrosive vapors, vibration, artificial aerosols, and atypical fire phenomena
- Shock resistant, theft protection as an accessory
- Time and process-dependent detection behavior
- Proven immunity to faults in power electronics
- Protected electronics, high-quality components
- Sophisticated sensors and electronic monitoring
- Internal alarm indicator (IAI), 360° visibility, alignment not necessary
- Integrated line separator
- Supports automatic detector test with **DFT***technology*™ (FDOOT241-A, FDO241, VdS 3860 certified)
- Supports scan for external alarm indicators (FDOOT241-A, FDO241)
- Supports external alarm indicator test (FDOOT241-A, FDO241)
- 'One-man' testing, commissioning, diagnostics, and maintenance
- Exchange the detector without resetting the parameters
- Exchange the detector without a ladder at heights up to 8 m

Ecological benefits

- Environmentally friendly processing
- Reusable materials
- Electronic parts and synthetic materials can be easily separated
- Environmentally friendly detector-testing without gas

Use

Multi-sensor fire detector FDOOT241-9

- Point detector with additional heat sensors
- Optional detector dust cap to protect the point detector during the construction phase

Function

- Functions according to the scattered light principle with two sensors: Optical forward and backward scattering
- Opto-electronic measuring chamber: Obstructs disruptive extraneous light but can be relied upon to detect both light and dark smoke particles
- Two additional heat sensors increase the fire detector's immunity to deceptive phenomena.
- Can be set as a multi-sensor smoke detector, smoke detector, or heat detector by the software
- Selectable detection behavior thanks to application-specific ASA parameter sets
- Multi-protocol: Collective / GMT (Cerberus / Siemens) / SynoLINE300, FDnet

Use

- For early detection of flaming fires of solid and liquid substances as well as of smoldering fires
- For early and reliable fire detection in an environment with deceptive phenomena
- Can be used addressed, for the gradual modernization of: Collective/GMT/ SynoLINE300 on Sinteso FDnet [1]

[1] FS20 compatibility in FDnet is assured subject to in-country FS20-software support.

Multi-sensor fire detector FDOOT241-A

- Point detector with additional heat sensors
- Optional detector dust cap to protect the point detector during the construction phase

Function

- Functions according to the scattered light principle with two sensors: Optical forward and backward scattering
- Opto-electronic measuring chamber: Obstructs disruptive extraneous light but can be relied upon to detect both light and dark smoke particles
- Two additional heat sensors increase the fire detector's immunity to deceptive phenomena.
- Can be set as a multi-sensor smoke detector, smoke detector, or heat detector by the software
- Selectable detection behavior thanks to application-specific ASA parameter sets

Use

- For early detection of flaming fires of solid and liquid substances as well as of smoldering fires
- For early and reliable fire detection in an environment with deceptive phenomena
- Can be used addressed

Smoke detector FDO241

- Optional detector dust cap to protect the point detector during the construction phase

Function

- Functions according to the scattered light principle with one sensor: Optical forward scattering
- Opto-electronic measuring chamber: Obstructs disruptive extraneous light but can be relied upon to detect both light and dark smoke particles
- Selectable detection behavior thanks to application-specific ASA parameter sets
- Integrated temperature sensor for room temperature measurement

Use

- For early detection of flaming fires as well as smoldering fires
- Can be used addressed

Heat detector FDT241

- Optional detector dust cap to protect the point detector during the construction phase

Function

- Two heat sensors prevent the total failure of the thermal detection capacity of in the event of a fault affecting a sensor.
- Measures the operating temperature and the temperature inside the detector housing so that temperature rise can be detected.
- Selectable detection behavior thanks to application-specific ASA parameter sets

Use

- For monitoring rooms in which rapid temperature rise is to be expected in the event of a fire or if optical detection is difficult
- Can be used addressed

