

Optical-Thermal Detector

DV22051TE

- **ADM loop technology with System Sensor/200 protocol**
- **Combines the optical and thermal characteristics of fire**
- **5 sensitivity levels and thermal-only mode**
- **Available with or without integrated isolator, in white or cream**
- **Function testable with magnet**



Description

The Optical-Thermal Detector DV22051TE combines an optical sensing chamber based on the principle of scattered light with a thermocouple for the detection of heat. It was developed to detect the characteristics of fire in a wide range of applications, and to avoid deceptive alarms.

The new design of the sensing chamber ensures reliable smoke detection and at the same time makes it more difficult for dust and insects to reach the chamber. The rate-of-rise temperature sensor complies with EN 54-5 Class A1R and responds to a rapid rise in temperature as well as to a maximum temperature of 58°C. The analysis of both parameters and the integrated comparison of characteristics of fire allow safe fire detection.

The influence of contamination on the optical measurement system is compensated for by using intelligent evaluation algorithms. In this way, the response sensitivity of the detector is kept constant for a long time – a further effective step to avoid false alarms.

The response sensitivity of the optical sensor can be individually adjusted in 5 steps between 2.2%/m and

5.8%/m according to the application. The detector can also operate in a thermal-only mode. In that case the application of the detector is limited to rooms which are not higher than 7.5m.

The proven ADM loop technology with System Sensor/200 protocol establishes a permanent communication between the fire detection control panel and the detector. That ensures a periodical function testing of the detector.

The detector address is set in the range 1 to 159 with two decadic rotary switches, thus allowing a change of the detector without additional tools.

The two LEDs with 360° visibility indicate the activated condition of the detector.

A detector function test can be conveniently conducted using a magnet. The detector can be attached to various bases and it can be protected against theft.

The Optical-Thermal Detector DV22051TE is available with or without integrated isolator in a white housing, as well as without isolator in a cream-coloured housing.



0786-CPD-20651
0786-CPD-20657

Specifications

Operating voltage	Supply through loop voltage
Current consumption at 24V, normal communication	max. 270µA (DV22051TEI) max. 220µA (DV22051TE, DV22051TE-IV)
Alarm temperature	58°C (maximum principle)
Operating temperature	max. +45°C
Ambient temperature	-30°C to +70°C
Relative humidity	10 – 93% (no condensation)
Dimensions ø × H	102 × 49 (mm)
Weight	99g

Optical-thermal detector with isolator, white

Approvals	VdS G209014 0786-CPD-20651
Order number	241116
Order name	Optical-Thermal Detector/200APISM DV22051TEI

Optical-thermal detector without isolator, white

Approvals	VdS G209020 0786-CPD-20657
Order number	241117
Order name	Optical-Thermal Detector/200AP DV22051TE

Optical-thermal detector without isolator, cream-coloured

Approvals	VdS G209020 0786-CPD-20657
Order number	241048
Order name	Optical-Thermal Detector/200AP/Ivory DV22051TE-IV

