



**Odyssey Conventional Heat Detectors**

200-401	Odyssey Conventional BR Heat Detector
200-402	Odyssey Conventional CR Heat Detector
200-403	Odyssey Conventional CS Heat Detector
200-400	Odyssey Conventional A1R Heat Detector

**PRODUCT SUMMARY**

The Odyssey Conventional Heat Detectors monitor temperature by using either a dual thermistor network or a single thermistor network (CS versions) which provides a voltage output proportional to the external air temperature.

- Ideal for environments that are dirty or smoky under normal circumstances
- Can be used for applications where smoke detectors are unsuitable
- Wide operating voltage

**COMPLIANCE**



Note:

Not all detectors have all approvals. Refer to the product pages.



## TECHNICAL SPECIFICATION

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

Supply Wiring	Two wire monitored supply, polarity insensitive
Terminal Functions	L1 In and L2      Supply in connections
	L1 Out and L2    Supply out connections
	-R                  Remote indicator negative connection
Supply Voltage	9 V to 33 V
Ripple Voltage	2 V peak to peak maximum at 0.1 Hz to 100 kHz
Quiescent Current	See Table 1
Power Up Surge Current	as per quiescent current
Alarm Voltage	6 V to 28 Vdc
Alarm Current	See Table 1
Alarm Indicator	Red light emitting diode
Design Alarm Load	420 Ohms in series with a 2 V drop
Holding Voltage	6 V
Holding Current	10 mA
Min Voltage for Alarm Indicator	12 V
Remote Output Characteristics	Remote is a current sink to the negative line limited to 17 mA
Storage Temp	- 30 C to + 120 C
Operating Temp	- 20 C to + 90 C
Humidity (no cond. or icing)	0% to 95% RH
Effect of Atmospheric Pressure	None
Designed to IP Rating	IP 54
Standards & Approval	CPR, LPCB, VdS, VNIIPO, SBSC, FG, BBOMBA
Dimensions (diameter x height)	100 mm x 42 mm
Weight	80 g
Materials	Housing:    white flam retardant polycarbonate
	Terminals:  nickel plated stainless steel

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## OPERATION

The Odyssey Conventional Heat Detector has a moulded self-extinguishing white polycarbonate case. Inside the case a printed circuit board (PCB) holds the signal processing electronics.

In the A1R, BR and CR variants a pair of matched negative temperature co-efficient (NTC) thermistors are mounted on the PCB in such a way that one thermistor is exposed to give good thermal contact with the surrounding air while the other thermistor is thermally insulated.

Under stable conditions both thermistors are in thermal equilibrium and have the same value of resistance. If air temperature increases rapidly the resistance of the exposed thermistor becomes less than that of the insulated thermistor. The ratio of the resistance of the thermistors is monitored electronically and an alarm is initiated if the ratio exceeds a factory pre-set level. This feature determines the 'rate of rise' response of the detector.

CS variants use a single NTC thermistor network which as in dual versions provides a voltage output proportional to the external air temperature.

## EMC Directive 2014/30/EU

The Odyssey Conventional 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 upon request.

### **Construction Products Regulation 305/2011/EU**

Conformity of the Odyssey Conventional 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.

**Table 1: Series 65 Heat Detector typical current against voltage characteristics for quiescent and alarm state**

Supply voltage (V)	A1R Standard		A1R flashing LED		A1R flashing LED/magnetic test switch	
	Quiescent	Alarm	Quiescent	Alarm	Quiescent	Alarm
24	45 $\mu$ A	52 mA	55 $\mu$ A	52 mA	55 $\mu$ A	52 mA
9	40 $\mu$ A	17 mA	50 $\mu$ A	17 mA	50 $\mu$ A	17 mA

**Series 65 Heat Detector temperatures and part numbers**

Class	Max application temperature $^{\circ}$ C	Max static response temperature $^{\circ}$ C	Part Number	
			Standard	Flashing LED
A1R	50	65	55000-122	55000-121
BR	65	85	55000-127	55000-126
CR	80	100	55000-132	55000-131
CS	80	100	55000-137	55000-136

**Choosing the correct heat detector**

