



Odyssey Intelligent Heat Detector (200-502)

The Odyssey Intelligent heat detectors have a common profile with ionisation and optical smoke detectors but have a low air flow resistance case made of self-extinguishing white polycarbonate. The devices monitor heat by using a single thermistor network which provides a voltage output proportional to the external air temperature.

The standard heat detector, 200-501 responds to increasing air temperature in such a way that it is classified as an A2S device. This device will give 55 counts at 55°C. A high temperature CS heat detector, 200-502, which can be installed in a typical ambient temperature of 55 degrees is available. See fig 14. This device will give 55 counts at 90 degrees. The detectors are designed to be connected to a two wire loop circuit carrying both data and a 17V to 28V de supply. The detectors are connected to the incoming and outgoing supply via terminals L1 and L2 in the mounting base. A remote LED indicator requiring not more than 4mA at 5V may be connected between +Rand -R terminals. An earth connection terminal is also provided.

When a device is energised 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. This voltage output is processed in the A/D converter and stored by the communications ASIC. It is transmitted to 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. The detector is calibrated to give an analogue value of 25±5 counts at 25°C.

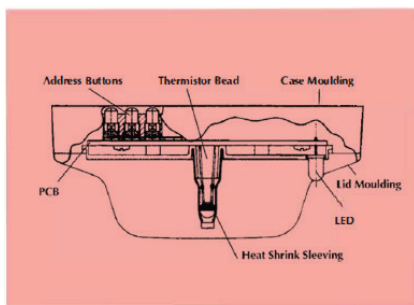


Fig. 12 Heat Detector

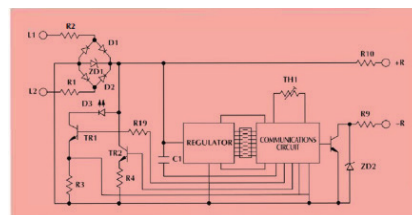


Fig. 11 Schematic diagram

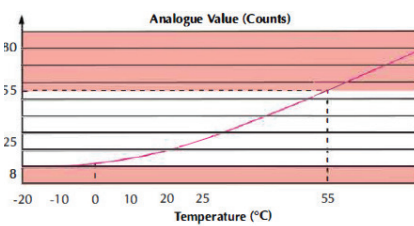


Fig. 13 Typical response characteristic - Standard heat detector

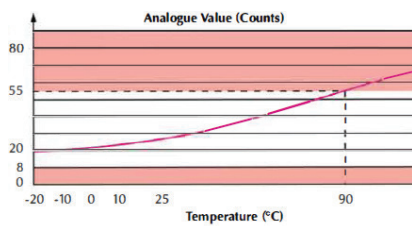


Fig. 14 Typical response characteristic - High temperature heat detector

TECHNICAL SPECIFICATION

Detector Type	Point Type Heat Detector
Detector Principle	Linear Approximation over temp range 25 C to 90 C single NTC
Sensor	Thermistor
Sampling Frequency	Continuous
Sensitivity	25 C to 90 C
Supply Wiring	2 Wire Supply, polarity insensitive
Supply Voltage	17 to 28 Vdc
Modulation Voltage of Detector	5 to 9 volts, peak to peak
Quiescent Current	250 uA average, 500 uA peak
Power-up Surge Current	1 mA
Duration of Power-up Surge Current	0.3 secs
Maximum Power-up Time	4 secs
Analogue Value at 25 C	25 + 5 counts
Alarm level 55 Counts	55 C when measured under static conditions
Alarm Indicator	Red LED
Alarm LED Current	2 mA
Remote LED Current	4 mA at 5V (measured across remote load)
Storage Temperature	-30 C to +80 C
Operating Temperature	-20 C to +70 C
Humidity (non-condensing)	95% RH
Wind Speed	Unaffected in fixed temperature use
Atmospheric Pressure	Unaffected
Vibration, Impact & Shock	to EN54-5: 2000
IP Rating	IP 53
Dimensions	100 mm x 42 mm
Weight	105 g
Materials	White polycarbonate housing