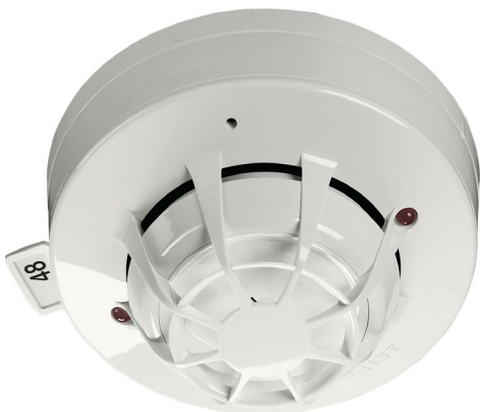
XP95A

Photoelectric/Heat Multisensor Detector



Product overview

Product	**XP95A Photoelectric/Heat Multisensor Detector**
Part No.	**55000-886**
Digital Communication	**XP95, Discovery and CoreProtocol® compatible**

Compliance

Product information

The XP95A Photoelectric/Heat Multisensor Detector contains an photoelectric smoke sensor and a thermistor temperature sensor whose outputs combine to give the final analogue value.

- Sensitive to a wide range of fires
- Well suited to environments such as hotel bedrooms, warehouses and loading docks
- Automatic addressing with the XPERT card
- Easy installation
- Elegant design
- Alternative to an Ionization Detector

Technical data

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73°F and 50% RH unless otherwise stated.

Sampling frequency smoke element only	*Once per second*
Sensitivity	*3.0 + 1.0 - 2.27 %/ft*
Operating voltage	*17 V to 28 V dc*
Modulation voltage	*5–9V peak to peak*
Digital communication protocol	*XP95, Discovery and CoreProtocol compatible*
Supervisory current	*500 µA average*
Surge current	*1 mA*
Alarm LED current	*3.5 mA*
Operating temperature range	*32 °F to 100 °F*
Humidity (no condensation or icing)	*0% to 95% RH*
Air velocity	*0 - 300 fpm*
Standards and approvals	*UL, ULC, CSFM and MSFM*
Dimensions	*3.93" diameter x 1.65" height (1.96" height with XPERT base)*
Weight	*3.70 oz (5.54 oz with XPERT base)*
Materials	*Housing: White flame-retardant polycarbonate* *Terminals: Nickel plated stainless steel*
Test method	*Home safeguard Gemini 501*

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Function

The XP95A Photoelectric/Heat Multisensor Detector contains an photoelectric smoke sensor and a thermistor temperature sensor whose outputs are combined to give the final analog value.

Operation

The XP95A Photoelectric/Heat Multisensor Detector construction is similar to that of the photœlectric detector but uses a different lid and photoelectric moldings to accommodate the thermistor temperature sensor.

Signals from the photoelectric smoke chamber and temperature sensor are independent and represent the smoke level and air temperature respectively in the vicinity of the detector; the detectors micro-controller 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 the presence of smoke if sustained for 20 seconds. The processing algorithms in the multisensor incorporate drift compensation.

Environmental characteristics

The XP95A Photoelectric/Heat Multisensor Detector is unaffected by wind or atmospheric pressure and operates over the temperature range 32°F to +100°F.

Electrical description

The XP95A Photoelectric/Heat Multisensor Detector is designed to be connected to a two wire loop circuit carrying both data and a 17 V to 28 V dc supply. The detector is connected to the incoming and outgoing supply via terminals L1 and L2 in the mounting base. A remote LED indicator requiring not more than 4 mA at 5 V may be connected between the +R and -R terminals. An earth connection terminal is also provided. The detector is calibrated to give an analog value of 25±7 counts in clean air. This value increases with smoke density. A count of 55 corresponds to the UL alarm sensitivity level.

Response characteristics of XP95A Photoelectric/Heat Multisensor Detector

Type of fire	Photoelectric/ Heat Multisensor Detector
Overheating/Heat combustion	Very Good
Smouldering/glowing combustion	Moderate/Good
Flaming combustion	Very Good
Flaming with high heat output	Very Good
Flaming - clean burning	Poor

XP95A Photoelectric/Heat Multisensor Detector diagram