



conventional wisdom

orbis™

Ampac Range of Conventional Detectors

- ✓ *Photo Optical,*
- ✓ *Multisensor and*
- ✓ *Heat detectors*



Orbis state-of-the-art range of conventional detectors come with a host of features:

- ✓ Unique TimeSaver Base and its range of options
- ✓ StartUp feature ensures correct wiring installation
- ✓ FasTest for quick functional testing
- ✓ DirtAlert indicates when the drift compensation limit has been reached
- ✓ DustDefy and intelligent algorithms reduce unwanted alarms
- ✓ Self diagnostics ensure that the sensor is always working
- ✓ Approval to AS7240 parts 5 & 7
- ✓ Approval to EN54 parts 5 & 7



World Leader of Innovative Solutions in Fire Detection and Alarm Systems

Orbis is an entirely new range of conventional detectors – aesthetically, mechanically and electronically.

Designed from a 'back to first principles' approach these detectors are shaping the future of conventional detector technology.

A modern, stylish detector packed with practical features that make installation, commissioning and maintenance easy and efficient, and new sensing and operating technologies that improve reliability and detection.

The Orbis range comprises an optical smoke detector, a multisensor smoke detector, heat detectors and a choice of bases.

Features explained

- ✓ TimeSaver Base® is a completely new design that provides installers with an open working area and single quadrant terminals;
- ✓ E-Z Fit Slots allow base to be fixed in position without removing mounting screws, using a simple sliding action.
- ✓ Continuity Link enables voltage testing of zone wiring prior to commissioning;
- ✓ StartUp™ uses a flashing red LED to confirm that the devices are correctly installed;
- ✓ FastTest® maintenance procedure takes just four seconds to test and confirm that smoke and heat detectors are functioning correctly;
- ✓ DirtAlert™ uses a flashing yellow LED to show that the drift compensation limit has been reached;
- ✓ DustDefy™ system prevents dust ingress while maintaining airflow;
- ✓ Transient Rejection uses algorithms to filter out temporary abnormal readings, helping to reduce unwanted alarms;
- ✓ SensAlert® uses a flashing yellow LED to indicate that the sensor is not operating correctly;
- ✓ Wide Angle Optics give a good response to fires generating white or black smoke;

Optical



OPERATING PRINCIPLES

Photo-electric detection of light scattered by smoke particles over a wide range of angles. The optical arrangement comprises an infra-red emitter with a prism and a photo-diode, with a wide field of view, at 90° to the light beam. The detector's microprocessor uses algorithms to process the sensor readings.

Multisensor



OPERATING PRINCIPLES

Photo-electric detection of light scattered by smoke particles over a wide range of angles. The optical arrangement comprises an infra-red emitter with a prism and a photo-diode, with a wide field of view, at 90° to the light beam. The detector's microprocessor uses algorithms to process the sensor readings. The heat sensing element increases the sensitivity of the detector as the temperature rises.

Heat



OPERATING PRINCIPLES

Measurement of heat by means of a thermistor.

Classes of Heat Detectors

EN54	Australian Equivalent
BR	Type A
A1R	-
A2S	Type B
BS	-
CR	Type C
CS	Type D

Common specifications

Sampling frequency:

Once every 4 seconds

ELECTRICAL

Supply voltage:

8.5–33V DC

Supply wiring:

2 wires, polarity sensitive

Maximum polarity reversal:

200ms

Power-up time:

<20 seconds

Minimum 'detector active' voltage:

6V

Switch-on surge current at 24V:

120µA

Average quiescent current at 24V:

65µA

Alarm current:

At 12 volts 20mA

At 24 volts 40mA

Alarm load:

600Ω

Holding voltage:

5–33V

Minimum holding current:

8mA

Minimum voltage to light alarm LED:

5V

Alarm reset voltage:

<1V

Alarm reset time:

1 second

Remote output LED (-)characteristic:

1.2kΩ connected to negative supply

MECHANICAL

Material:

Detector and base moulded in white polycarbonate.

Alarm Indicator:

Integral indicator with 360° visibility

Environmental:

Operating and storage temperature

-40°C to +70°C (no condensation or icing)

Humidity:

0% to 98% relative humidity (no condensation)

Wind speed:

Unaffected by wind

Atmospheric pressure:

Insensitive to pressure IP rating to EN 60529: 1992*: 23D

Electromagnetic Compatibility:

The detector meets the requirements of BS EN 50 081-1 for emissions and BS EN50 130-4 for susceptibility, marked

*The IP rating is not a requirement of EN 54 since smoke detectors have to be open in order to function. An IP rating is therefore not as significant as with other electrical products.

Dimensions and weight of detector:

97mm diameter x 31mm height, 75g

Dimensions and weight of detector in base:

100mm diameter x 46mm height, 135g

Dimensions and weight of detector:

97mm diameter x 42mm height, 80g

Dimensions and weight of detector in base:

100mm diameter x 57mm height, 140g

Dimensions and weight of detector:

97mm diameter x 36mm height, 70g

Dimensions and weight of detector in base:

100mm diameter x 51mm height, 130g



TimeSaver Base® in 4 (four) variants

- ✓ TimeSaver Base - Standard
- ✓ LX – TimeSaver Base without continuity unit
- ✓ Diode – when active End-Of-Line (EOL) devices are required
- ✓ Relay – relay is energised when detector LED is active
- ✓ Orbis S60/65 Adaptor – allows Orbis detector to be fitted to Apollo Series 60/65 base



www.ampac.net

Due to Ampac's commitment to continuous improvement specifications provided may change without notice

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