XP95

I.S. Heat Detector

Product overview

Product	I.S. Heat Detector
Part No.	55000-440SIL
Digital Communication	XP95 and Discovery compatible

Approvals

Product information

The XP95 Intrinsically Safe (I.S.) Heat Detector monitors temperature by using a single thermistor which provides a count output proportional to the external air temperature.

- Ideal for environments that are dirty or smoky under normal circumstances
- Unaffected by wind or atmospheric pressure

Technical data

All data is supplied subject to change without notice. Specifications are typical at 24 V, 23°C and 50% RH unless otherwise stated.

Detection principle	Linear approximation over temperature range 25^{0}C to 90^{0}C	
Sensor	Single NTC thermistor	
Sampling frequency	Continuous	
Sensitivity	25^{0}C to 90^{0}C: 1°C/count -20^{0}C returns 8 counts	
Supply Wiring	Two wire supply, polarity sensitive	
Terminal functions	L1	Positive supply
	L2	Negative supply and remote LED negative
	+R	Remote LED positive
	Notes: 1. I.S. detectors are polarity sensitive. 2. There is no requirement for series resistance on remote LED lines. 3. The remote LED characteristic differs from XP95	
Supply voltage	14 V - 22 V dc	
Digital communication	XP95 and Discovery compatible	
Quiescent current	300 µA	
Power-up surge current	1mA	
Duration of power-up surge current	0.3 seconds	
Max power-up time	4 seconds	
Analogue value at 25°C	25 $\pm$ 5 counts	
Alarm indicator	Red light emitting diode (LED)	
Alarm LED current	2 mA	
Remote LED current	1 mA (internally limited)	
Storage temperature	-30°C to +80°C	
Operating temperature	-20°C to +40°C (T5) -20°C to +60°C (T4)	
Guaranteed temperature range (no condensation or icing)	-20°C to +60°C	
Humidity (no condensation or icing	0% to 95% RH)	
Effect of atmospheric pressure	None	
Effect of wind speed	None in fixed temperature use	
Vibration, impact & shock	To EN 54 - 5	
IP Rating	designed to IP53	
Standards & approvals	EN54, IEC61508-1, 2	
BASEEFA Certificate No.	BAS02ATEX1289X/7	
Classification (max ambient)	Ex ia IIC T4 GA (≤ +60ºC) Ex ia IIC T5 GA (≤ +45ºC)	
Dimensions	100mm diameter x 42 mm height (50 mm height with mounting base)	
Weight	105 g (157 g with mounting base)	
Material	Housing: White flame retardant polycarbonate Terminals: Nickel plated stainless steel	

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Operation

The XP95 I.S. Heat Detector has a common profile with the ionisation and optical smoke detectors but has a low air flow resistance case made of white polycarbonate.

The device monitors heat using a single thermistor network which provides a voltage output proportional to the external air temperature.
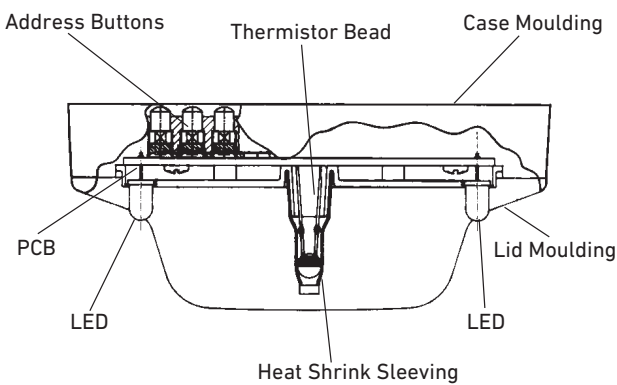
Electrical description

The Heat Detector is designed to be connected to a two wire loop circuit carrying both data and a 14 V to 22 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 1 mA may be connected between the +R and L2 terminals. An earth connection terminal is also provided. The detector is calibrated to give an analogue value of 25±5 counts at 5^0C. This value increases with rising temperature. A count of 55 corresponds to the EN alarm sensitivity level.

When the detector is energized the ASIC regulates the flow of power and controls the data processing. The thermistor provides an output over normal operating ranges that is proportional to the external air temperature. The voltage output is processed in the analogue to digital converter and stored by the communications ASIC. It is transmitted to the control equipment when the device is interrogated. When a count of 55 is exceeded the alarm flag is initiated and the device address is added to the data stream every 32 polling cycles from its last polling for the duration of the alarm level condition, except when an alarming device is being interrogated. This can provide a location identified alarm from any device on the loop in approximately two seconds.

Environmental characteristics

The XP95 I.S. Heat Detector range is unaffected by wind or atmospheric pressure. Standard detectors operate over the temperature range –20°C to +70°C.

XP95 I.S. Heat Detector sectional diagram

Address Buttons   Thermistor Bead   Case Moulding

PCB

LED   LED

Heat Shrink Sleeving

Lid Moulding

EMC Directive 2014/30/EU

The XP95 I.S. Heat Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this datasheet.

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

Conformity of the XP95 I.S. Heat Detector with the EMC Directive, does not confer compliance with the directive on any apparatus or systems connected to it.

Construction Products Regulation 305/2011/EU

The XP95 I.S. Heat 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.

Marine Equipment Directive 2014/90/EU

The XP95 I.S. Heat Detector complies with the essential requirements of the Marine Equipment Directive 2014/90/EU.

ATEX Directive 2014/34/EU

The XP95 I.S. Heat Detector complies with the essential requirements of the ATEX Directive 2014/34/EU.

Construction Products Regulation 305/2011/EU

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ATEX Directive 2014/34/EU

The XP95 I.S. Heat Detector complies with the essential requirements of the ATEX Directive 2014/34/EU.

XP95 I.S. Heat Detector dimensional drawing

ADDRESS CARD 38531-771
SUPPLIED LOOSE WITH BASE

MOUNTING BASE 45681-210
TO BE ORDERED SEPERATELY.

110,00 HAND REMOVAL DIMENSION

50,00

Ø100,00

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