SIEMENS

Sinteso™ S-LINE

Multi-sensor fire detector

FDOOTC241



Multi-sensor fire detector with ASAtechnology™ to evaluate the three criteria smoke, heat, and CO

- Signal processing with **ASA***technology* (Advanced Signal Analysis)
- Event-controlled detection behavior
- Quick response to all fires that generate carbon monoxide (CO)
- Early and reliable detection when fires occur
- High immunity in environments with deceptive phenomena
- Suitable for wind speeds of 1…20 m/s
- Separate detection of toxic CO
- Prepared for future requirements thanks to its configurability
- Communication via FDnet

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
- Signal processing with **ASA***technology*
- Time and process-dependent detection behavior
- High degree of immunity to faults in power electronics
- Protected electronics, high-quality components
- Sophisticated sensors and electronic monitoring
- Redundant, high-quality sensor system
- Internal alarm indicator (IAI), 360° visibility
- Integrated line separator

Ecological benefits

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

Use

Alongside its fire detection functionality, the FDOOTC241 also has a CO detection functionality.

Multi-sensor fire detector, neural ASA (S-LINE), FDOOTC241	
	**Fire detection function:** ● Functions according to the scattered light principle with two sensors, optical forward and backward scattering ● Opto-electronic measuring chamber which obstructs disruptive extraneous light but provides excellent detection of both light and dark smoke particles ● Two additional heat sensors and an additional CO sensor increase the fire detector's response behavior and immunity to deceptive phenomena ● Selectable detection behavior thanks to application-specific ASA parameter sets **CO detection function:** ● Functions using an electro-chemical CO cell ● CO concentration alarm is transmitted to an independent technical CO alarm channel ('Technical alarm CO') ● Independent processing of the CO signal for the CO alarm channel and CO signal for fire detection ● Selectable detection behavior of the CO alarm channel, regardless of ASA parameter sets for fire detection **Use:** ● Areas with increased CO exposure, e.g., heating rooms, combustion plants, fermentation plants, garages, automotive workshops, animal stalls, chemical laboratories, or production sites ● For early detection of smoldering fires that generate carbon monoxide (CO) (e.g., mattress fires in homes) ● For early and reliable fire detection in an environment with deceptive phenomena ● Can be used addressed

Type Overview

Type	Designation	Order number	Weight [kg]
FDOOTC241	Multi-sensor fire detector, neural ASA (S-LINE)	S54311-F1-A1	0.107
Accessories			
FDB221	Detector base, addressable	A5Q00001664	0.026
FDB221-AA	Detector base, addressable incl. 1 micro terminal DBZ1190-AA	A5Q00012741	0.029
FDB222	Addressable detector base, flat	S54319-F1-A1	0.025

Product documentation

Document ID	Title
008164	Equipment overview Sinteso™ Detector system FD20
008331	List of compatibility (for 'Sinteso™' product line)
A6V10209291	Technical manual Neural fire detector FDOOTC241
007775	Data Sheet Detector bases and accessories FDB22x, FDB20x, FDB241, FDB251, FDB281, FDB299

