



## DF1151-Ex

AlgoRex

## Infrared flame detector



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

- **For inside and outside applications**
- **Triple-sensor evaluation**
  - Detection in various wavelengths
  - Microprocessor-controlled signal evaluation
- **Selective evaluation of flicker frequency**
- **Selectable application algorithms**
- **Excellent immunity to false alarms thanks to a combination of patented fuzzy logic and Wavelet analysis**
- **Highest resistance to**
  - electromagnetic influence
  - sunlight and heat radiation
  - humidity and corrosion
- **Wide operating temperature range**
- **Connectable to interactive fire detection systems**

## Characteristics

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- **Environmental**

- ecologically processing
- recyclable materials
- electronic and synthetic material simple separable

- **Characteristics**

- the detector housing made of aluminum also serves as a screen against electromagnetic interference (EMB)
- the base housing consists of a robust, glass-fiber reinforced synthetic material
- protected electronics
- built-in alarm indicator (AI)
- interactive signal processing

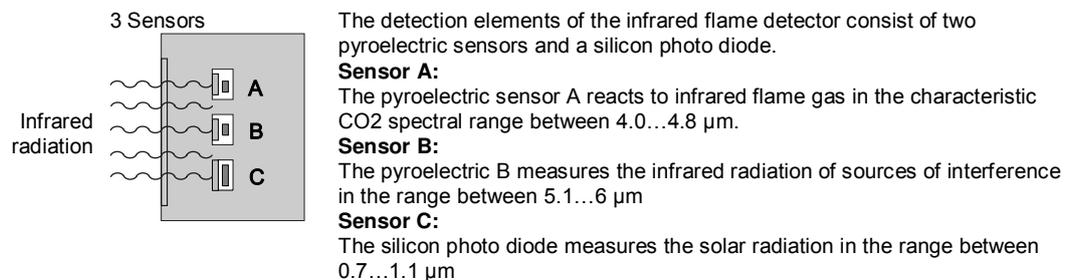
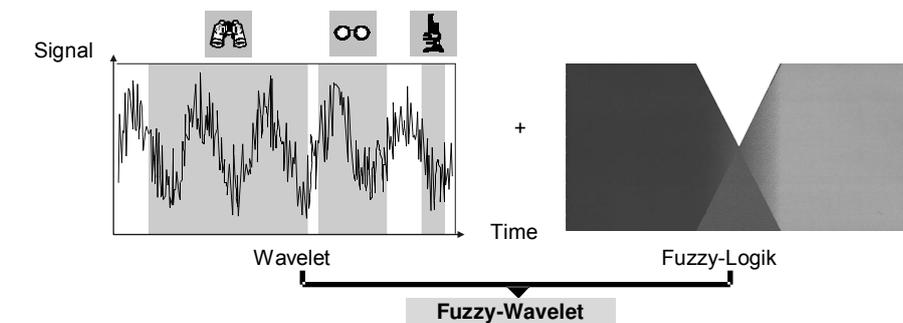
- **Explosion protection category**

- The infrared flame detector DF1151-Ex is designed to the explosion protection category 'Intrinsic safety' EEx i. The standards which cover this are EN50014 (IEC60079-0) und EN50020 (IEC60079-11)

## Function

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- Patented signal evaluation



- One sensor measures the hot carbon dioxide in a specific flame wavelength; the two other sensors simultaneously measure the interference radiation in other wavelengths.
- With intelligent signal processing through fuzzy algorithms and wavelet analysis, the DF1151-Ex achieves excellent detection reliability while maintaining the highest immunity to interference radiation and sunlight.
- In order to safeguard against a possible decision emergency, the detector contains an additional emergency activation channel.

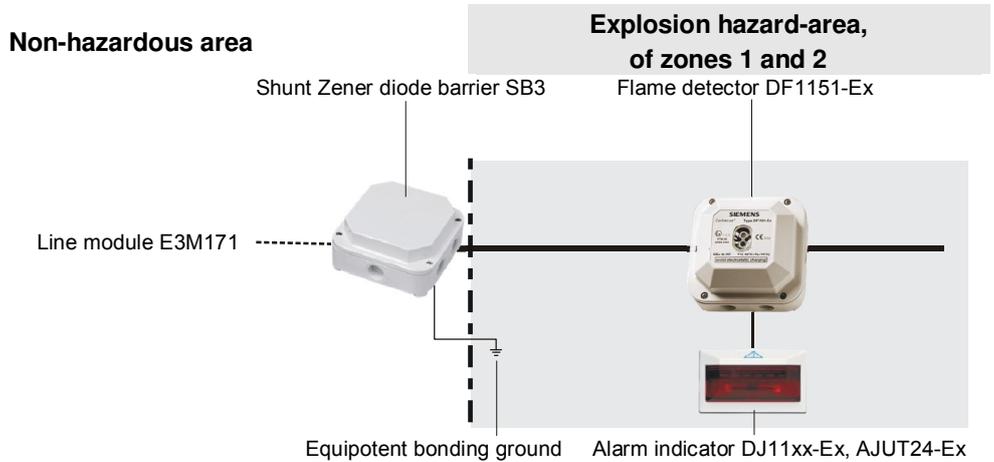
- **Application**

- Chemicals production plants, chemicals stores
- Oil refineries
- petrol storage and pump stations
- Natural gas transfer points
- Propane and butane filling installations
- All explosion-hazard areas in which flaming fires involving carbonaceous materials are to be expected

