

Sensis® Cobalt Single or Dual Zones Aspirating Smoke Detector

[EN] 4100-100 – Cobalt HM1

[EN] 4200-100 – Cobalt HM2

Cobalt Aspirating Smoke Detector integrates a unique combination of sensors, including smoke, temperature and humidity sensors, providing advanced detection capabilities across various applications.

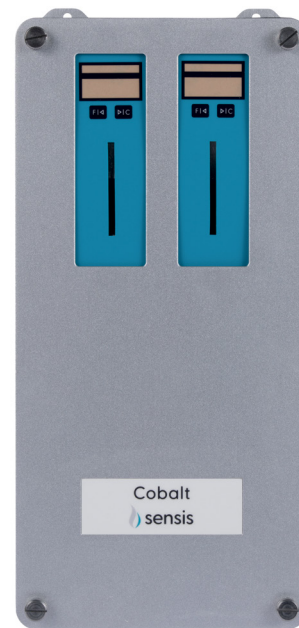
Cobalt utilises a high-power Blue LED as its detection light source, ensuring exceptional sensitivity to small smoke particles during the incipient stage of a fire. It offers a balanced response to both small and large particles. Employing Large Volume “Three-Dimension” detection, Cobalt utilises a specially engineered smoke chamber structure, resulting in a significantly large total scattered light signal. This enables a more accurate representation of the actual concentration of smoke in the air. The Cobalt Smart Smoke Level (SSL) algorithm automatically activates upon power-up of the device. Operating continuously, 24/7, it gathers data on background particle levels. The algorithm calculates the average background particle level and uses it as the reference point (zeroing) for detection, ensuring consistent performance and minimising nuisance alarms.

The Cobalt mini display and status bar serve to present the operational conditions, control options and fundamental function adjustments of the detector.

- **Display mode:** The display mode delivers real-time data including smoke value, normalised flow value as a percentage, flow raw value, active events, temperature and humidity.
- **Programmer mode:** In programmer mode, users can configure essential settings such as alarm threshold adjustments, fan speed alterations and address changes.
- **Control Mode:** The control mode enables users to execute various actions including reset, isolate/de-isolate, silence and display test.

For comprehensive function customisation, the SensisTool application running on a PC is recommended. Alternatively, full function settings can also be accessed via AMS or NCP if the device is networked.

FEATURES
Mini 3-in-1 display
Alarm sensitivity range: 0.01-20% obs/m
Built-in temperature and humidity sensors
2 x event thresholds for temperature and humidity
4 alarm levels (Alert, Action, Fire 1, Fire 2)
2/4 relay outputs (configurable)
Expansion relays (optional)
RS485 network, support Modbus RTU open protocol



SPECIFICATION	
Smoke detection principle	• Light scattering mass detection • High power blue LED
Smoke detection range	0.02-25%/m
Alarm sensitivity range	0.01-20%/m
Temp. detection range	0-100°C
Humidity detection range	0-100% RH
Coverage	• HM1 : 1600 m² • HM2 : 2000 m²
Pipe length (linear/branch)	• HM1: 105 m/260 m • HM2: 2 x 105 m/2 x 260 m
No. of sampling holes EN54-20 Class A/B/C)	• HM1 : 6/16/32 • HM2 : 12/32/64
Alarm levels and time delay	
Alert	(0-60 seconds)
Action	(0-60 seconds)
Fire-1	(0-60 seconds)
Fire-2	(0-60 seconds)
Environment smoke learning	• 24 hours, 365 days non-stop smoke background level learning
Flow detection principle	Heat mass detection
Flow monitoring	• Pipe flow normalise to 100% • Flow high and flow low fault • Adjustable flow detection sensitivity

APPROVALS
EN 54-20 approved.

NOTE: Per EN 54-20 Class A Sensitivity. Please refer to Sensis design manual for the details about pipe length and the number of sampling holes.

