XP95
Multisensor Detector

Product overview

Product	**Multisensor Detector**
Part No.	**55000-885**
Digital Communication	**XP95, Discovery and CoreProtocol® compatible**

Compliance

CE, LPCB, VdS, BOSEC, SBSC INTYGAD PRODUKT, GOST-R

Product information

The XP95 Multisensor Detector combines optical smoke and temperature sensors whose outputs are combined to give the final analogue value.

The signals from the optical smoke sensing element and the temperature sensor are independent, and represent the smoke level and the air temperature respectively in the vicinity of the detector.

- Sensitive to a wide range of fires
- Well suited to environments such as hotel bedrooms
- Unaffected by wind or atmospheric pressure

Technical data

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Detection principle	*Smoke: Photo-electric detection of light scattered by smoke particles Heat: Temperature-sensitive resistance*	
Chamber configuration - smoke element only	*Horizontal optical bench housing an infrared emitter and sensor arranged radially to detect scattered light*	
Sensor - smoke element only	*Silicon PIN photo-diode*	
Emitter- smoke element only	*GaAs infra-red light emitting diode*	
Sampling frequency smoke element only	*Once per second*	
Supply Wiring	*Two wire supply, polarity insensitive*	
Terminal functions	*L1 & L2*	*Loop in & out*
	+R	*Remote indicator positive connection (internal 2.2 kΩ resistance to supply +ve)*
	–R	*Remote indicator negative connection (internal 2.2 kΩ resistance to supply -ve)*
Operating voltage	*17 V to 28 V dc*	
Digital communication	*XP95, Discovery and CoreProtocol compatible*	
Modulation voltage	*5–9V peak to peak*	
Quiescent current	*500 µA average, 750 µA peak*	
Power-up surge current	*1 mA*	
Max power-up time	*10 seconds*	
Alarm indicator	*Two colourless light emitting diode (LED) emitting red light in alarm*	
Alarm LED current	*3.5 mA*	
Remote LED current	*4 mA at 5 V (measured across remote load)*	
Clean air analogue value	*23 +4/-0*	
Alarm level analogue value	*55*	
Storage temperature	*-30°C to +80°C*	
Operating temperature	*-20°C to + 60°C*	
Humidity (no condensation or icing)	*0% to 95% RH*	
Effect of atmospheric pressure on optical sensor	*None*	
Effect of wind speed on optical sensor	*None*	
Vibration, impact and shock	*To EN 54-5. EN54-7*	
Designed to IP Rating	*IP23D*	
Standards and approvals	*EN 54-5, EN 54-7, CPR, LPCB, VdS, VNIIPO, BOSEC, SBSC, CCMG*	
Dimensions	*100 mm diameter x 50 mm height (58 mm height with mounting base)*	
Weight	*105 g* *160 g with base*	
Materials	*Housing: White flame-retardant polycarbonate*	
	Terminals: Nickel plated stainless steel	

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Operation

The XP95 Multisensor Detector contains an optical smoke sensor and a thermistor temperature sensor whose outputs are combined to give the final analogue value.

The Multisensor construction is similar to that of the optical detector but uses a different lid and optical moulding to accommodate the thermistor temperature sensor.

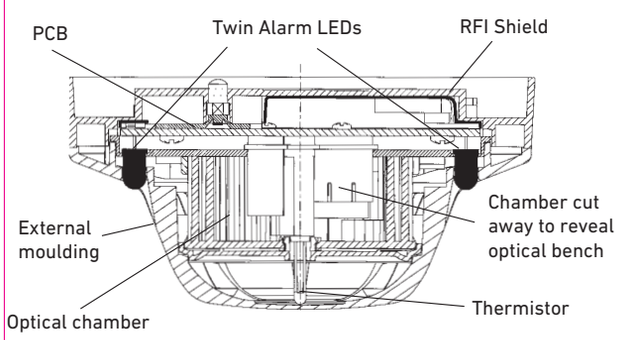
The signals from the optical smoke sensing element and the temperature sensor are independent and represent the smoke level and the air temperature respectively in the vicinity of the detector.

The detectors micro-controller processes the two signals. The temperature signal processing extracts only rate of rise information for combining with the optical signal. The detector will not respond to a slow temperature increase - even if the temperature reaches a high level. A large sudden change in temperature can however, cause an alarm without the presence of smoke if sustained for 20 seconds.

The processing algorithms in the multisensor incorporate drift compensation. The control panel must not have a drift compensation algorithm enabled.

The sensitivity of the detector is considered the optimum for most general applications since it offers good response to both smouldering and flaming fires.

XP95 Multisensor Detector sectional diagram



Environmental characteristics

The XP95 Multisensor Detector is unaffected by wind or atmospheric pressure and operates over the temperature range -20°C to +60°C.

Electrical description

The XP95 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 23 +4/-0 counts in clean air. This value increases with smoke density. A count of 55 corresponds to the EN 54 alarm sensitivity level.

EMC Directive 2014/30/EU

The XP95 Multisensor Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this data sheet.

A copy of the Declaration of Conformity is available from Apollo upon request.

Conformity of the XP95 Multisensor Detector with the EMC Directive, does not confer compliance with the directive on any apparatus or systems connected to them.

Construction Products Regulation 305/2011/EU

The XP95 Multisensor Detector complies with the essential requirements of the Construction Products Regulation 305/2011/EU.

A copy of the Declaration of Performance is available from Apollo upon request.