



## FDOOT241-A9-Ex

Sinteso™  
Collective

### Multisensor fire detector

*ASAtechnology™*  
For potentially explosive areas



- Signal processing with *ASAtechnology*
- Multiple protocol detector (collective/FDnet-Ex)
- Event-controlled detection behavior
- Early and reliable detection when fires occur
- Highly developed immunity to deceptive phenomena
- Redundant sensor system
- Suitable for wind speeds of 1 to 20 m/s
- Prepared for future requirements thanks to its programmability
- Communication via FDnet-Ex (addressed individually)
- Address automatically issued during commissioning

## Properties

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- **Eco-friendly**

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

- **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, protection against sabotage
- Signal processing with **ASA**technology (Advanced Signal Analysis)
- 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
- Integrated alarm indicator (AI), 360° visibility

## FDOOT241-A9-Ex neural fire detector, ASA

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- **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 increase the fire detector's immunity to deceptive phenomena
- Can be set as a multisensor 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, and FDnet-Ex

- **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 either addressed or collectively

## Efficiency on-site

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- Exchange the detector with detector exchanger FDUD291 without resetting the parameters
- Exchange the detector with detector exchanger FDUD291 without a ladder at heights up to 8 m

## Installation

- **Easy, time-saving, and completely reliable mounting**

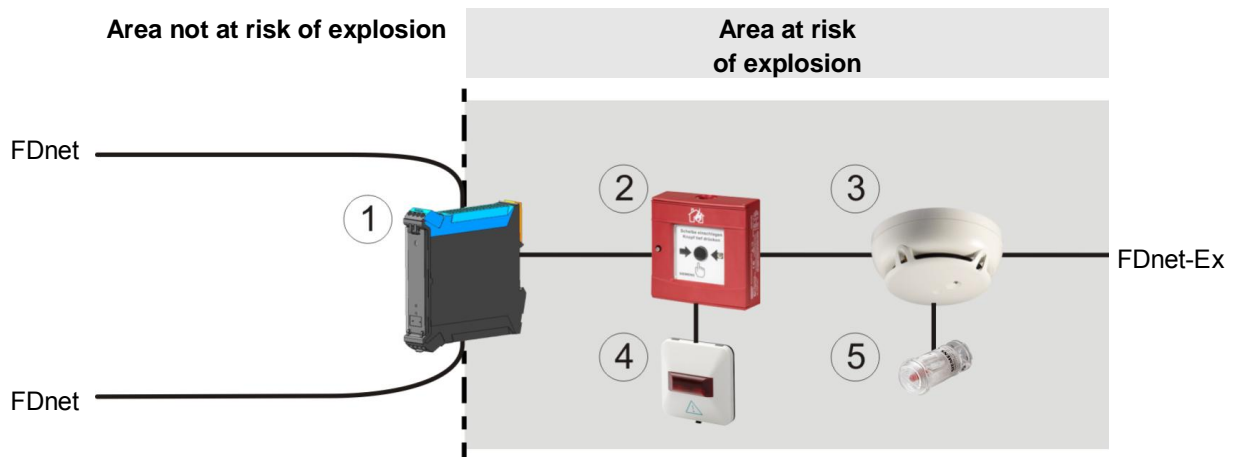
- Base with stilts for surface-mounted and recess-mounted supply lines
- Flat base for flush mounting, only for recess-mounted supply lines
- Extra-long mounting slits allow existing drill holes from other systems to be reused
- A large opening in the detector base makes it easy to feed the cables through
- The detector can be screwed into the base easily either manually or using a detector exchanger
- The FDOOT241-A9-Ex fire detector is designed in ignition protection category 'intrinsic safety' Ex i Standards IEC 60079-0 and IEC 60079-11 provide a basis

## Installation in potentially explosive areas

Specific national requirements always apply when creating installations in areas at risk of explosion.

