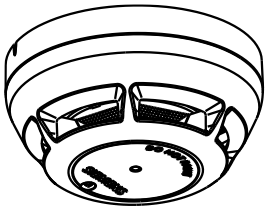
SIEMENS



FDO183S Smoke Detector
Product Manual

Overview

The FDO183S point-type photoelectric smoke detector utilizes an optical sensor and the principle of light scattering to enhance the capability of detecting smoke particles generated by fires. This significantly improves its sensitivity in detecting open flames or smoldering fires, thereby enabling early detection of fire incidents.

Features

- Comply with the national standard GB4715-2005 " Smoke detectors—Point detectors using scattered light, transmitted light or ionization "
- With a built-in CPU, the received signal is processed by intelligent algorithm for fire identification
- Two kinds of sensitivity settings (standard, sensitive)
- Using a brand-new design of opto-electronic sampling chamber structure, fire detection is more reliable and accurate
- Automatically address setting without encoder setting or DIP switch
- Especially applicable for early detection and alarm of smoldering fires or smoke-producing flames.
- Resistant to environment and interference factors such as dust, fiber, insects, humidity, extreme temperatures, electro-magnetic interference, corrosion, vibration, and atypical fire phenomena
- All-around visible alarm indicator
- Communicates via C-NET, polarity free connection

Function

- Works according to the backward scattered light principle with one sensor
- Opto-electronic sampling chamber holds off disturbing extraneous light but optimally detects smoke particles

– Automatic drift compensation. When the detector is contaminated badly and drift compensation cannot work, it will send a fault message to controller, and the alarm indicator will turn on.
– The sensitivity of the detector can be selected through parameter settings so that it can be specifically adjusted accordingly for the environmental conditions being monitored
– Unique ID of each detector. Controller can identify the detector type according to the ID and assign an address

Application

– Early detection of smoldering fires and smoke-generating flaming
– Dust cover protects the detector from being contaminated by construction work

Indicator

The detector is provided with an internal alarm indicator to show its operating status.

Status	Indicator
Normal	Off
Locate	Red light flashing every 1 s
Polling	Red light flashing every 10 s
Alarm	Red light steady on
Contamination	Yellow light steady on

Installation

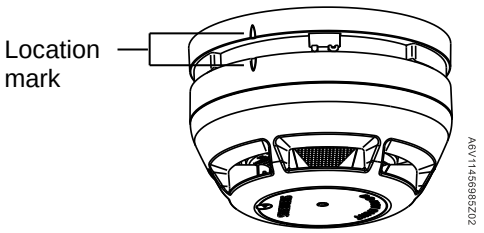


Figure 1
The indicator is visible all around.
No need to point to certain direction while installing.

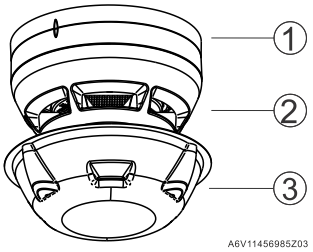


Figure 2
1 – Detector base
2 – Detector
3 – Dust cover

- **Easy, time-saving and high-quality mounting (Figure 1)**
  Install the detector base first, then insert the detector into the detector base, and turn the detector clockwise until the location marks on the detector and on the detector base align with each other.

  To uninstall the detector, turn the detector counterclockwise.

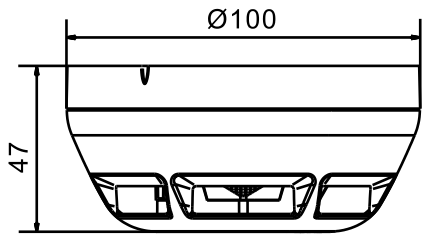
- **Dust cover (Figure 2)**
  Each detector has a dust cover, which prevents the detector from dust and contamination during construction.

After all the construction is finished, the dust cover must be taken away!

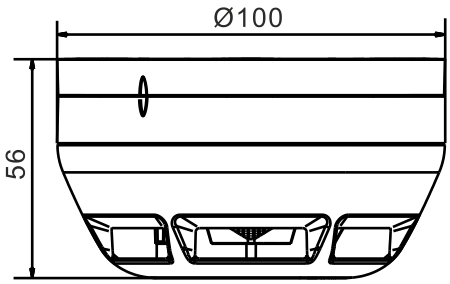
Dimensions

In: mm

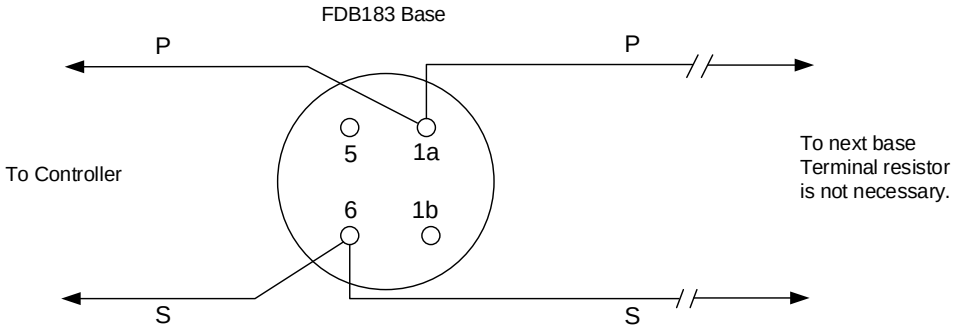
Without the base



With the base



Connection diagram



To ensure product safety performance and meet CCCF certification requirements, please do not modify this product!

Maintenance

Recommendation:

- Submit all detectors to an annual visual check. Detectors that are strongly soiled or mechanically damaged must be replaced.
- Any detectors should be replaced after 12 years of service, independent from the environmental conditions.
- Do not dispose of the product at will after the end of its life. Dispose of it in accordance with relevant national regulations such as the "Regulations on the Administration of Waste Electrical and Electronic Products Recycling and Disposal".
- Long term auxiliary detectors should be stored with sealed plastic bag.
- Carry out smoke test each year.

There is a risk of false alarm if seriously contaminated devices are not replaced in time.

Technical data

Operating voltage	DC 13 … 33 V
Quiescent current	0.25 mA
Activation current	1.4 mA
Sensitivity	Standard 7 %/m. Sensitive 4.2 %/m.
Operating temperature	–10…55 °C
Storage temperature	–20…70 °C
Humidity	⩽96% (40 ± 2 °C)
Communication protocol	C-NET
Color	White, RAL 9010
Protection category GB4208-2008	IP44

Details for ordering

Type	Material No.	Part No.	Designation	Weight
FDO183S	S54320-F20-A101	104886593	Smoke detector	0.083 kg
FDB183	S54320-F10-A4	104886592	Detector base	0.032 kg

Beijing Siemens Cerberus Electronics Ltd.
Smart Infrastructure
No.1, Fengzhidonglu, Xibeiwang,
HaiDian District, Beijing, 100094, China
+86 400 150 6060
www.siemens.com/buildingtechnologies

© Siemens 2024
Technical specifications and availability subject to change without notice.