



## DT1151A-Ex / DOT1151A-Ex

AlgoRex

### Automatic fire detectors



Interactive, for explosion-hazard areas of zones 1 and 2

- **Detection algorithms for specific applications stored in the detector processor**
- **Built-in diagnosis algorithms with automatic self-test**
- **Unrivalled immunity to deceptive alarms and ambient influences**
- **High resistance to**
  - electromagnetic interference
  - humidity and corrosion
- **Environmentally safe material**
  - halogen-free plastic material identifiable through embossed code
  - easy to uninstall and disassemble
- **Comprehensive final examination and quality control**

## Heat detector DT1151A-Ex

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- Reliable heat detector for demanding requirements
  - Selectable, standardized response categories - Parameterization from the control unit
  - Response behavior immune to deceptive phenomena with rapid and slow increases in temperature
  - Intelligently designed differential characteristics
  - Maximum temperature alarm activation with quality thermo sensor
  - Monitored sensors
- **Function**
- The detector measures the ambient temperature with one NTC thermistor and the detector housing temperature with another NTC thermistor. In this way the detector can rapidly and differentially evaluate an increase in temperature independent of the starting temperature.
  - Four different standard response categories (Parameters) can be set via the control unit.
  - Four stages of danger enable the activation of different measures as well as early warning in the event of incorrect application.
  - Periodically or upon command the detector carries out a thorough self-test.
- **Application**
- For the monitoring of rooms and installations where in the event of fire, a rapid increase in temperature can be expected, or other types of detector cannot be used due to operational reasons.

## Smoke detector DOT1151A-Ex, interactive-neural Ex

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- Total response to all types of fire thanks to multi-criteria sensors
  - Dynamic analysis of the sensor signals Smoke and Heat
  - Fuzzy logic and neural network in the detector
  - Choice of response behavior - Parameterization from the control unit
  - Outstanding operating reliability through data processing in the detector and distributed system intelligence
  - High-quality Opto and thermo electrical sensor systems
  - Automatic compensation for soiling
- **Function**
- Special computing procedures in the detector processor (Algorithms) enable evaluation according to application criteria by optimizing smoke sensitivity, immunity to interference and operational reliability. In addition the false alarm rate at constant detector sensitivity is considerably reduced.
  - Compensation of measured values enables the detector to maintain a practically uniform level of sensitivity throughout its entire operating life.
  - Multi-criteria evaluation on the basis of a neuronal network and fuzzy logic provides information on the nature of the fire and eliminates deceptive phenomena.
  - Four stages of danger enable the activation of different measures as well as early warning in the event of incorrect application.
  - Periodically or upon command the detector carries out a thorough self-test.
- **Application**
- For the early warning of flaming fires involving solid particles and liquids as well as smoldering fires.

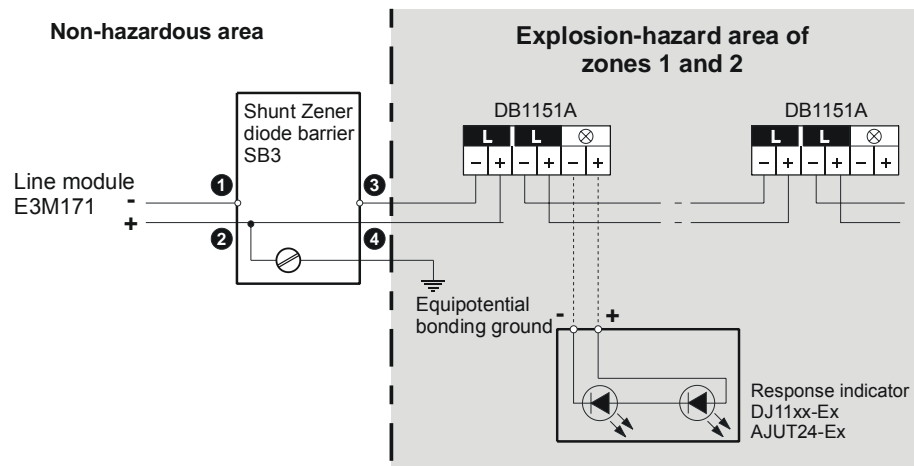
## Design

- Mounting with detector base DB1151A
- Range of base accessories for installation even in critical locations
- Connection to the control unit via a two-wire line
- Vibration-proof mounting of detector in the base
- Anti-theft device if required
- One external alarm indicator can be connected
- DOT1151A-Ex and DT1151A-Ex fire detectors are designed to the explosion protection category 'Intrinsic safety' EEx i. The standards which cover this are EN 50014 (IEC 60079-0) and EN 50020 (IEC 60079-11).