### Addressed operation (FDnet/FDnet-Ex)

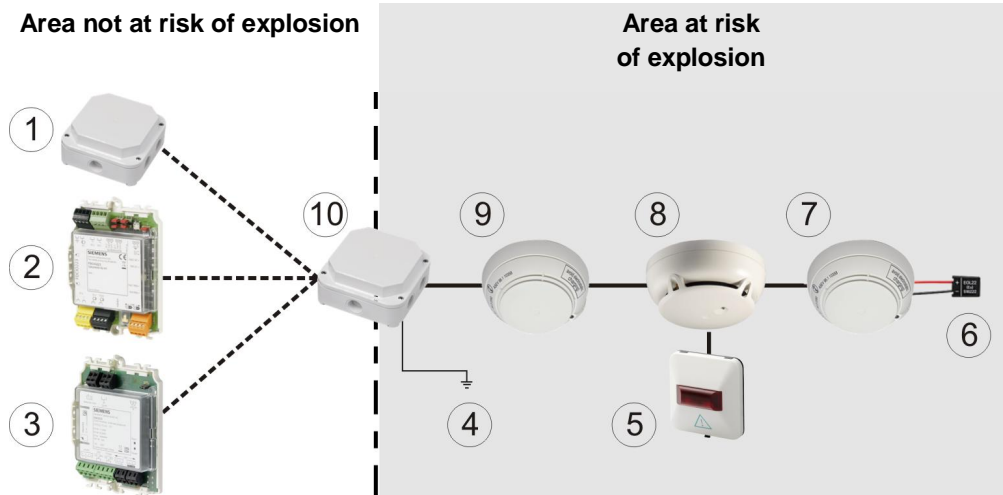
The line adapter (Ex) FDCL221-Ex ensures electrical isolation of the potentially explosive areas and the areas not at risk.



- 1 FDCL221-Ex line adapter (Ex)
- 2 Manual call point FDM223-Ex
- 3 Multisensor fire detector FDOOT241-A9-Ex Alarm
- 4 indicator FDAI92-Ex
- 5 Alarm indicator FDAI93-Ex

### Collective Ex installation

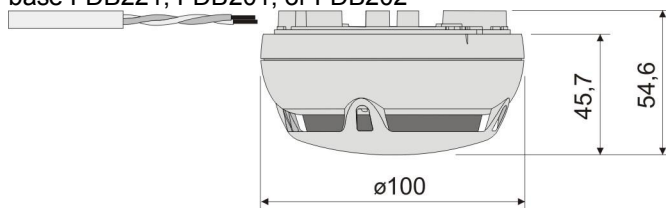
The input/output module DC1192/FDCIO223 with downstream safety barrier SB3 ensures electrical isolation of the potentially explosive areas and areas not at risk.



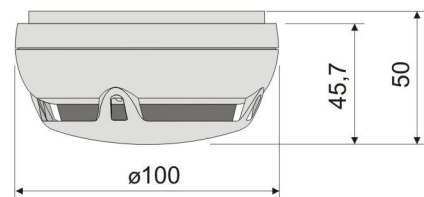
- 1 Input/output module DC1192
- 2 Transponder FDCIO223
- 3 Zone module FDCI223
- 4 Equipotential bonding ground
- 5 Alarm indicator FDAI92-Ex / FDAI93-Ex
- 6 End-of-line EOL22(Ex) in the last detector
- 7 Heat detector DT1101A/02A-Ex
- 8 Multisensor fire detector FDOOT241-A9-Ex
- 9 Smoke detector DO1101A-Ex
- 10 Safety barrier SB3

### Dimensions of the FDOOT241-A9-Ex

up to Ø6 mm possible for surface-mounted cable entry with base FDB221, FDB201, or FDB202