Sensis® Cobalt HM1, HM2

Single or Dual Zones Aspirating Smoke Detector

Datasheet

ELECTRICAL SPECIFICATION

Aspirator speed	10 speed adjustable
Relay output	• HM1 : 2 relays (configurable) • HM2 : 4 relays (configurable) • Rating: 2 A @ 30 Vdc
Expansion relays (optional)	• HM1 : 4 relays (configurable) • HM2 : 8 relays (configurable) • Rating: 2 A @ 30 Vdc
General purpose inputs	• HM1 : 1 x GPIs (configurable) • HM2 : 2 x GPIs (configurable)
Power (@Aspirator speed 1-10)	• 24 ±4.8 Vdc • HM1 : 115 mA~157 mA • HM2 : 230 mA~314 mA
Communication	• RS485 Network • Maximum number of devices on network: 250 • Maximum cable length for all devices on network: 1.2 km • Support Modbus RTU open protocol
Event logs	• Number of events: 180,000 • Event type: Alarm/Fault/Operation/ Smoke/Flow/Temp./Humidity

OPERATING CONDITIONS

Device operating temp.	0° to 40°C (32° to 104°F)
Sampling air temp.	-20° to 60°C (-4° to 140°F)
Humidity	10-95% RH non-condensing

MECHANICAL SPECIFICATION

Dimensions	321.7(h) x 154(w) x 97.4(d) mm (12¾"(h) x 6"(w) x 3¾"(d))
IP rating	IP51
Weight	• HM1 : 2.2 kg (4¾ lb) • HM2 : 2.3 kg (5 lb)

PART NO.

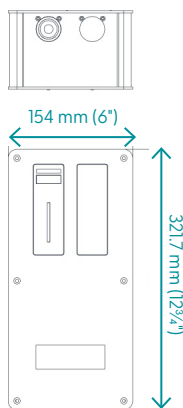
DESCRIPTION

HM1	Single Zone ASD
HM2	Dual Zones ASD
Expansion I/O	4 relays / 1 GPI

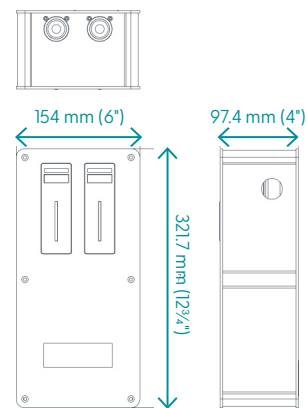
WARNING: The temperature sensor in this device can detect temperatures up to 100 °C, but **the device is designed to operate only within a maximum ambient temperature of 60 °C.** Operating the device above 60 °C may result in malfunction, reduced performance, or permanent damage. Please ensure the device is used within its specified operating range.

DIMENSIONS & MOUNTING

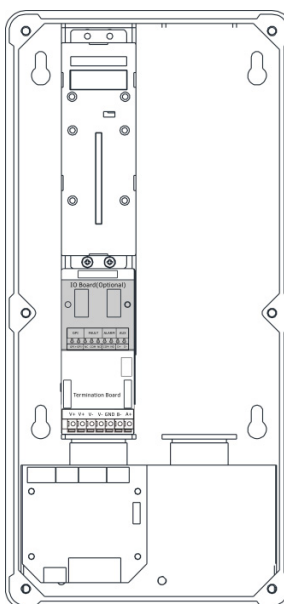
HM1



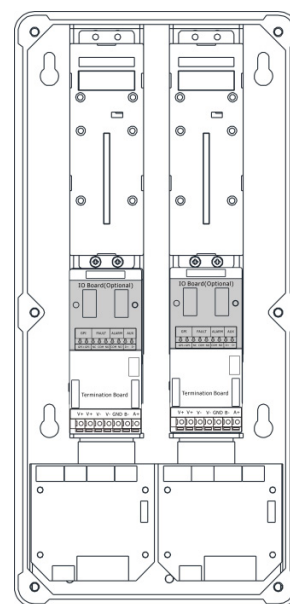
HM2



Internal structure



Internal structure



SCAN THE QR CODE
TO EXPLORE THE SENSIS
PRODUCT RANGE



FFE Limited, 9 Hunting Gate, Hitchin, Hertfordshire SG4 0TJ, UK
t: +44 (0) 1462 444 740 w: ffeuk.com

FFE Limited, 1455 Jamike Ave Ste 200, Erlanger, KY 41018-3147, USA
t: +1 859 957 1570 w: ffeuk.com

Specifications and wiring information are provided for information only and are believed to be accurate. FFE Ltd assumes no responsibility for their use. Data and design are subject to change without notice. Installation and wiring instructions are shipped with the products and should always be used for actual installation. For more information, contact your Sales Representative.
Document Part No: 24-0439-01