



DF1101-Ex

AlgoRex
Synova™

Infrared flame detector



Collective/SynoLINE600, for explosion-hazard areas of zone 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**
- **Connection to the detection line via the DC1192 input/output module**
 - for galvanic isolation in collective/SynoLINE600 fire detection systems
 - for galvanic isolation and connection to the interactive or AnalogPLUS/SynoLOOP fire detection system

Characteristics

- **Environmental**

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

- **Characteristics**

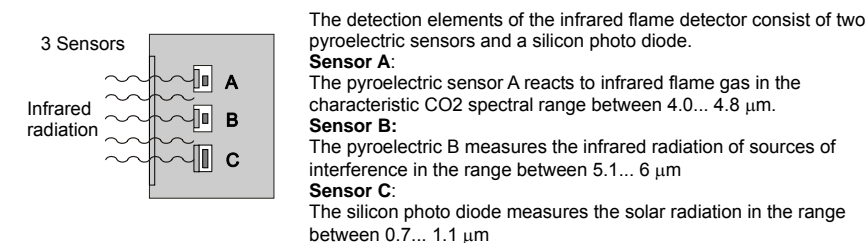
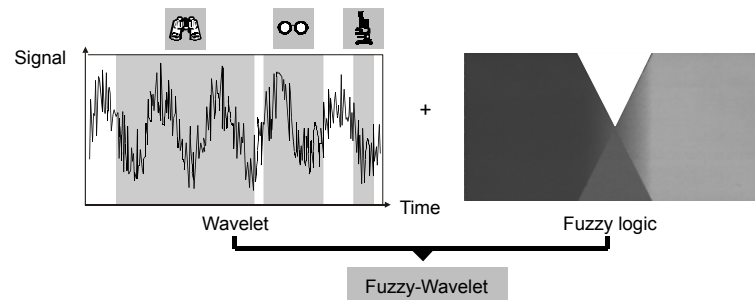
- the detector housing made of aluminum also serves as a screen against electromagnetic interference (EMB)
- the base housing consists of a robust, glass-fiber reinforced synthetic material
- protected electronics
- built-in alarm indicator (AI)
- collective signal processing

- **Explosion protection category**

- The infrared flame detector DF1101-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

- 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 DF1101-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.

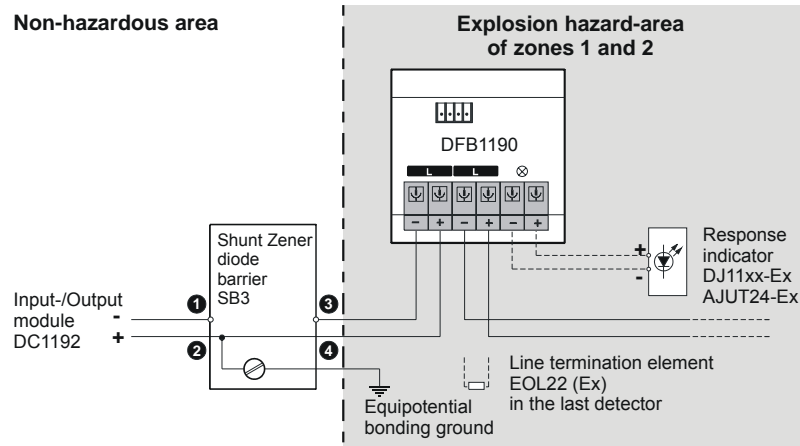
- **Application**

- 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.

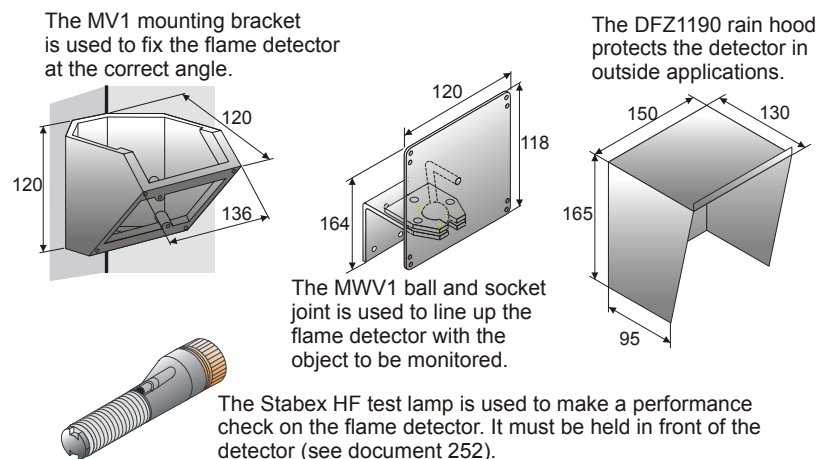
The DC1192 input/output module and the series-connected SB3 shunt Zener diode barrier are used as a galvanic isolation between explosion-hazard and non-hazardous areas.



Further details can be found in the documents

- 'Fire protection in explosion-hazard areas', document no. 1204
- 'Input/output module DC1192', document no. 001571

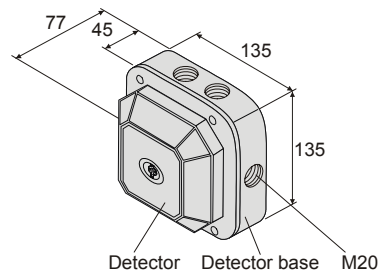
Accessories



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

Operating voltage	16... 28 VDC
Operating current (quiescent)	0.5 mA
Alarm indicator (AI) ext. connectable and programmable	2
Operating temperature	-35... +70 °C
Storage temperature	-40... +75 °C
Humidity (no heavy condensation of window)	≤95 % rel.
Connection factor KMK	6
Connection terminals	0.2... 2.5 mm ²
Color	white, RAL 9010
Protection category EN60329 / IEC529	IP67
Standards	
– for flame detector	EN54-10
– for explosion-hazard areas	EN50014 (IEC60079-0), EN50020 (IEC60079-11)
Ex classification	II 2 G EEx ib IIC T4 (-35 °C ≤Ta ≤70 °C)
Approvals	VdS Nr. G299085, PTB 02 ATEX 2161, LPCB 126s/03
Compatibility	By using the DC1192 it is compatible with fire detection system control units with collective/SynoLINE600, interactive or Analog-PLUS/SynoLOOP signal evaluation.

Details for ordering

Type	Part no	Designation	Weight
DF1101-Ex	5166750001	Infrared flame detector	0.500 kg
DFB1190	5165360001	Base	0.250 kg
–	A5Q00004478	Screwed cable gland M20 x 1,5	0.039 kg
MV1	3950450001	Mounting bracket	0.285 kg
MWV1	3674840001	Ball and socket joint	0.860 kg
DFZ1190	5302660001	Rain hood	0.640 kg
Stabex HF	4620910001	Test lamp	0.250 kg

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