OPTICAL SMOKE DETECTOR *XPERT CARD ADDRESSED*

Part Number 55000-600IMC

DEVICE RESPONSE

Type: Overheating/thermal combustion
Response: Very good

Type: Smouldering/glowing combustion
Response: Good

Type: Flaming combustion
Response: Good

Type: Flaming with high heat output
Response: Good

Type: Flaming - clean burning
Response: Very poor

Optical Smoke Detector, XPERT style, 55000-600IMC

010q 0832

The Context Plus XP95 optical detector uses the same outer case as the ionisation smoke detector and is distinguished by the indicator LED which is clear in standby and red in alarm.
Within the case is a printed circuit board which, on one side, has the light proof labyrinth chamber with integral gauze surrounding the optical measuring system and, on the other, the address capture, signal processing and communications electronics.

An infrared light emitting diode within its collimator is arranged at an obtuse angle to the photo-diode. The photo-diode has an integral daylight-blocking filter.

The IR LED emits a burst of collimated light every second. In clear air the photo-diode receives no light directly from the IR LED because of the angular arrangement and the dual mask. When smoke enters the chamber it scatters photons from the emitter IR LED onto the photo-diode in an amount related to the smoke characteristics and density.

Technical Data

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

Communication protocol: Apollo XP95 pulse 5-9V

Detector Type: Products of combustion (smoke) detector

Detection Principles: 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: 1 second

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

Quiescent Current: 340µA average, 600µA peak

Power-up Surge Current: 1mA

Duration of Power-up Surge Current: 0.3 seconds

Maximum Power-up Time: 4 seconds for communications (measured from application of power and protocol) 10 seconds to exceed 10 counts 35 seconds for stable clean air value

Storage Temp: -30°C to +80°C

Operating Temp: -20°C to +60°C

Alarm Level Analogue Value: 55

Clean Air Analogue Value: 25±7 counts

Alarm Indicator: Clear light emitting diode (LED) emitting red light

Alarm LED Current: 4mA

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

Type Code: (210 43) 101 00

Sensitivity: Nominal threshold of 2.4% light grey smoke obscuration per metre

Guaranteed Temperature Range **(No condensation or icing):** -20°C to +60°C

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

Wind Speed: Unaffected by wind

Atmospheric Pressure: Unaffected

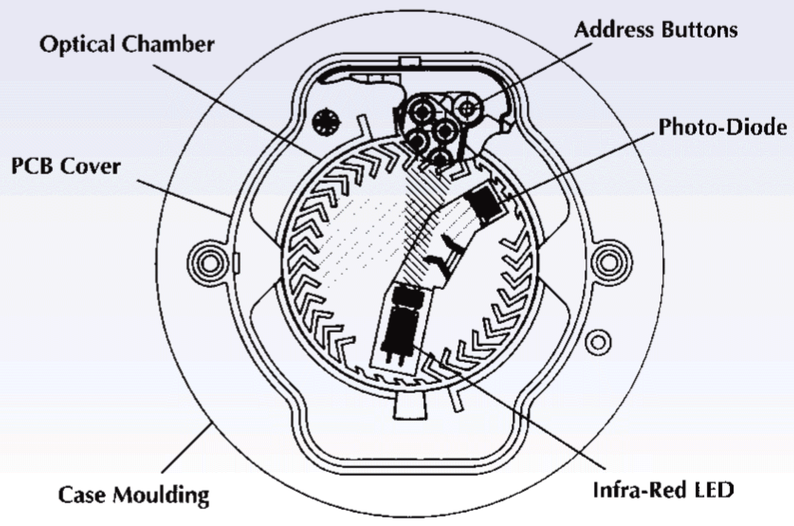
Vibration, Impact & Shock: To EN54 Pt 7 2001 (BS5445 Pt 7 2001)

IP Rating: 43

Dimensions: (diameter x height)
Detector: 100mm x 42mm
Detector in Base:
100mm x 50mm

Weights: Detector: 105g Detector in Base: 157g

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



Top section view - Optical Smoke Detector