

SFP-CSD-001

Conventional Smoke Detector



Our Conventional Optical (Photoelectric) Smoke Detector model SFP-CSD-001 is third party certified to the European Standard EN54-7:2018 for Smoke Detectors in Fire Alarm Systems and has undergone rigorous, independent laboratory testing to guarantee its reliability, quality & resistance to false alarms.

In order to gain the EN54-7:2018 approval, our Optical Smoke Detectors model SFP-CSD-001 have successfully passed the following tests:

- **Strict Fire Sensitivity tests:** These tests are undertaken in specialized fire tunnels against multiple fire types (e.g., smoldering wood, flaming plastics, and liquid fires) to ensure it triggers at precise smoke densities.
- **False Alarm Resistance tests:** These are tests for air velocity, ambient light, and electromagnetic compatibility so it doesn't trigger accidentally from drafts or electronic interference.
- **Durability & Design tests:** These are strict material and mechanical tests to withstand vibrations, impacts, and temperature fluctuations.

Key Features of Conventional Optical Smoke Detector model SFP-CSD-001

- **Dual Emitter with 2 wave lengths** using multiple light paths to capture scattered light from different directions. Improves the accuracy of the smoke detection.
- **Split-spectrum sensing technology** with a complex design that filters out ambient light to reduce false alarms from environmental dust and other contaminant particles making our smoke detector more reliable and less prone to false alarms.
- **Designed to detect the larger smoke particles** typically produced in the early, smoldering stages of a fire (e.g., from burning cables, upholstery, or paper). Because our Optical Smoke Detectors are less sensitive to small, fast-burning particles or steam, they reduce nuisance alarms and prevent costly business disruptions and false evacuations caused by cooking steam, small aerosol particles, dust, or humidity.
- Our detectors feature **drift compensation** to automatically adjust sensitivity as the unit ages or becomes dirty. The detector's sensitivity is automatically re-calibrated as dust and other contaminants accumulate in its optical chamber. This improves the accuracy of the smoke detection.
- **Remote LED connection:** Our detectors provide 2 wire terminal to connect a remote LED.

Technical Specification

Type	Smoke Detector
Operating Voltage	16-28V DC
Operating Current	Alarm current: $\leq 25\text{mA}$
	Quiescent current: $\leq 60\mu\text{A}$ @ 24VDC
Operating Temperature	-10°C to 55°C (14° to 131°F)
Operating Humidity	$\leq 95\%$ RH Non-condensing or icing
Ingress Protection Rating	IP30
Alarm Indicator State	Red LED remains lit
Fault Indicator State	Red LED Flashes
4 Wire Connection	2 Wire Terminal for Zone Connection and 2 Wire Terminal For Remote LED connection
Terminal Connection	_1L+: Smoke Alarm Bus Connection _2L-: Smoke Alarm Bus Connection _3-: Remote Indicator Positive Connection _4-: Remote Indicator Negative Connection
Polarity	Terminals 1L+ and 2L- are Polarity Insensitive
Alarm Reset Time	1 second
Shell Colour	White
Shell Material	ABS
Enclosure & PCB	Compliant with UL 796 & UL 94
Principle of operation	Photo-Electric with light scattering principle. When smoke particles enter the chamber, they scatter the light. A photodetector picks up the scattered light and triggers an alarm if the signal exceeds a predetermined threshold.
Terminals' Materiel	Stainless Steel Terminals
Storage Temperature	-20°C to 65°C (-4° to 149°F)
Detector Base	Use with Universal Base model SFP-BSH-012

Approvals

- Approved to the European Standard EN54-7:2018 for smoke detectors by TUV Rheinland
- CE & TUV Marked
- Approved to the Safety Standards EN62368-1:2014+A11 & BS EN 62368-1:2014+A11:2017 for Technology Equipment by TUV Rheinland
- EMC Tested and Approved to EN IEC 61000-6-3:2021 & EN 50130-4:2011+A1 by TUV Rheinland
- Approved to the Light Source Safety Standards IEC 62471: 2006 & IEC 62471:2008 by TUV Rheinland

