



FDO181C Collective Smoke Detector Product Manual

Overview

The FDO181C is an optical smoke detector with an optical sensor. It works according to the principle of forward scattering. The detector reacts extremely sensitive on light aerosols caused by fire. The increased sensitivity makes the detection of smoldering and open fire possible.

Characteristics

- Intelligent detector with built-in CPU, providing advanced distributed intelligence for optimum reliable detection principle
- Opto-electronic sampling chamber detects fire more reliable and accurate
- Collective detector, no address setting, polarity free connection
- Particularly suited for the early detection of smoke-generating flaming and smoldering fires
- Resistant to environment and interference factors such as dust, fibers, insects, humidity, extreme temperatures, corrosive, vapors, vibration, synthetic aerosols. With immunity against electro-magnetic interference
- Self-test of operating status, when fault occurs or low voltage happens, indicator can prompt user
- Automatic drift compensation and dust prompt for reducing false alarm because of dust accumulation
- 360° visible alarm indicator
- Dust cap protects the detector from being contaminated by construction work

Application

- Communication with FC18 controller via FDCI183 transponder, each FDCI183 can connect max. 32 collective detectors.
- Communication with FC720 controller via FDCIO223-CN transponder, each FDCIO223-CN can connect max. 32 collective detectors.
- Communication with FS1120 controller via FDCIO223-CN transponder, each FDCIO223-CN can connect max. 32 collective detectors.
- Communication with BC80 controller via BDS161 transponder, each BDS161 can connect max. 10 collective detectors.

Indicator

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

| Status | Indicator |
|--------------------------|-----------------------|
| Normal | Off |
| Fault | Flash every 5s |
| Dust Prompt (Heavy dust) | Double flash every 5s |
| Alarm | Steady on |

Installation

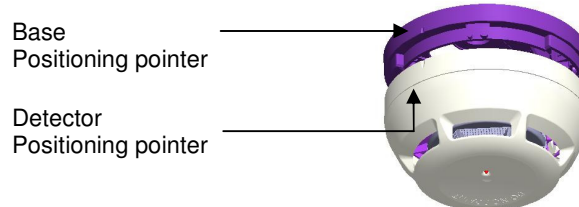
• Easy and time-saving mounting

Install the base and finish the wiring during the construction phase.

1. Insert detector into base and turn it clockwise until positioning pointer on base align with positioning pointer on detector. (see below)

Uninstallation:

1. Turn it counterclockwise and pull the detector out of base.

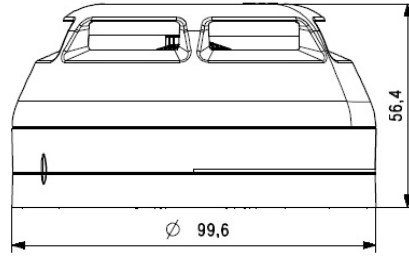


After all the construction is finished, the dust cap must be taken away!
No painting!

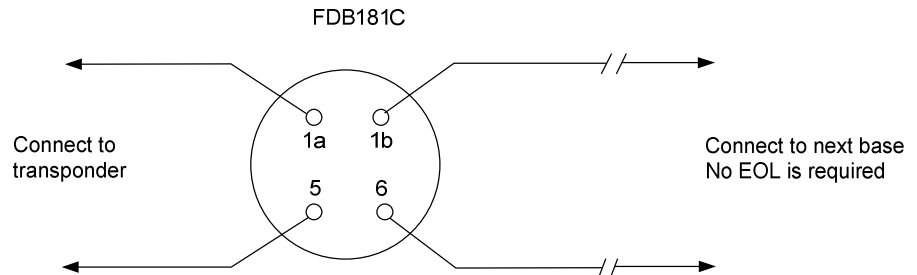
Dimensions

In : mm (with the base)

In : mm (with the base)



Connection diagram



Maintenance

● Performance test

Recommendation:

- Submit all detectors to an annual visual check. Detectors that are strongly soiled or mechanically damaged must be replaced.
- Long term backup detectors should be stored with sealed plastic bag.
- Carry out smoke test each year.

Technical data

| | |
|-------------------------------|----------------------------|
| Operating voltage | 10 ... 28 VDC |
| Operating current (quiescent) | 0.1 mA |
| Activation current | 60.0 mA |
| Sensitivity | Standard 2.4% _m |
| Operating temperature | -10 ... +50 °C |
| Storage temperature | -20 ... +70 °C |
| Humidity | ≤96% (40±2 °C) |
| Color | White, RAL 9010 |
| Protection category GB4208-93 | IP40 |

Details for ordering

| Type | Material No. | Part No. | Designation | Weight |
|---------|---------------|-----------|---------------------------|---------|
| FDO181C | S54320-F11-A2 | 101190982 | Collective smoke detector | 0.081Kg |
| FDB181C | S54320-F9-A2 | 101190980 | Collective detector base | 0.038Kg |
| | A5Q00022000 | 100566010 | FDO181 dust cap | |

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