SIEMENS

Sinteso™ Cerberus™ PRO Cerberus™ FIT

FDF241-9

Flame detector

Flame detector addressed or collective, ASA*technology*™

- Reliable detection using three infrared sensors and **ASA***technology* (indoor and outdoor application)
- Excellent false alarm immunity thanks to fuzzy logic and wavelet analysis
- Event-controlled detection behavior
- Microprocessor-controlled signal processing
- Two-wire installation for all cable types
- Communication via FDnet/C-NET (individually addressed) or collective detector line (switchover)

Properties

Features

- Integrated line separator: The defective part on the detector line is located by the fire control panel and isolated between two FDnet/C-NET devices.
- The aluminum detector housing also acts as shielding against electromagnetic interference.
- The housing is made from hard-wearing, glass-fiber-reinforced plastic.
- Protected electronics
- Built-in alarm indicator
- Addressed and collective signal processing

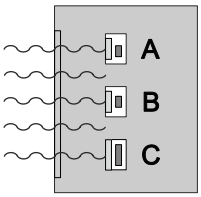
Eco-friendly

- Environmentally friendly processing
- Reusable materials
- Electronic parts and synthetic materials can be easily separated

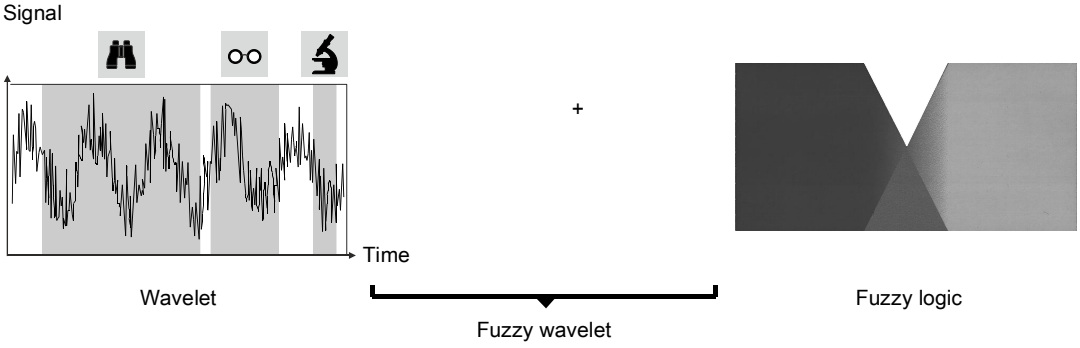
Functions

The flame detector measures infrared radiation and can therefore detect liquid and gas fires without smoke and organic material fires with smoke. It has three sensors with **ASA***technology* and can distinguish between deceptive phenomena and real fires.

- Pyroelectric sensor A measures the infrared radiation in the characteristic CO_2 spectral range between 4.0 and 4.8 µm.
- Pyroelectric sensor B measures the infrared radiation of deceptive phenomena, such as hot objects, in the range between 5.1 and 6.0 µm.
- Sensor C is a silicon photo diode and measures solar radiation in the range between 0.7 and 1.1 µm.



- A sensor measures the hot CO_2 at a specific wavelength of the flame; the other two sensors measure interference radiation at other wavelengths at the same time.
- With the intelligent signal processing using fuzzy algorithms and wavelet analysis, the flame detector achieves excellent detection reliability with maximum immunity to interference emitters and sunlight at the same time.
- In order to safeguard against a possible decision emergency, the flame detector contains an additional emergency activation channel.



Fields of application

The flame detector is suited to use in environments with deceptive phenomena, such as solar radiation or hot motors.

- Large industrial storage rooms
- Power plants
- Chemical production facilities
- Transformer stations
- Warehouses for chemicals
- Print shops
- Gas depots and pump stations
- Motor test beds
- Arc welding
- Atriums, malls
- Ferries and cargo ships
- Wood storage
- Machine rooms on ships
- Hangars for military and civil aircrafts
- Subway tunnels

Accessories

Mounting bracket MV1	
	• For room monitoring • For fixing flame detector at 45°

Ball and socket joint MWV1	
	• For fixing flame detector at the angle and in the direction required • For accurately aligning the flame detector to an area

Rain hood (plastic) FDFZ241	
	• Rain hood made of plastic (ABS) • For protecting the flame detector during outdoor applications

Rain hood DFZ1190	
	• Rain hood made of stainless steel • For protecting the flame detector during outdoor applications

Test lamp LE3	
	• For testing the function of all flame detectors at distances up to 10 m

Type Overview

Flame detector FDF241-9

Type	Designation	Order number	Weight [kg]
FDF241-9	Flame detector	A5Q00003006	0.500

Accessories for flame detector FDF241-9

Type	Designation	Order number	Weight [kg]
FDFB291	Base for flame detector	A5Q00003310	0.250
–	M20 x 1.5 metal cable gland	A5Q00004478	0.036
MV1	Mounting bracket	BPZ:3950450001	0.285
MWV1	Ball and socket joint	BPZ:3674840001	0.860
DFZ1190	Rain hood	BPZ:5302660001	0.640
FDFZ241	Rain hood (plastic)	S54330-N4-A1	0.232

Product documentation

Document ID	Name
008164	Equipment overview Sinteso™ Detector system FD20
A6V10225323	Equipment overview Cerberus™ PRO Detector system FD720
008331	List of compatibility (for 'Sinteso™' product line)
A6V10229261	List of compatibility (for 'Cerberus™ PRO' product line)
A6V10882301	List of compatibility (for 'FC360' product line)
007011	Technical manual Flame detector FDF241-9
008121	Installation Infrared flame detector FDF241-9
A6V10882455	Installation Rain hood FDFZ241