## Installation in explosion-hazard areas

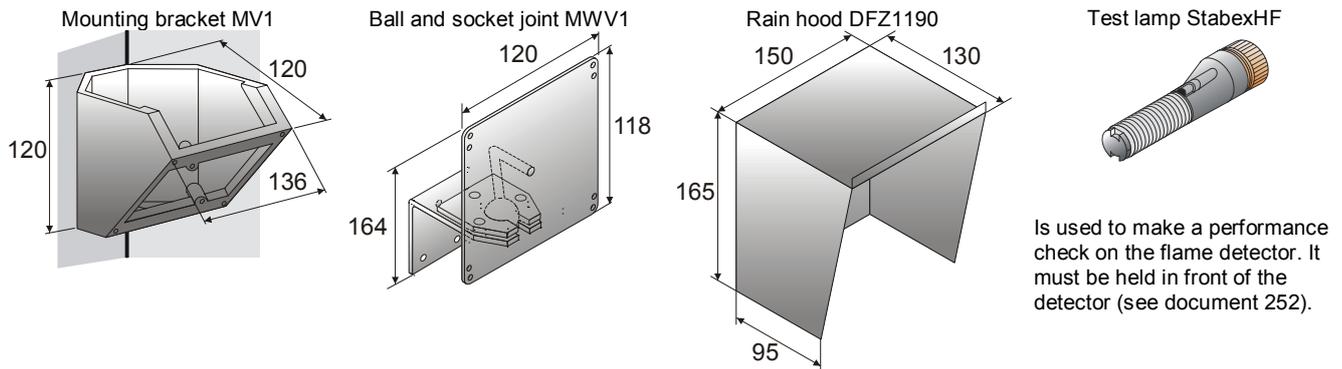
Equipment installed in explosion-hazard areas must always comply with local national regulations.

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

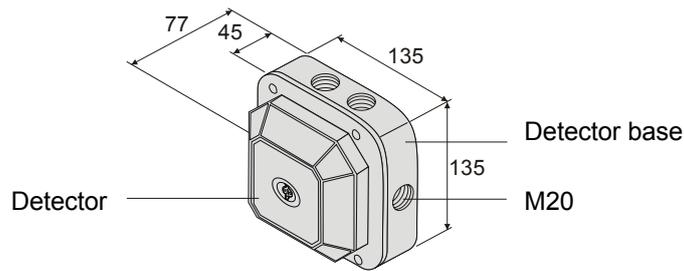
## Accessories



## Design

- easy installation of the housing on stable, vibration-free surfaces; the detector is only inserted after installation check, shortly before commissioning
- 6 threads M20 for screwed cable glands
- connection via two-wire installation with the control unit
- ext. alarm indicator connectable
- pluggable connection between flame detector and base
- mounting bracket MV1 for room surveillance to fix the detector at the right inclination angle
- ball and socket joint MWV1 for the orientation to an object
- rain hood DFZ1190 for outside applications

## Dimensions



## Technical data

Alarm indicator (AI) ext. connectable and programmable	2
Operating temperature	-35...+70 °C
Storage temperature	-40...+75 °C
Humidity	≤95 % rel. (no heavy condensation of window)
Connection factor IMK	3
Connection terminals	0.2...2.5 mm <sup>2</sup>
Color	white, ~RAL 9010
Protection category EN 60529 / IEC 60529	IP67
Standards	
– for flame detector	EN 54-10, EN 54-17
– for explosion-hazard area	EN 50014 (IEC 60079-0), EN 50020 (IEC 60079-11)
Ex classification	II 2 G EEx ib IIC T4 (-35 °C ≤Ta ≤70 °C)
Approvals	PTB 02 ATEX 2159
Compatibility	Compatible with interactive fire detection system S11 Operation with stub lines only Max. 32 detectors with IMK1 per E3M171

08  0786	<b>DF1151-Ex</b>	Siemens Schweiz AG; Theilerstrasse 1a CH-6300 Zug Technical data: see doc. <b>001673</b>
DF1151-Ex - Flame detector incl. short-circuit isolator for use in fire detection and fire alarm systems installed in buildings.		
305/2011/EU (CPR): EN 54-10 / EN 54-17 ; 2014/30/EU (EMC): EN 50130-4 / EN 61000-6-3 ; 2014/34/EU (ATEX): EN 60079-0 / EN 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-20496; DoC No.: CED-DF1151-Ex		

## Details for ordering

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Type	Part no	Designation	Weight
DF1151-Ex	BPZ:5357820001	Infrared flame detector	0.500 kg
FDB1190	BPZ:5165360001	Base	0.250 kg
–	A5Q00004478	Screwed cable gland M20 x 1.5	0.039 kg
MV1	BPZ:3950450001	Mounting bracket	0.285 kg
MWV1	BPZ:3674840001	Ball and socket joint	0.860 kg
DFZ1190	BPZ:5302660001	Rain hood	0.640 kg
Stabex HF	BPZ:4620910001	Test lamp	0.250 kg

## Disposal

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

- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

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