



Odyssey Intelligent Standard Heat Detector (200-501)

The Odyssey Heat Detector (A2S) monitors temperature by using a single thermistor which provides a count output proportional to the external air temperature, reporting an alarm at 55°C.

- Reliable fire detection in areas with a wide temperature range from -20°C to +70°C
- Ideal for environments that are dirty or smoky under normal circumstances
- Unaffected by wind and atmospheric pressure

OPERATION

The Odyssey Heat Detector has a common profile with the Odyssey 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 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 5V may be connected between the +R and -R terminals. An earth connection terminal is also provided. The detector is calibrated to give an analogue value of 25±5 counts at 50°C. This value increases with rising temperature. A count of 55 corresponds to the EN 54 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 Odyssey Heat Detector range is unaffected by wind or atmospheric pressure. Standard detectors operate over the temperature range -20°C to +70°C.

EMC Directive 2014/30/EU

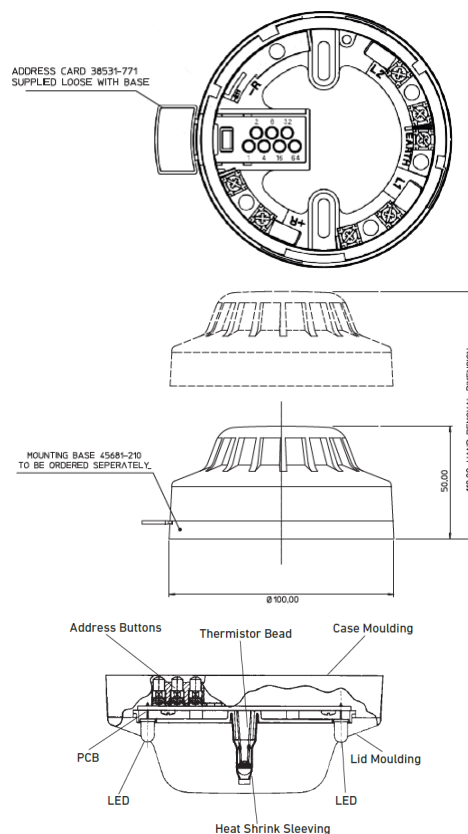
The Odyssey Heat Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described

in this datasheet. A copy of the Declaration of Conformity is available from upon request.

Conformity of the Odyssey 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 Odyssey Heat Detector complies with the essential requirements of the Construction Products Regulation 305/2011/EU. A copy of the Declaration of Performance is available upon request.



TECHNICAL DATA

Detection principle	Photo-electric detection of light scattered in a forward direction by smoke particles
Chamber configuration	Horizontal optical bench housing an infrared emitter and sensor arranged radially to detect scattered light
Sensor	Silicon PIN photo-diode
Emitter	GaAs infra-red light emitting diode
Sampling frequency	Once per second
Sensitivity	Nominal response threshold value of 0.12 dB/m when measured in accordance with EN 54-7
Supply Wiring	Two wire supply, polarity insensitive
Terminal functions	L1 & L2 Loop in & out positive +R Remote indicator positive connection (internal 2.2k Ω resistance to supply +ve) -R Remote indicator negative connection (internal 2.2 k Ω resistance to supply -ve)
Supply voltage	17 - 28 V dc
Communication protocol	Odyssey
Quiescent current	340 μ A
Power-up surge current	1 mA for 1 second
Alarm indicator	Clear light emitting diode (LED) emitting red light
Alarm LED current	4 mA
Remote LED current	5 mA maximum
Operating temperature	-20°C to +60°C
Storage temperature	-30°C to +80°C
Humidity (no condensation or icing)	0% to 95% RH
Effect of atmospheric pressure	None
Effect of wind speed	None
Vibration, impact and shock	EN54-7
Standards and approvals	EN 54, CPR, LPCB, VdS, BOSEC, SBSC, CCMG, FG
Dimensions	100 mm, diameter x 42 mm height
Weight	105 g
Materials	Housing: White flame-retardant polycarbonate. Terminals: Nickel plated stainless steel
<i>All data is supplied subject to change without notice. Specifications are typical at 24V, 25°C and 50% RH unless otherwise stated.</i>	