with base FDB222 for flush mounting, only for recess-mounted cable entry



## Technical data

Dimensions (Ø x H)	100 x 45.7 mm															
Operating temperature	-25...+70 °C															
Storage temperature	-30...+75 °C															
Air humidity	≤95 % rel. (short-term moisture condensation permitted)															
Communication protocol	FDnet-Ex or collective Ex															
Color	~RAL 9010, pure white															
Protection category according to EN 60529	IP43 IP44 with sealing kit FDBZ295															
Collective system compatibility	CS11, FC10, XC10, and SIGMASYS															
FDnet system compatibility	FS20, AlgoRex, SIGMASYS															
Characteristics	<table> <tr> <td>U<sub>i</sub></td> <td>≤</td> <td>28 V</td> </tr> <tr> <td>I<sub>i</sub></td> <td>≤</td> <td>100 mA</td> </tr> <tr> <td>P<sub>i</sub></td> <td>≤</td> <td>700 mW</td> </tr> <tr> <td>L<sub>i</sub></td> <td></td> <td>negligible</td> </tr> <tr> <td>C<sub>i</sub></td> <td>&lt;</td> <td>0.2 nF</td> </tr> </table>	U <sub>i</sub>	≤	28 V	I <sub>i</sub>	≤	100 mA	P <sub>i</sub>	≤	700 mW	L <sub>i</sub>		negligible	C <sub>i</sub>	<	0.2 nF
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C <sub>i</sub>	<	0.2 nF														
Operating current (quiescent)	200...280 µA															
Ext. Alarm indicator (AI)	<table> <tr> <td>U<sub>o</sub></td> <td>≤</td> <td>14.2 V</td> </tr> <tr> <td>I<sub>o</sub></td> <td>≤</td> <td>480 mA</td> </tr> <tr> <td>P<sub>o</sub></td> <td>≤</td> <td>195 mW</td> </tr> <tr> <td>L<sub>o</sub></td> <td>&lt;</td> <td>100 µH</td> </tr> <tr> <td>C<sub>o</sub></td> <td>&lt;</td> <td>38 nF</td> </tr> </table> <p>Only for connecting passive, external alarm indicators to negligibly small inductivities and capacities</p>	U <sub>o</sub>	≤	14.2 V	I <sub>o</sub>	≤	480 mA	P <sub>o</sub>	≤	195 mW	L <sub>o</sub>	<	100 µH	C <sub>o</sub>	<	38 nF
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Ex classification																
IECEx scheme	Ex ia IIC T4 Ga, Ta = -35 °C...+70 °C															
94/9/EC (ATEX Directive)	II 1 G Ex ia IIC T4 Ga, Ta = -35 °C...+70 °C															
Ex approvals																
– EC-type examination certificate	BVS 12 ATEX E 087 X															
– IECEx	BVS 12.0076 X															
EN 54 approvals																
– VdS	G213106															
DNV GL (Marine)	45 246 - 16 HH															

14  0786 0102	<b>FDOOT241-A9-Ex</b>	Siemens Switzerland Ltd; Gubelstrasse 22 CH-6301 Zug Technical data: see doc. <b>A6V10346580</b>
	FDOOT241-A9-Ex - Smoke/heat detector for use in fire detection and fire alarm systems installed in buildings.	
305/2011/EU (CPR): EN 54-5 / EN54-7 ; 2014/30/EU (EMC): EN 50130-4 / EN 61000-6-3 ; 2011/65/EU (RoHS): EN 50581 ; 2014/34/EU (ATEX): EN 60079-0 / EN 60079-11 / EN 60079-26		
The declared performance and conformity can be seen in the Declaration of Performance (DoP) and the EU Declaration of Conformity (DoC), which is obtainable via the Customer Support Center: Tel. +49 89 9221-8000 or <a href="http://siemens.com/bt/download">http://siemens.com/bt/download</a>		
DoP No.: 0786-CPR-21321; DoC No.: CED-FDOOT241-A9-Ex		

## Details for ordering

	Type	Art. no.	Designation	Weight
Accessories	FDOOT241-A9-Ex	S54329-F7-A1	Multisensor fire detector	0.106 kg
	FDBZ295	S54319-F10-A1	Sealing kit	0.062 kg

You will find additional information in the following documents:

- Equipment overview, doc no. 008164
- For system compatibility, see list of compatibility, doc no. 008331
- Fire alarm signal in areas at risk of explosion, doc no. 001204
- Planning, mounting/installation, commissioning, maintenance/servicing of fire detection installations FS20 and FS720 in potentially explosive areas, doc no. A6V10324618
- Safety barrier SB3 mounting instructions; doc no. 1227
- Line adapter (Ex) FDCL221-Ex, doc no. A6V10349349
- FDOOT241-A9-Ex technical manual, doc no. A6V10346580

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