Dummy detector FDX291

Use

- To cover bases that are left empty for prolonged periods of time

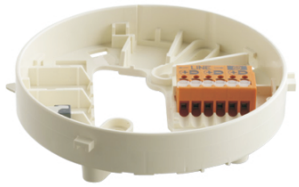
Type Overview

Type	Designation	Order no.	Weight [kg]
Point detector			
FDOOT241-9	Multi-sensor smoke detector	A5Q00004813	0.106
FDOOT241-A	Multi-sensor smoke detector	S54310-F21-A1	0.106
FDO241	Smoke detector	S54310-F19-A1	0.103
FDT241	Heat detector	A5Q00004812	0.086
Base adapter			
FDB241	Base adapter Sinteso (SIGMA/A+)	S54319-F13-A1	0.086
FDB251	Base adapter Sinteso (Interactive)	S54319-F28-A1	0.090
FDB281	Base adapter MS8/PMT	A5Q00004929	0.125
FDB299	Base adapter Sinteso (AlgoRex coll.)	S54319-F14-A1	0.086
Other accessories			
FDUD290	Removal tool for adapter	S54370-S13-A1	0.098
FDX291	Dummy detector	S54319-F2-A1	0.120
FDOOT241-9M	Migration kit	A5Q00015955	0.140

Accessories

You will find more information about detector bases and accessories in document 007775.

Addressable detector base FDB221 / FDB221-AA



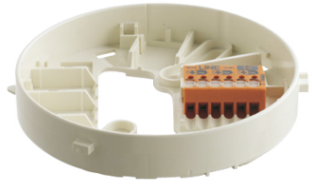
Function:

- Detector base with stilts for fire detectors with addressable signal processing
- 'Orange' connection terminals, 0.2…1.5 mm^2 conductor cross-section
- FDB221-AA also contains micro terminal DBZ1190-AA

Use:

- For recess-mounted cable entry
- For surface-mounted cable entry up to a cable diameter of 6 mm

Flat, addressable detector base FDB222



Function:

- Flat detector base for fire detectors with addressable signal processing
- 'Orange' connection terminals, 0.2…1.5 mm^2 conductor cross-section

Use:

- For flush mounting; only for recess-mounted cable entry

Base attachment FDB291

Function:

- For routing surface-mounted cables larger than Ø 6 mm
- Detector base is secured with a snap fastener

Base attachment humid FDB293

- For achieving a higher protection category
- For mounting in wet or humid environments
- Required when using detector heating unit FDBH291
- Required when using protective cage DBZ1194 or EMC-protective cage FDBZ294
- Mounted between detector base and ceiling
- Detector base mounted quickly: The detector base simply clicks into place in base attachment humid FDB293.

Base attachment wet FDB295

- Base attachment wet with additional integrated rubber seal for mounting in wet or humid environments
- For achieving a higher protection category
- For mounting in wet or humid environments
- Required when using detector heating unit FDBH291
- Required when using protective cage DBZ1194
- Mounted between detector base and ceiling
- Detector base mounted quickly: The detector base simply clicks into place in base attachment wet FDB295.

Sealing element FDBZ295

Function:

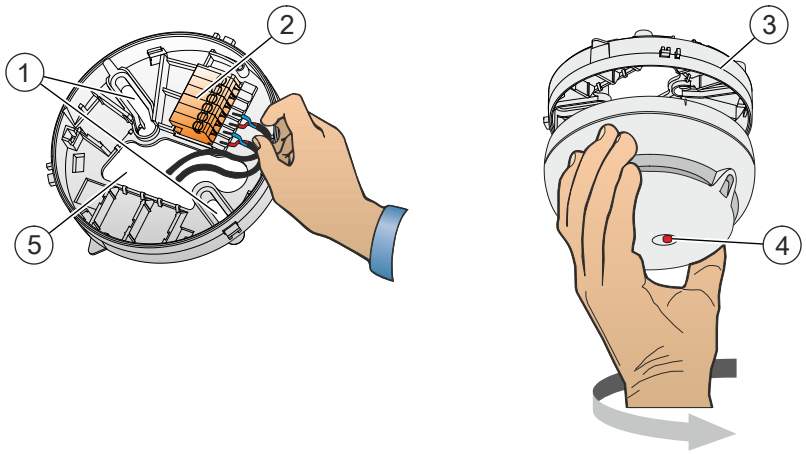
- For improving the protection category. However, detectors can no longer be installed or removed using the detector exchanger.

Note: Cannot be used in conjunction with designation plate FDBZ291!