Related documents such as environmental declarations, CE declarations, etc., can be downloaded at the following Internet address:
http://siemens.com/bt/download

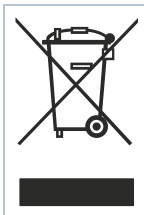
Notes

Mounting

Mounting options

- Easy mounting of the housing on stable, vibration-free surfaces. The flame detector is only used once installation has been checked just before commissioning.
- In the housing: 6x thread M20 for cable glands
- Connection to the control panel via a wire pair
- External alarm indicator can be connected
- Pluggable connection between flame detector and base

Disposal



The device is considered an electronics device for disposal in terms of European Directive 2012/19/EU 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.

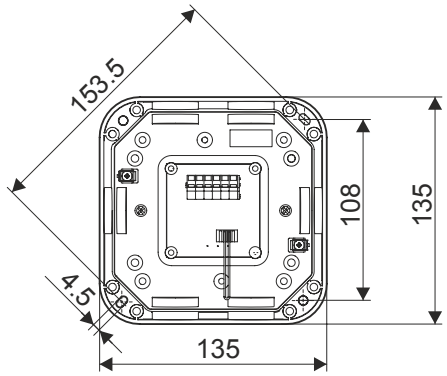
Technical data

Flame detector FDF241-9	
Operating voltage (quiet) addressed / collective	DC 12…33 V / DC 14…28 V
Operating current (quiet) addressed / collective	0.7 mA / 0.5 mA
External alarm indicator (AI) can be connected and configured externally	2
Operating temperature	-35…+70 °C
Storage temperature	-40…+75 °C
Air humidity (no moisture condensation)	≤95 % rel.
Communication protocol	FDnet/C-NET or collective (with and without current limitation)
Cable cross section	0.2…1.5 mm²
Color	~RAL 9010 pure white
Protection category (IEC 60529)	IP67
Standards	EN 54-10, EN 54-17
Approvals • VdS • LPCB • DNV GL (marine)	 G204010 126bc/05 45 248 – 16 HH
System compatibility • FDnet • C-NET	 FS20, AlgoRex, SIGMASYS FS720, FC360
Collective system compatibility	CZ10, BC10, FC10, XC10, CS11, FC700A, FC330A, SIGMASYS, BMS, SM80/88/D100

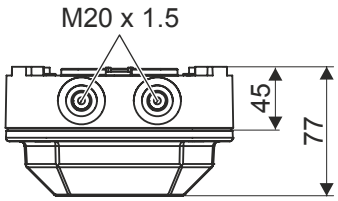
07 CE 0786	**FDF241-9**	Siemens Switzerland Ltd; Gubelstrasse 22 CH-6301 Zug Technical data: see doc. **007011**
FDF241-9 - Flame detector incl. short-circuit isolator for use in fire detection and fire alarm systems installed in buildings.		
305/2011/EU (CPR): EN 54-10 / EN 54-17 ; 2014/30/EU (EMC): EN 50130-4 / EN 61000-6-3		
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 http://siemens.com/bt/download		
DoP No.: 0786-CPR-20372; DoC No.: CED-FDF241-9		

Dimensional drawings

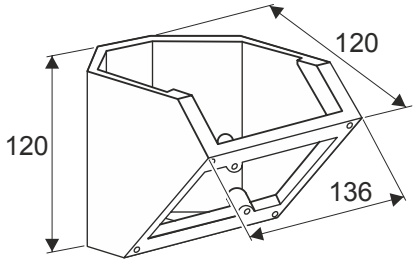
Base for flame detector FDFB291



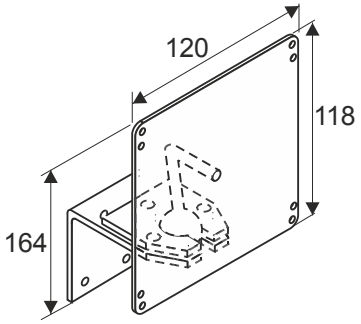
Base for flame detector FDFB291 with flame detector FDF241-9



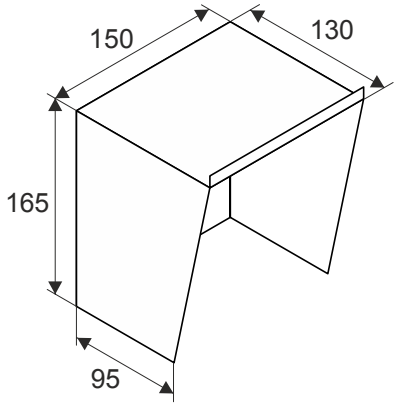
Mounting bracket MV1



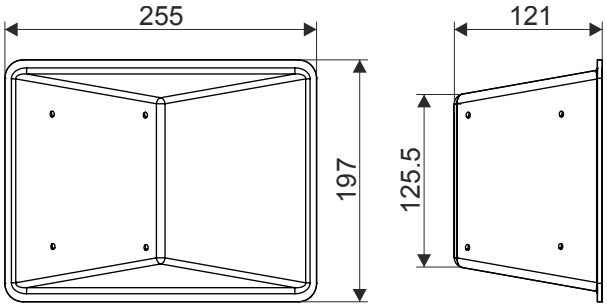
Ball and socket joint MWV1



Rain hood DFZ1190



Rain hood FDFZ241



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