



## FDL241-9

Sinteso™  
Cerberus™ PRO

## ASA Linear smoke detector



addressable or collective, conventional, *ASAtechnology*™

- **Reliable smoke detection in large-volume rooms (inside application)**
- **Detection distance from 5 – 100 Meter**
- **Signal processing with *ASAtechnology***
- **Works according to the principle of light attenuation by smoke**
- **Selectable response behavior, up to 3 sensitivity levels can be selected**
- **Event-controlled detection behavior**
- **Transmission of 4 different danger levels to control unit**
- **Microprocessor-controlled signal evaluation**
- **Automatic self-test**
- **Automatic compensation for soiling**
- **High immunity against extraneous light and electromagnetic influences**
- **Transmitter and receiver in one housing**
- **Distance measuring between transmitter and receiver**
- **Communication via FDnet/C-NET (individual addressing), or collective, conventional signal evaluation (change-over)**

## Characteristics

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- **Environmental**

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

- **Characteristics**

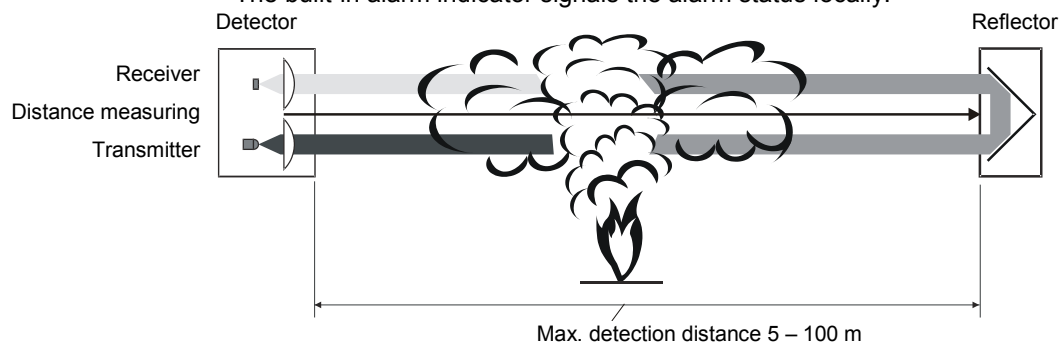
- the detector and base housing is made of a robust, glass fiber reinforced synthetic material
- protected electronic
- built-in alarm indicator
- self-test function
- integrated line separator
- detector heating in case of danger of moisture condensation
- 3 sensitivity levels and event-controlled detection behavior
- addressable signal processing
  - 4 danger levels facilitate the initiation of dedicated actions as well as early warning in case of erroneous application
  - 4 function states; in addition to the normal status, the detector signals Information, Interference or Fault, depending on the urgency of the cause
- collective, conventional signal processing
  - the detector signals alarm and fault states to the control unit

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- **Function**

- The detector consists of a light emitter and a light receiver. The light emitter emits a bundled infrared ray, which is scattered back by the prism-shaped reflector to the light emitter. The receiver converts the received infrared signal in an electric signal, which is evaluated by the microprocessor-controlled electronics.
- Smoke penetrating the measuring section attenuates the infrared signal. When the signal reaches predefined measuring values, the detector transmits the corresponding danger level to the control unit.
- distance measurement for the recognition of foreign matters
- The built-in alarm indicator signals the alarm status locally.



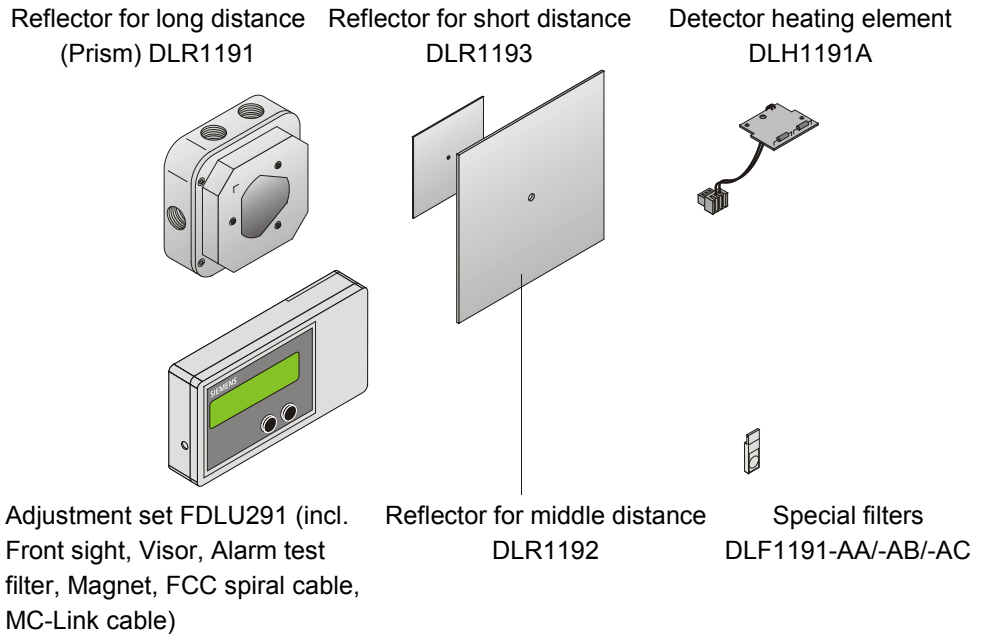
- **Environmental influences**

- digital signal follower circuit
  - Gradual changes in the infrared signal received owing to dust on the lens or the detector automatically compensates other environmental influences.
- multiple coincidence circuit
  - Suppresses electrical and optical interference signals. The DLF1191-AC filter is provided in the event of particularly strong incidence of extraneous light.
- prism-shaped reflectors
  - light rays arriving are reflected parallel
  - vibrations of the installation surface have no effect on the detector