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

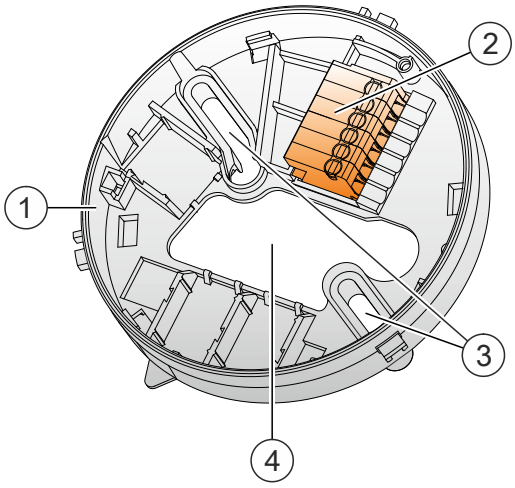
https://siemens.com/bt/download

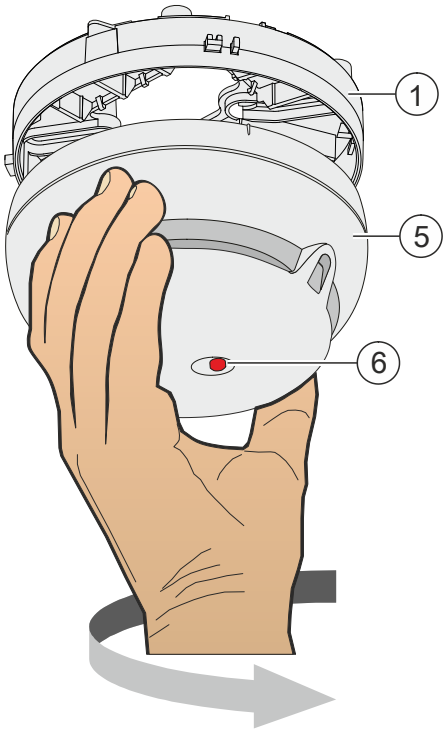
Notes

Mounting

Mounting options

- Easy, time-saving, and completely reliable mounting
- Base with stilts FDB221, FDB221-AA for surface-mounted and recess-mounted cable entries
- Base without slits FDB222 for flush mounting. For recess-mounted cable entry only
- 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.
- The detector line can be connected without any tools: The wire can be inserted easily by hand through screwless connection terminals (spring clip principle).
- The detector can be screwed into the base easily either manually or using a detector exchanger.
- The alarm indicator (AI) is centered in the detector, which means there is no need to align the detector



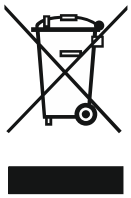


1	Detector base	4	Opening for cable entry
2	Screwless connection terminals	5	Point detector FDOOTC241
3	Mounting slits	6	Internal alarm indicator (AI)

Efficiency on-site

- '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

Disposal



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

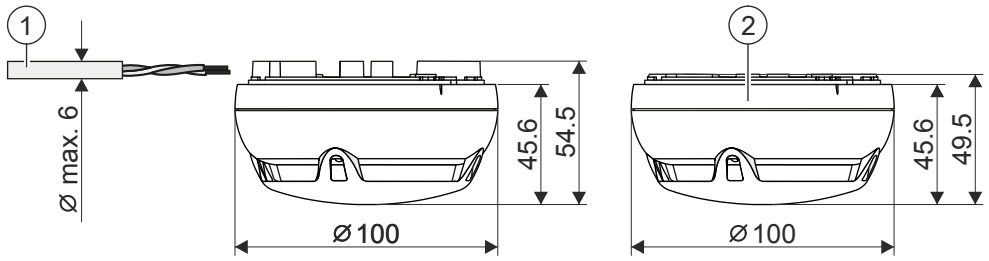
- Use only designated channels for disposing the devices.
- Comply with all local and currently applicable laws and regulations.

Technical data

	FDOOTC241
Operating voltage (modulated)	DC 12…33 V
Operating current (quiescent)	Typ. 320...400 µA
External alarm indicator without sounder base External alarm indicator with sounder base	2 1
Operating temperature	-20...+50 °C
Storage temperature	-20…+55 °C
Air humidity (short-term moisture condensation permitted)	15...95 % rel.
Communication protocol	FDnet
Color	~RAL 9010 pure white
Protection category (IEC 60529): ● Base FDB221/FDB222 ● Base attachment FDB291 with base FDB221/FDB222 ● Base attachment wet FDB295 with base FDB221/FDB222 and FDOOTC241 ● Sounder base FDSB29x	 IP43 IP43 IP44 IP43
Standards	EN 54-5, EN 54-7, EN 54-17, EN 54-29 Fulfills the requirements according to EN 54-31
Approvals ● VdS ● LPCB ● FM	 G209040 126bv/06 3040250
Permissible wind speed	Max. 20 m/s
System compatibility	FS20

Dimensional drawings

1	FDOOTC241 with base FDB221, FDB221-AA for surface-mounted and recess-mounted cable entries	2	FDOOTC241 with base FDB222 for flush mounting. For recess-mounted cable entry only



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