SIEMENS

FDF221-9, FDF241-9

Sinteso™

DA Infrared flame detectors
ASA Infrared flame detectors

addressable, **ASA***technology*™

- **DA FDF221-9 Flame detector for simple inside applications, detection with one infrared sensor und detection algorithms**
- **ASA FDF241-9 Flame detector for the most demanding application (inside and outside), detection with 3 infrared sensors and ASA*technology*™**
- **Excellent immunity to false alarms thanks to a combination of fuzzy logic and Wavelet analysis**
- **Event-controlled detection behavior**
- **Microprocessor-controlled signal evaluation**
- **Two-wire installation for all types of cable**
- **Communication via FDnet (individual addressing), or collective signal processing**

Building Technologies

Fire Safety & Security Products

Characteristics

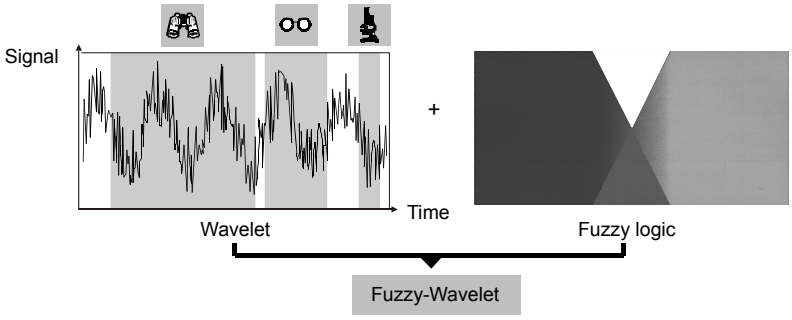
- **Environmental**
- ecologically processing
- recyclable materials
- electronic and synthetic material simple separable
- **Characteristics**
- the detector housing made of aluminium also serves as a screen against electro-magnetic interference (EMB)
- the base housing consists of a robust, glass-fiber reinforced synthetic material
- protected electronics
- built-in response indicator (AI)
- integrated line separator
- addressable and collective signal processing

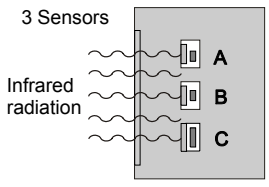
DA Infrared flame detector FDF221-9

- **Function**
- 1 infrared sensor with detection algorithms
- **Application**
- for simple applications, additional to smoke detectors
- Detection of smokeless combustible liquid and gas fires, as well as smoke-forming open fire involving carbonaceous materials as contained in wood, plastics, gases, oil products etc.
- only used without source of interference as sun, halogen light, blackbody radiation

ASA Infrared flame detector FDF241-9

- **Function**
- 3 infrared sensors with **ASA***technology*™





The detection elements of the infrared flame detector consist of two pyroelectric sensors and a silicon photo diode.
Sensor A:
The pyroelectric sensor A reacts to infrared flame gas in the characteristic CO2 spectral range between 4.0... 4.8 μm.
Sensor B:
The pyroelectric B measures the infrared radiation of sources of interference in the range between 5.1... 6 μm
Sensor C:
The silicon photo diode measures the solar radiation in the range between 0.7... 1.1 μm

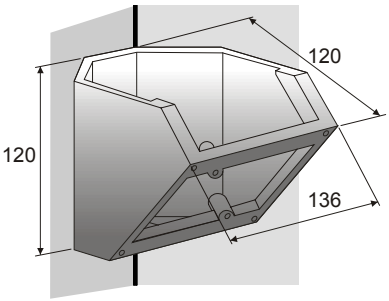
- One sensor measures the hot carbon dioxide in a specific flame wavelength; the two other sensors simultaneously measure the interference radiation in other wavelengths.
- With intelligent signal processing through fuzzy algorithms and wavelet analysis, the FDF241-9 achieves excellent detection reliability 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.

