ECO 1000
SYSTEM SENSOR

conventional detectors

System Sensor®

Advanced Ideas. Advanced Solutions

A major advance in
conventional smoke detector technology

ECO 1000
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Key Features

- Photo–thermal model provides outstanding protection

- Unique laser-based remote test unit – no need for ladders or towers

- EN 54 Certified (2000 edition)

- Photoelectric, photo–thermal and thermal detectors

- Improved chamber design minimises the effects of dust contamination

- 8 to 30VDC operating voltage range provides compatibility with both fire and security systems

- –30 to +70°C operating temperature range

- Choice of bases, including a 12V relay version

- Automatic drift compensation

System Sensor, the world's largest manufacturer of conventional and analogue addressable fire detectors, has used its immense experience, design capabilities and technical abilities in the development of the ECO1000 family of conventional detectors. Combining advanced technology with state of the art volume manufacturing, the ECO1000 combines features normally only found in top of the range analogue detectors with the ease of use and cost effectiveness of a conventional unit.

The ECO1000 family has been independently tested and certified to the latest European standard, EN54 pt5/pt 7 2000, giving specifiers, fire and security installers and end users complete confidence that the products are suitable for the protection of life and property.

The range boasts many features previously only found in the more sophisticated – and therefore expensive – analogue addressable models. System Sensor is the first manufacturer to include such features in a conventional detector, improving the levels of protection and reducing false alarm rates in the smaller and less complex systems where the complexity of an analogue addressable system is not required.

Routine testing has traditionally involved physical access to the installed unit, a time-consuming procedure often requiring the use of step ladders or long poles. The ECO1000 is tested from ground level using a laser based remote alarm test unit. The commissioning or service engineer directs the modulated laser beam at the detector's LED; the unit responds to the commands and latches into alarm. What could be simpler?

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The family consists of a photoelectric smoke detector, a combined photo-thermal smoke and heat detector, fixed 58°C and 78°C thermal detectors and rate of rise thermal detectors, all fitting common low profile or deep bases. A low profile, unobtrusive design blends in with both traditional and modern premises, enabling them to be installed in any location without problems.

The wide operating voltage of the ECO1000 family allows the detectors to be used on 24V fire systems and 12V security systems, greatly extending the potential application sof the range. 12V latching and non-latching bases are available to ensure compatibility with the two most common control technologies found in security systems.

The ECO1002 photo-thermal detector is a true multi-criteria unit. The output levels from both the optical chamber and the thermistor are continually monitored by the onboard processor, using algorithms developed specifically for the unit. An alarm signal is enabled in the detector once the processor is satisfied that an incipient fire has been detected. By using a combination of inputs, the incidence of false alarms is reduced while at the same time, the response time to a rapidly developing fire is also reduced.

The ECO1003 photoelectric smoke detector's chamber has been specifically designed to be highly tolerant to the long term build-up of dust and other airborne contaminants. This high level of immunity significantly reduces the potential for unwanted alarms caused by settled dust increasing the detector's sensitivity. Additional immunity to unwanted alarms arising from short-lived transients is also provided through the use of special signal processing.

The end result is an extremely stable detector with the potential to extend significantly the period before cleaning is required.

ECO1004 and ECO1005 thermal detectors are available as fixed 58°C and 78°C devices and as rate of rise units. The fixed operating point units are suitable for use in areas where rapid changes of temperature can normally be expected; the rate of rise device in areas where the temperature will normally be relatively stable.

The world's largest smoke detector manufacturer

Outline Technical Specifications

- Operating voltage: 8 – 30VDC (nominal 12 or 24VDC)
- Detector height: 42mm (optical) or 50mm (thermal)
- Detector diameter: 102mm
- Detector weight: 75g

- Single multi-function LED indicator
- Standard base with remote LED output
- Dust tolerant optical chamber design
- Unique remote laser test unit

ECO1002 combined photo–thermal

Typical standby current @ 25°C:	60µA @ 24V
Maximum alarm current:	80mA (limited by control panel)
Maximum humidity:	95% RH
Operating temperature:	−30 to +70°C
Weight excluding base:	78g

Approved to EN54–7:2000; EN54–5:2000 Class A1R; CEA4021

ECO1003 photoelectric detector

Typical standby current @ 25°C:	45µA @ 24V
Maximum alarm current:	80mA (limited by control panel)
Maximum humidity:	95% RH
Operating temperature:	−30 to +70°C
Weight excluding base:	75g

Approved to EN54–7:2000

ECO1004T 78°C fixed temperature detector

Typical standby current @ 25°C:	60µA @ 24V
Maximum alarm current:	80mA (limited by control panel)
Maximum humidity:	95% RH
Operating temperature:	−30 to +70°C
Weight excluding base:	70g

Approved to EN54–5:2000 Class BS

ECO1005 rate of rise thermal detector

Typical standby current @ 25°C:	55µA @ 24V
Maximum alarm current:	80mA (limited by control panel)
Maximum humidity:	95% RH
Operating temperature:	−30 to +70°C
Weight excluding base:	70g

Approved to EN54–5:2000 Class A1R

ECO1005T 58°C fixed temperature detector

Typical standby current @ 25°C:	55µA @ 24V
Maximum alarm current:	80mA (limited by control panel)
Maximum humidity:	95% RH
Operating temperature:	−30 to +70°C
Weight excluding base:	70g

Approved to EN54–5:2000 Class A2S

ECO1000 bases

ECO1000B	Standard base
ECO1000BSD	Standard base with Shottky diode
ECO1000BR	Resistor base 470 Ohm
ECO1000BRSD	Resistor base 470 Ohm with Shottky diode
ECO1000DB	Deep base
ECO100DBR	Deep resistor base 470 Ohm
ECO100DBRSD	Deep resistor base 470 Ohm with Schottky diode
ECO1000BREL12L	Relay base 12V Latching
ECO1000BREL12NL	Relay base 12V Non–latching
ECO1000BREL24NL	Relay base 24V Latching

Accessories

ECO1000RTU	Remote Test Unit
ECO1000BA1	Base Adaptor (surface-mount cabling)
ECO1000DRT	Detector Removal Tool (No-Climb fitting)

sales@sseuk.com
www.systemsensoreurope.com

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