Product Information & News

XP95 MULTI-SENSOR DETECTOR

GET MORE FROM YOUR XP95 SYSTEM

In addition to simple-sensor smoke and heat detectors, Apollo offers a highly useful combined detector: the XP95 Multi-Sensor detector.

The multi-sensor detector can be connected to any XP95 system–existing or new–and entails little or no change to the control panel configuration.

Two very important benefits result from the availability of the XP95 multi-sensor:

- the multi-sensor can be fitted where local specifications call for its use
- the multi-sensor can be fitted in place of ionisation detectors where these prove to be too sensitive and might cause unwanted alarms

Part no: *55000-885*

FEATURES

This detector combines inputs from optical and heat sensors and processes them using a sophisticated algorithm.

When polled by the control panel it returns an analogue count which is determined by combined responses from both optical and heat sensors.

The XP95 Multi-Sensor detector is designed to be sensitive to a wide range of fires and may be used in place of an ionisation detector in many instances.

OPERATING PRINCIPLES

Signals from the optical smoke chamber and temperature sensor are independent, and represent the smoke level and air temperature respectively in the vicinity of the detector; the detector's microcontroller processes both signals. The temperature signal processing extracts only rate of rise information for combination with the smoke signal. The detector will not respond to slow increases in temperature but a large sudden change can cause an alarm without presence of smoke, if sustained for 20 seconds. The processing algorithms in the multi-sensor incorporate drift compensation.

PROTOCOL COMPATIBILITY

The XP95 Multi-Sensor detector has a type code of 10111 which, depending on panel configuration, can be seen as a multi-sensor by the XP95 protocol and as an optical detector by Series 90 protocol.

Note: if the control panel incorporates a drift compensation algorithm, this should be disabled when polling the XP95 Multi-Sensor detector.

apollo FIRE DETECTORS LIMITED

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LPCB

Quality Systems Certificate No 010
Assessed to ISO 9001

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Technical Data

Specifications are typical and apply at 24V, 23ºC and 50% relative humidity unless otherwise stated.

Detector Part No:
55000-885

Base Part No:
45681-210

Detector principle:
Smoke: Photoelectric detection of light scattered by smoke particles.
Heat: Temperature sensitive resistance.

Type code:
Bits 2 1 0 4 3
1 0 1 1 1

Supply wiring:
Two-wire supply, polarity insensitive

Terminal functions:
L1 & L2: supply in and out connections
+R: remote indicator positive connection (internal 2.2kΩ resistance to positive)
-R: remote indicator negative connection (internal 2.2kΩ resistance to negative)

Operating voltage:
14-28V DC

Quiescent current:
500µA average, 750µA peak

Power-up surge current:
1mA

Maximum power-up time:
10s

Alarm current, LED illuminated:
3.5mA

Remote output characteristics:
Connects to positive line through 4.5kΩ (5mA maximum)

Clean air analogue value:
23 +4/-0

Alarm level analogue value:
55

Alarm indicator:
2 colourless Light Emitting Diodes (LEDs); illuminated red in alarm; Optional remote LED

Smoke Sensitivity:
Nominal threshold of 2.8% light grey smoke obscuration per metre (0.9% per ft)

Storage Temperature:
-30ºC to +80ºC

Operating Temperature:
-20ºC to +60ºC

Humidity:
0 to 95% relative humidity (no condensation)

Effect of temperature on optical detector:
Less than 15% change in sensitivity over rated range. Slow changes in ambient conditions will automatically be compensated and will not affect sensitivity

Effect of atmospheric pressure on optical sensor:
None

Effect of wind on optical sensor:
None

Vibration, Impact and Shock:
To prEN54-7

IP rating:
43

Dimensions:
100mm diameter
50mm height
58mm (height in base)

Weight:
Detector 105g
Detector in base 160g

Materials:
Housing: White polycarbonate
V-0 rated to UL94
Terminals: Nickel plated stainless steel

Smoke element only:

Chamber configuration:
Horizontal optical bench housing infra-red emitter and sensor, arranged radially to detect forward scattered light

Sensor:
Silicon PIN photo-diode

Emitter:
GaAlAs infra-red light emitting diode

Heat element:
NTC Thermistor

Sampling frequency:
1 per second

CE marked

For more information on the XP95 range of detectors, the following publications are available:

XP95 Sales Leaflet PP1038
XP95 General Sales Brochure PP1040
XP95 Engineering Product Guide PP1039