DP991

Apollo Discovery optical detector (58000-600)

General

The DP991 is an elegant, slim-line, optical sensor with high performance analogue addressable features. Compensation for sensor drift is included as part of the internal signal-processing algorithm.

Optical smoke monitor

The optical smoke detectors has an internal pulsing LED and a photo-diode at an obtuse angle. In clear air conditions the photo-diode in the monitor receives no light from the LED and produces a corresponding analogue signal. This signal increases when smoke enters the chamber and light is scattered onto the photodiode. The signal is processed by the electronic circuitry and transmitted to the control equipment in exactly the same way as in the case of the ionisation smoke monitor.

Drift compensation

The drift compensation algorithm will compensate for changes in sensor output caused, for example, by dust in the chamber, and will therefore hold the sensitivity at a constant level even with severe chamber contamination. This increased stability is achieved without significantly affecting the detector's sensitivity to fire.

Compensation values are stored in nonvolatile memory and will be retained even if detectors are disconnected.

Unique addressing

A unique, patented addressing method provides simple, user-friendly and accurate identification of monitor location whereby a coded card, inserted in the base, is read by any monitor as it is plugged in. All the electronic components are in the monitor, but the location information is held in the base. Addressing errors during maintenance and service are eliminated. Precoded and pre-numbered address cards are also available. These address cards simplify and speed up installation and commissioning.



Details

- 5 Approved response modes for ease of optimisation to different environments
- Rejection of transient signals
- Drift compensation to ensure constant sensitivity
- 360° Alarm visibility
- Flashing LED option
- Fast alarm reporting
- EN54 approved and CPR certified

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Technical specifications

General

Status indication	2 clear LEDs (red in alarm)
Compatibility	Addressable panels with 900 series (Apollo) support
Alarm levels	5
Connectivity	2-wire loop
Addressing method	Card Addressing

Electrical

Power supply type	Loop powered
Operating voltage	17 to 28 VDC
Communication voltage	5 to 9 V (peak to peak)
Current consumption	300 µA (quiescent) 3.5 mA (alarm)

Detection

Detection principle	Optical light scatter
Monitoring	Alarm threshold, Contamination level
Air velocity	No effect

Output

Output quantity	1
Output type and rating	Remote LED output (<5 mA)
Programmable	Yes

Physical

Physical dimensions	100 x 42 mm (Ø x H)
Net weight	105 g
Colour	White
Mounting type	Base mount
Material (body)	Polycarbonate

Environmental

Vandal proof	No
Operating temperature	-20 to +60°C
Storage temperature	-40 to +70°C
Relative humidity	0 to 95% noncondensing
Environment	Indoor
IP rating	IP44

Regulatory

Compliancy	CE, REACH, RoHS 3, WEEE
Certification	CPR
Standards	EN54:7

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