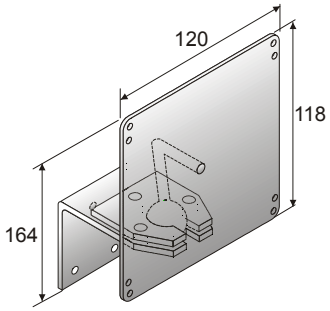
- **Application**

– Detects smokeless liquid and gas fires as well as smoke-generating open fires resulting from the combustion of carbonaceous materials such as wood, synthetics, gases, oil products, etc.
– large industrial warehouses
– hangars for military and civil aircraft
– chemicals production plants
– chemicals stores
– petrol storage and pump stations
– arc welding workshops
– ferries and cargo boats
– ships' engine rooms
– power plants
– transformer stations
– printing works
– motor test beds
– malls
– wood stores
– underground tunnels

Accessories

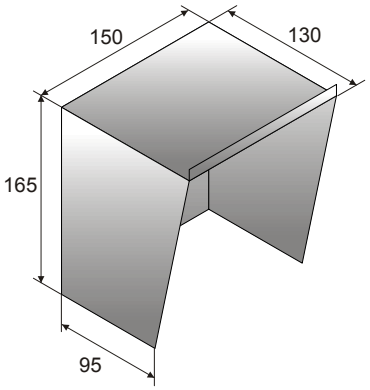
The MV1 mounting bracket is used to fix the flame detector at the correct angle.

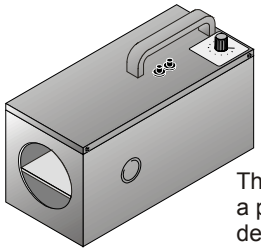




The MWV1 ball and socket joint is used to line up the flame detector with the object to be monitored.

The DFZ1190 rain hood protects the detector in outside applications.



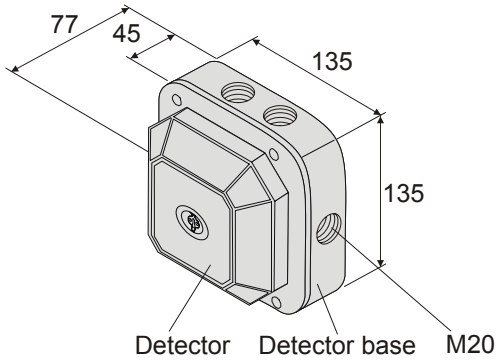


The LE3 test lamp is used to make a performance check on the flame detector at a distance of up to 10m

Installation

– 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. response 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

	FDF221-9	FDF241-9
Operating voltage (addressable) (quiescent)	12... 33 VDC	12... 33 VDC
Operating current (addressable) (quiescent)	0.7 mA	0.7 mA
Operating voltage (collective) (quiescent)	14... 28 VDC	14... 28 VDC
Operating current (collective) (quiescent)	0.5 mA	0.5 mA
Response indicator (AI) ext. connectable and programmable	2	2
Operating temperature	–25... +70 °C	–35... +70 °C
Storage temperature	–40... +75 °C	–40... +75 °C
Humidity	≤ 100 % rel. no heavy condensation of window	≤ 100 % rel. no heavy condensation of window
Communication protocol	FDnet or collective	FDnet or collective
Connection terminals	0.2... 1.5 mm^2	0.2... 1.5 mm^2
Color	pure white (RAL9010)	pure white (RAL9010)
Protection category EN60329 / IEC529	IP44	IP67
Standards	EN54-10	EN54-10
Approvals - VdS	G204009	G204010
QS standards	Siemens Standard SN 36350	
System compatibility FDnet	AlgoRex, SIGMASYS	
System compatibility collective	CS11, CZ10	

Details for ordering

Type	Part no	Designation	Weight
FDF221-9	A5Q00003902	Flame detector (1 Sensor)	0.500 kg
FDF241-9	A5Q00003006	Flame detector (2 Sensors / 1 Photo diode)	0.500 kg
FDFB291	A5Q00003310	Detector base	0.250 kg
–	A5Q00004478	Metal screwed cable gland M20	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

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