

Context Plus

Addressable Fire Equipment Catalogue



TEMPERATURE DETECTORS XPRT CARD ADDRESSED



Addressable Heat Detector (A2S)
Part Number 55000-485IMC

ADDRESSABLE HEAT DETECTOR (A2S), 55000-485IMC ADDRESSABLE HEAT DETECTOR (CS), 55000-495IMC

Context Plus temperature (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. They monitor temperature by using a single thermistor network which provides a voltage output proportional to the external air temperature.

The response to temperature increases of the standard temperature detector (part no: 55000-485IMC) enables the detector to be utilised as an EN54 Grade 2 heat detector.

To provide a device for use in ambient temperatures of up to 55°C, a high temperature detector (part no: 55000-495IMC) is also available. This has similar characteristics to the standard temperature detector at 25°C but reaches a 55 count (alarm) at 90°C.

Technical Data

Addressable Heat Detector (A2S) Part No 55000-485IMC

Specifications are typical and given at 23°C and 50% relative humidity unless stated.

Communication protocol: Apollo XP95 pulse 5-9V

Detector Type: Fixed Temperature Heat Detector (software algorithm may be used for Grade 1 response)

Detector Principle: Linear approximation over temperature range 25°C to 90°C

Sensor: Single NTC Thermistor

Sampling Frequency: Continuous

Supply Wiring: Two wire supply, polarity insensitive

Terminal Functions:

- L1&L2 supply in and out connections (polarity insensitive)
- +R remote indicator positive connection (internal 2.2kΩ resistance to supply +ve)
- R remote indicator negative connection (internal 2.2kΩ resistance to supply -ve)

Supply Voltage: 17 to 28 Volts dc
Modulation Voltage at Detector: 5 to 9 Volts peak to peak

Quiescent Current: 300µA

Power-up Surge Current: 1mA

Duration of Power-up Surge Current: 0.3 seconds

Maximum Power-up Time: 4 secs

Storage Temp: -30°C to +80°C

Operating Temp: -20°C to +70°C

Analogue Value at 25°C 25± 5 counts

Alarm Level 55 Counts: 55°C

Alarm Indicator: Red light emitting diode (LED)

Alarm LED Current: 4mA

Remote LED Current: 4mA at 5V (measured across remote load)

Type Code: (210 43) 110 00

Sensitivity: 25°C to 55°C: 1°C/Count. -20°C returns 8 counts

Guaranteed Temp. Range (No condensation or icing): -20°C to +70°C

Humidity (No condensation): 0% to 95% relative humidity

Wind Speed: Unaffected in fixed temperature use

Atmospheric Pressure: Unaffected

Vibration, Impact & Shock: To EN54 Pt 5 (BS5445 Pt 5)

IP Rating: 53

Dimensions: (diameter x height)

Detector: 100mm x 39mm
Detector in Base: 100mm x 47mm

Weights: Detector: 100g; Detector in Base: 157g

Materials: Detector Housing: White polycarbonate V-0 rated to UL 94; Terminals: Stainless Steel

Addressable Heat Detector (CS) Part No: 55000-495IMC

Specifications are the same as those for the standard temperature detector described above, apart from the following points:

Detector Type: Fixed Temperature

Detector Principles: Linear approximation designed to give 25 counts at 25°C and 55 counts at 90°C

Guaranteed Temp. Range (No condensation or icing): -20°C to +120°C

Sensitivity: 25°C to 90°C: 2-17°C / Count -20°C returns 20 counts

DEVICE RESPONSE

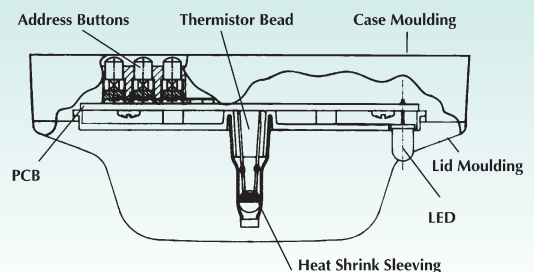
Type: Flaming with high heat output
Response: Moderate/good

Type: Flaming - clean burning
Response: Moderate/good

Type: Flaming combustion
Response: Poor

Type: Overheating/thermal combustion
Response: Very poor

Type: Smouldering/glowing combustion
Response: Very poor



Sectional view - Temperature (Heat) Detector

CONTEXT UL-PLUS HEAT DETECTOR

Part No. 58000-450IMC

Context UL-PLUS 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 Context UL-PLUS Heat Detector uses a single thermistor to sense the air temperature at the detector position. The thermistor is connected in a resistor network, which produces a voltage output dependent on temperature. The design of the resistor network, together with the processing algorithm in the microcontroller, gives an approximately linear characteristic. This linearised signal is further processed, depending on the response mode selected, and converted to an analogue output.

For the European standard version of the detector, the five modes correspond to five “classes” as defined in UL standard for automatic heat detectors. The classes in this standard correspond with different response behaviour, each of which is designed to be suitable for a range of application temperatures. All modes incorporate “fixed temperature” response, which is defined in the standard by the “static response temperature”. The application temperatures and static response temperatures for all response modes are given in the table below.

A detector that has been shown to have a rate-of-rise characteristic will still give a rapid response even when starting from an ambient temperature well below its typical application temperature. This type of detector is therefore suitable for areas such as unheated warehouses in which the ambient temperature may be very low for long periods.

The detector in purely fixed temperature mode on the other hand will not respond below its minimum static response temperature even when exposed to high rates of rise of air temperature. This type is therefore suitable for areas such as kitchens and boiler rooms where large, rapid temperature changes are considered normal.

TECHNICAL DATA

Context UL-PLUS Heat Detector

Part No. 58000-450IMC

Specifications are typical at 24V, 23°C and 50% relative humidity unless otherwise stated.

Detector principle: Heat sensitive resistance

Supply wiring: Two-wire supply, polarity insensitive

Terminal functions: L1 & L2 supply in and out connections

+R remote indicator positive connection (internal 2.2kΩ resistance to positive)

–R remote indicator negative connection (internal 2.2kΩ resistance to negative)

Operating voltage: 17–28V DC

Communication protocol: Discovery, XP95 (5-9V peak to peak)

Quiescent current: 350µA

Power-up surge current: 1mA

Maximum power-up time: 10s

Alarm current, LED illuminated: 3.4mA

Remote output characteristics: Connects to positive line through 4.5kΩ (5mA maximum)

Alarm level analogue value: 55

Alarm indicator: 2 red Light Emitting Diodes (LEDs). Optional remote LED

Temperature range: Minimum operating temperature –40°C

Maximum operating temperature see Table 4

Storage -40°C to 80°C

Humidity: 0% to 95% RH (no condensation or icing)

Vibration, impact & shock: EN 54-5

Designed to IP Rating: IP54

Standards & approvals: UL Certified

Dimensions: 100mm diameter x 42mm height
(50mm height with XPERT 7 Mounting Base)

Weight: Detector 105g
Detector with XPERT Mounting Base 160g

Materials: Housing White polycarbonate UL94-V0
Terminals Nickel plated stainless steel



Context
Plus

Context Plus

Other products in the Context Plus range



Conventional fire detection panels



Conventional smoke and heat detectors



HFC227ea
Conventional fire suppression systems



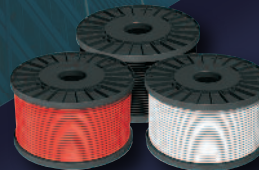
Conventional signalling devices



Conventional wireless fire alarm systems



Stand-alone mains & battery operated smoke, heat & CO alarms



Fire resistant cables



EN54 compliant power supplies

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