● **Application**

- large store-rooms and production workshops
- areas with complex roof structures or historically valuable ceilings
- covered courtyards
- atrium-type buildings
- reception halls

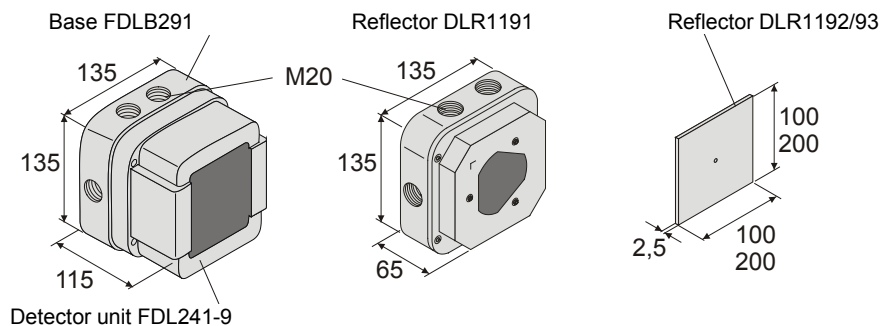
**Accessories**



**Installation**

- Easy mounting of the housing on stable surfaces; wood and steel constructions are rather unsuitable as temperature and humidity fluctuations, wind or snow pressure may exert an influence.
- 6 openings with M20 thread for cable glands
- ext. alarm indicator connectable
- Between the detector and the reflector there must be permanent, unhindered visual contact. Obscuration by operational dust, vapor or smoke generation may impair the system. Any objects in motion, e.g. overhead traveling cranes, ladders, portable items, cobwebs etc, must not interrupt the monitoring ray.
- The optics can be rationally adjusted to the reflector by single-handed alignment by means of the adjustment device FDLU291.
- For various distances, different reflectors are available.

**Dimensions**



## Technical data

Detector	Operating voltage addressable / collective	DC12...33 V / DC 14...28 V
	Operating current (quiescent) addressable / collective	0.8 mA / 0.7 mA
	Alarm indicator (AI) ext. connectable and programmable	2
	Detection distance	5...100 m
	Operating temperature	-25...+60 °C
	Storage temperature	-30...+75 °C
	Humidity	≤95 % rel.
	Communication protocol	FDnet/C-NET or collective (with and without current limitation)
	Connection terminals	0.2...1.5 mm <sup>2</sup>
	Color	white, ~RAL 9010
	Protection category EN 60529 / IEC 60529	IP65
	Standards	EN 54-12, EN 54-17, EN 62471
	Approvals	
	– VdS	G204063
	– LPCB	126bd/02
	QS standards	Siemens Standard SN 36350
	System compatibility	
	– FDnet	FS20, AlgoRex, SIGMASYS
	– C-NET	FS720
	System compatibility collective, conventional	CZ10, BC10, FC10, XC10, CS11, FC700A, FC330A, SIGMASYS, BMS, SM80/88/D100
Detector heating	Operating voltage	DC 20...30 V
	Operating current	30... 50 mA
	Resistor	600 Ω

07  0786

**FDL241-9**

Siemens Switzerland Ltd, Gubelstrasse 22  
CH-6301 Zug, Switzerland  
Technical data: see doc. **007016**

FDL241-9 - Linear optical smoke detector incl. short-circuit isolator for use in fire detection and fire alarm systems installed in buildings

305/2011/EU (CPR): EN 54-12 / EN 54-17 ; 2004/108/EC (EMC): EN 50130-4 / EN 61000-6-3 ;

Declared performance and conformity can be seen in the Declaration of Performance and the EC Declaration of Conformity, which is obtainable via the Customer Support center: Tel. +49 89 9221-8000 or <http://siemens.com/bt/download>

DoP No.: 0786-CPR-20014; DoC No.: CED-FDL241-9

## Details for ordering

Type	Part no	Designation	Weight
FDL241-9	A5Q00002298	Linear smoke detector	0.440 kg
FDLB291	A5Q00003941	Base	0.305 kg
–	A5Q00004478	Metal screwed cable gland M20 x 1.5	0.039 kg
DLF1191-AA	BPZ:4933030001	Filters for distances of 7...10 m	0.005 kg
DLF1191-AB	BPZ:4933160001	Filters for distances of 5...8 m	0.005 kg
DLF1191-AC	BPZ:5221480001	Filter against incidence of extraneous light	0.005 kg
DLH1191A	BPZ:4787970001	Detector heating element	0.010 kg
DLR1191	BPZ:4787710001	Reflector for long distance (Prism, 20-100 m)	0.510 kg
DLR1192	BPZ:4788490001	Reflector for middle dist. (400 cm <sup>2</sup> , 30-65 m)	0.075 kg
DLR1193	BPZ:4787840001	Reflector for short dist. (100 cm <sup>2</sup> , 10-30 m)	0.025 kg
FDLU291	A5Q00004905	Adjustment set incl. accessories (case)	0.840 kg
RE10	BPZ:3685190001	Detector tester for linear smoke detectors	0.345 kg
TF04	BPZ:4931090001	Alarm test filter (Absorption 77 %)	0.005 kg

Alarm test filter for RE10  
(is also included in Adjustment  
set FDLU291)

Details about system compatibility see List of compatibility 008331

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Manual FD20 / FD720  
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