Installation

Easy, time-saving, and completely reliable mounting

- Detector base FDB221 for surface-mounted and recess-mounted supply lines
- Detector base FDB222 for flush mounting, only for recess-mounted supply lines
- Extra-long mounting slits allow existing drill holes from other systems to be reused.
- A large opening in the detector base makes it easy to feed the cables through
- Screwless connection terminals (spring clip principle)
- Detector line can be connected without any tools. The wire can be inserted easily by hand.
- The detector can be mounted in the base easily by hand or using a detector exchanger
- The alarm indicator (AI) is centered in the detector, which means there is no need to align the detector



1 Mounting slit
2 Screwless connection terminals
3 Detector base
4 Alarm indicator
5 Opening for cable entry

You will find more information in document 007775.

Disposal

The device is considered an electronic device for disposal in accordance with European Directive and may not be disposed of as domestic waste.

- Use only designated channels for disposing the devices.
- Comply with all local and currently applicable laws and regulations.
- Dispose of empty batteries at designated collection points.

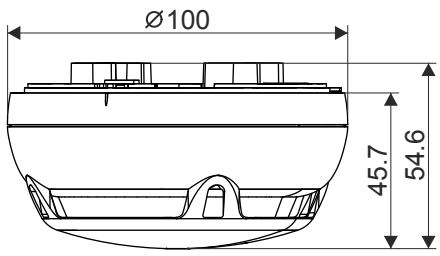
Technical data

		FDOOT241-9	FDOOT241-A	FDO241	FDT241
Operating voltage (modulated)		DC 12…33 V			
Operating current (quiescent)		65…230 µA		180…230 µA	130…200 µA
External alarm indicators (EAI) which can be connected	Without sounder base	2			
	With sounder base	1			
Communication protocol		FD20or collective	FDnet		
System compatibility		FS20[1], AlgoRex, SIGMASYS	FS20[1], SIGMASYS AlgoRex: Product version <67	FS20[1], SIGMASYS AlgoRex: Product version <66	FS20[1], AlgoRex, SIGMASYS
		CZ10, CS11, BC10, FC10, XC10, FC330A, FC700A, BMS, SM80/88D100	–		
Operating temperature		-25…+70°C	-35…+70 °C	-25…+70 °C	-25…+50 C / -25…+65 °C / Depending on parameter settings
Storage temperature		-30…+75 °C	-35…+75 °C	-30…+75 °C	
Air humidity (short-term moisture condensation permitted)		≤95 % rel.			
Color		~RAL 9010 pure white			
Protection category (IEC 60529)	With detector base FDB221/-AA, FDB222, FDB291	IP43			
	Base FDB221 and sealing element FDBZ295	IP44			
	Base attachment humid FDB293 or base attachment wet FDB295				
Standards		EN 54-5		–	EN 54-5
		EN 54-17			
		EN 54-7			–
		–	EN 54-27 EN 54-29	–	–

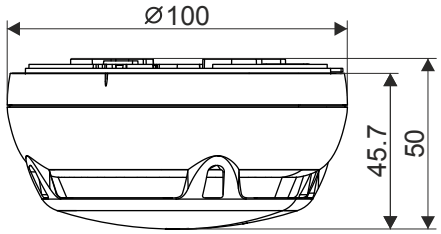
	FDOOT241-9	FDOOT241-A	FDO241	FDT241
Approvals:				
• VdS	G204007	G215052	G204017	G204019
• LPCB (except EN 54-27)	126bh/01	126bv/05	126bf/02	126bj/02
• FM	3029351	–	3029351	3046115
• DNV GL (marine)	–	–	MEDB00003UK	MEDB00003UR
Permissible wind speed	Max. 20 m/s	Max. 20 m/s	Max. 5 m/s	–

[1] FS20 compatibility in FDnet is assured subject to in-country FS20 software support.

Dimensional drawing



With base FDB221 for surface-mounted cable entry



With base FDB222 for flush mounting

Product documentation

Document ID	Title
007004	Technical manual Automatic fire detectors FDOOT221, FDOOT241-A3, FDOOT241-A4, FDOOT241-A5, FDOOT241-8, FDOOT241-9, FDOOT241-A9, FDO241, FDO221, FDT241, FDT221
007775	Data Sheet Detector bases and accessories FDB22x, FDB20x, FDB241, FDB251, FDB281, FDB299
008164	Equipment overview Sinteso™ Detector system FD20
008331	List of compatibility (for 'Sinteso™' product line)
009409	Data sheet Colored detectors, bases and base attachment FDO.., FDOOT…, FDT…, FDB…, FDCW241

Related documents such as the environmental declarations, CE declarations, etc., can be downloaded from the following Internet address:

www.siemens.com/bt/download

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