## Installation in explosion-hazard areas

Equipment installed in explosion-hazard areas must always comply with local national regulations.

The SB3 shunt Zener diode barrier is used as an interface between explosion-hazard and non-hazardous areas.



Further details can be found in the document:

- Fire protection in explosion-hazard areas no. 1204

## Maintenance

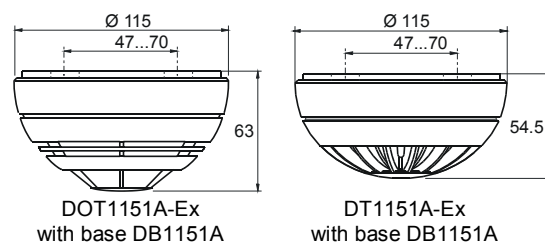
### DOT1151A-Ex / DT1151A-Ex

- Detectors can be inserted and removed from their bases with a detector exchanger up to a height of 7 m.

### DOT1151A-Ex


- By means of a periodic factory overhaul (cleaning and re-calibration), smoke detectors are given a new lease of life.


## Dimensions



## Technical data

	DT1151A-Ex	DOT1151A-Ex
Operating temperature	-25...+50 °C -25...+70 °C (depending on parameter set)	-25...+70 °C
Storage temperature	-30... +75 °C	-30... +75 °C
Humidity	≤95 % rel.	≤95 % rel.
Protection category IEC 60529	IP44	IP44
Color	white, ~RAL 9010	white, ~RAL 9010
Standards		
– for fire detectors	EN 54-5: A1R, B	EN 54-7
– for explosion-hazard areas	EN 60079-0 EN 60079-11	EN 60079-0 EN 60079-11
Ex classification	II 2 G Ex ib IIC T4 (-25 °C ≤Ta ≤70 °C)	II 2 G Ex ib IIC T4 (-25 °C ≤Ta ≤70 °C)
Approvals	PTB 02 ATEX 2099	PTB 02 ATEX 2098
Connection factor IMK	1	1
Compatibility	Compatible with interactive fire detection system S11 Operation with stub lines only Max. 32 detectors with IMK1 per E3M171	
QS standards	Fire protection industry certified quality assurance system according to EN ISO 9001:2000	

05  0786	<b>DOT1151A-Ex</b>	Siemens Switzerland Ltd; Theilerstrasse 1a CH-6300 Zug Technical data: see doc. <b>d1901</b>
DOT1151A-Ex - Point type smoke detector for use in fire detection and fire alarm systems installed in buildings.		
305/2011/EU (CPR): EN 54-7 ; 2014/30/EU (EMC): EN 50130-4 / EN 61000-6-3 ; 2014/34/EU (ATEX): EN 60079-0 / EM 60079-11		
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="https://siemens.com/bt/download">https://siemens.com/bt/download</a>		
DoP No.: 0786-CPR-20155; DoC No.: CED-DOT1151A-Ex		

05  0786	<b>DT1151A-Ex</b>	Siemens Schweiz AG; Theilerstrasse 1a CH-6300 Zug Technical data: see doc. <b>001900</b>
DT1151A-Ex - Point type heat detector for use in fire detection and fire alarm systems installed in buildings.		
305/2011/EU (CPR): EN 54-5 ; 2014/30/EU (EMC): EN 50130-4 / EN 61000-6-3 ; 2014/34/EEC (ATEX): EN 60079-0 / EM 60079-11		
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="https://siemens.com/bt/download">https://siemens.com/bt/download</a>		
DoP No.: 0786-CPR-20157; DoC No.: CED-DT1151A-Ex		

## Details for ordering

Type	Part no	Designation	Weight
DOT1151A-Ex	BPZ:5317310001	Smoke detector	0.205 kg
DT1151A-Ex	BPZ:5349160001	Heat detector	0.160 kg

For base and accessories see document 001035

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