**CONVENTIONAL - Photoelectric Smoke Detector**

**Model ECO1003 A**

### Overview

**Features**
- Low profile design
- Low current draw
- Automatic drift compensation
- Operates on 12 and 24VDC Systems
- Remote alarm test feature
- Easy Maintenance
- Range of detector bases available
- Remote LED Option
- Approved to EN54 – 7:2000 (Amendment 1)
- Approved to MED 96/98/EC (Amendment 2009/26/EC)
- Extended warranty

### Description

The ECO1003 A photoelectric smoke detector belongs to System Sensor’s ECO1000 range of detectors. ECO1000 is a range of conventional detectors, which have been produced using the latest in manufacturing technology and supplied with an array of advanced features, making them ‘better by design’.

The ECO1003 A photoelectric smoke detector uses a state of the art optical chamber combined with an application specific integrated circuit (ASIC) to provide quick and accurate detection of fires. A combination of the unique chamber design and other technically advanced features will significantly extend the service intervals before cleaning of the detector becomes necessary.

A laser-based hand held Remote Test Unit can be used in conjunction with the range of ECO1000 detectors for alarm test purposes. The unit transmits a coded message, preventing spurious alarms being generated by other laser-based devices. With a range of several metres, the hand held test unit provides a fast and simple way of remotely alarm testing the range of ECO1000 detectors and removes the need for any direct physical access to the detector by the user.

The ECO1003 A detector has an integral LED, which illuminates to provide a local alarm signal. This latches on, and remains illuminated until the detector is reset by a momentary power interruption. An optional remote LED annunciator may be used to repeat any alarm signal.

A variety of detector bases can be used with the ECO1000 A detector, providing application flexibility and compatibility with a wide range of Fire Alarm Control Panels. All bases are fitted with a shorting spring to permit circuit testing prior to fitting the detector and have a tamper resistant feature, which when activated prevents removal of the detector without the use of a tool.

All System Sensor products are covered by our extended 3-year warranty.
Electrical Specifications

Operating Voltage Range 8 to 30VDC (Nominal 12/24VDC)

Maximum Standby Current @25°C 60µA @ 24VDC

Maximum Permissible Alarm Current 80mA (current limited by control panel)

Environmental Specifications

Application Temperature Range (see note) -30°C to 70°C

Humidity 5% to 95% Relative Humidity (non-condensing)

Mechanical Information

Height 32.5mm (plus 9.5mm for standard base)

Diameter 102mm

Weight 75g (plus 45g for standard base)

Wire Gauge for Terminals 0.4mm² to 2.0mm²

Colour Approximates to RAL9016

Material ABS

Product Range

Bases
ECO1000B Standard Base
ECO1000BR Resistor base 470 Ohm
ECO1000DB Deep base
ECO1000DBR Deep resistor base 470 Ohm
ECO1000DBREL12L Relay base 12V Latching
ECO1000BREL12LSD Relay base 12V Latching with Shottky diode
ECO1000BREL24L Relay base 24V Latching
ECO1000BREL24LSD Relay base 24V Latching with Shottky diode

Accessories
ECO1000RTU Remote Test Unit

Other Detectors
ECO1002 A Photoelectric/Thermal Detector
ECO1005 A Rate of Rise & 58°C Fixed Temperature

Notes

Bases with other resistor values are available to suit the requirements of most Fire Alarm Control Panels.
**General information**

**Manufacturing Location:** System Sensor Trieste
Pittway tecnologica S.r.l.
Via Caboto 19/3
34147 Trieste, Italy

**Model Numbers:** ECO1003A

**Product description:** PHOTO DETECTOR ECO1000 SERIES

**Product Life Cycle:** Life span expectancy of >20 years (assuming that environmental conditions have been taken into consideration and the detectors are regularly maintained)

**Material Content**

<table>
<thead>
<tr>
<th>Name of Part</th>
<th>Material</th>
<th>RoHS</th>
<th>Hazardous</th>
<th>Recycling Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust cover</td>
<td>polystyrene</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Re-used or recycled</td>
</tr>
<tr>
<td>Cover thermal/photo thermal</td>
<td>ABS</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Recycled by regrinding into granules and blending with virgin material or landfilled</td>
</tr>
<tr>
<td>Swirl chamber cover</td>
<td>ABS; PC+ABS - FR</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Recycled or landfilled</td>
</tr>
<tr>
<td>Swirl chamber base</td>
<td>ABS+Stirene- ETF - Stirene (SEBS); ABS+Stirene- ETF - Stirene (SEBS)</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Not recyclable - landfilled</td>
</tr>
<tr>
<td>Light pipe</td>
<td>PMMA</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Re-used or recycled</td>
</tr>
<tr>
<td>Cover</td>
<td>ABS</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Re-used or recycled</td>
</tr>
<tr>
<td>Printed Circuit Board</td>
<td>CEM3 (Epoxy, Glass) SAC305 (Copper Coating, Solder)</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Recycled or landfilled</td>
</tr>
<tr>
<td>Printed Circuit Board Components</td>
<td>Metals, Plastics, Ceramics, Tin Stainless Steel, Tin Brass</td>
<td>Yes</td>
<td>Non-hazardous</td>
<td>Recycled or landfilled</td>
</tr>
</tbody>
</table>

**Energy Consumption**

ECO1003A

Avg. Standby Power: 1,08 mW (45 µA at 24 V) at 25°C one communication every 5 sec. With LED blink enabled

Max. Alarm Power (LED on): 1,92 W (80mA at 24VDC)

**Environmental Permit**

System Sensor Trieste Facility (address as above) approved to ISO 14001. These products do not require an environmental permit.

**Packaging**

Primary packaging: Single Box: Cardboard

Secondary packaging: Masterbox (5 Singlebox per M.box) and Shippingbox (28 M.box per S.box): cardboard, Tape (polypropylene)

Transportation packaging: Pallet (wooden platform), wrapping (polyethylene 04)

**Additional Information**

The purpose of this report is to provide information on the environmental aspects of the product, emphasis being on the material content and the energy consumption. Since there are not any emissions of harmful substances during the use of this product or in the manufacturing process of it, it is not necessary to specify these factors in this report. Also the transportation emissions are not included.