Orbis

Optical/Heat Multisensor Detector

Product overview

Product	Optical/Heat Multisensor Detector
Part No.	ORB-OH-13001-APO
Product	Optical/Heat Multisensor Detector with flashing LED
Part No.	ORB-OH-13003-APO

Compliance*

CE   LPCB   VdS   BOSEC

SBSC INTYGAD PRODUKT   FG   CSIRO

Product information

The Orbis Optical⁄Heat Multisensor Detector is recognised as a good detector for general use but is more sensitive to fast burning, flaming fires – including liquid fires – than optical detectors.

They can be readily used instead of optical detectors but should be used as the detector of choice for areas where the fire risk is likely to include heat at an early stage in the development of the fire.

The Multisensor detector has two sensors, one for smoke and one for heat with the alarm decision derived from either sensor or combination of both.

- Responds well to fast-burning, flaming fires
- Transient rejection algorithms reduce false alarms
- Automatic drift compensation with DirtAlert™, a yellow flashing LED, to easily identify dirty detectors
- Red flashing LED at start up confirms the device is operating. SensAlert™, yellow flashing LED indicates faulty operation
- FasTest™ takes just four seconds to test and confirm detectors are functioning correctly

Technical data

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

Detection principle		Smoke: Photo-electric detection of light scattered by smoke particles Heat: Temperature-dependent resistances.
Sampling frequency		Once every four seconds
Operating voltage		8.5 V dc to 33 V dc
Supply Wiring		Two wire supply, polarity sensitive
Maximum polarity reversal		200 ms
Power up time		< 20 seconds
Minimum 'detector active' voltage		6 V
Power-up surge current at 24 V		95 μA
Average quiescent current at 24 V		95 μA
Alarm current	12 V	20 mA
	24V	40 mA
Alarm load		600 Ω
Holding voltage		5 V – 33 V
Minimum holding current		8 mA
Minimum voltage to light alarm LED		5 V
Alarm reset voltage		< 1 V
Alarm reset time		One second
Alarm indicator		Integral indicator with 360° visibility
Remote output LED (-) characteristic		1.2 kΩ connected to negative supply
Operating and storage temperature		-40°C to +70°C
Humidity (no condensation or icing)		0% to 98% RH
Effect of atmospheric pressure on optical sensor		None
Effect of wind speed		None
IP Rating		IP44
Standards and approvals		CPR, LPCB, VdS, BOSEC, SBSC, FG, CSIRO
Dimensions		97 mm diameter x 31 mm height
Weight		75 g detector
Materials		Housing: White flame-retardant polycarbonate Terminals: Nickel plated stainless steel

Compliance*
Part No. ORB-OH-13001-APO – CPR, LPCB, VdS, BOSEC, SBSC
Part No. ORB-OH-13003-APO – CPR, LPCB, BOSEC, FG, CSIRO

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EMC Directive 2014/30/EU

The Orbis Optical/Heat Multisensor Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this data sheet.

A copy of the Declaration of Conformity is available from the Apollo website: www.apollo-fire.co.uk
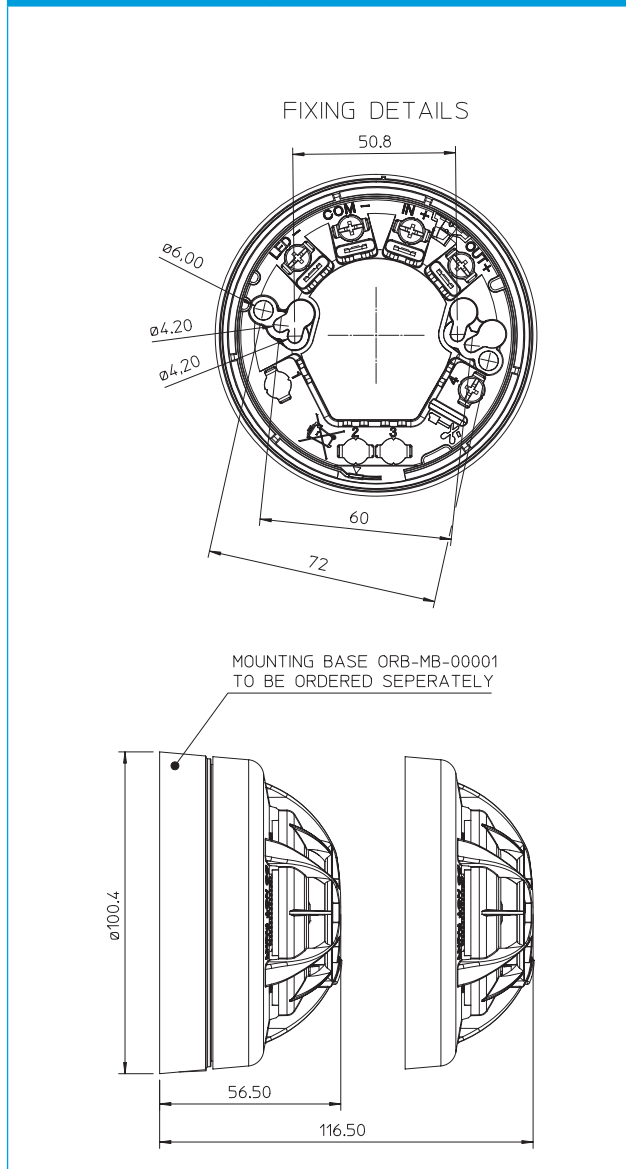
Conformity of the Orbis Optical/Heat Multisensor Detector with the EMC Directive, does not confer compliance with the directive on any apparatus or systems connected to them.

Construction Products Regulation 305/2011/EU

The Orbis Optical/Heat Multisensor Detector complies with the essential requirements of the Construction Products Regulation 305/2011/EU.

A copy of the Declaration of Performance is available from the Apollo website: www.apollo-fire.co.uk

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Orbis Optical /Heat Multisensor Detector dimensional drawing

FIXING DETAILS

MOUNTING BASE ORB-MB-00001 TO BE ORDERED SEPERATELY

Orbis detectors; LED status

Feature	Description	Red LED status	Yellow LED status
StartUp™	Confirms that the detectors are wired in the correct polarity	Flashes once per second	No flash
FasTest™	Maintenance procedure, takes just four seconds to functionally test and confirm detectors are functioning correctly	Flashes once per second	No flash
DirtAlert™	Shows that the drift compensation limit has been reached	No flash	Flashes once per second in StartUp (Stops flashing when StartUp finishes)
SensAlert™	Indicates that the sensor is not operating correctly	No flash	Flashes every four seconds (Flashes once per second in StartUp)
Normal operation	At the end of StartUp and FasTest (without flashing LED as standard)	No flash	No flash
Flashing LED version	Detectors red LED flashes in normal operation (at the end of FasTest)	Flashes every four seconds	No flash