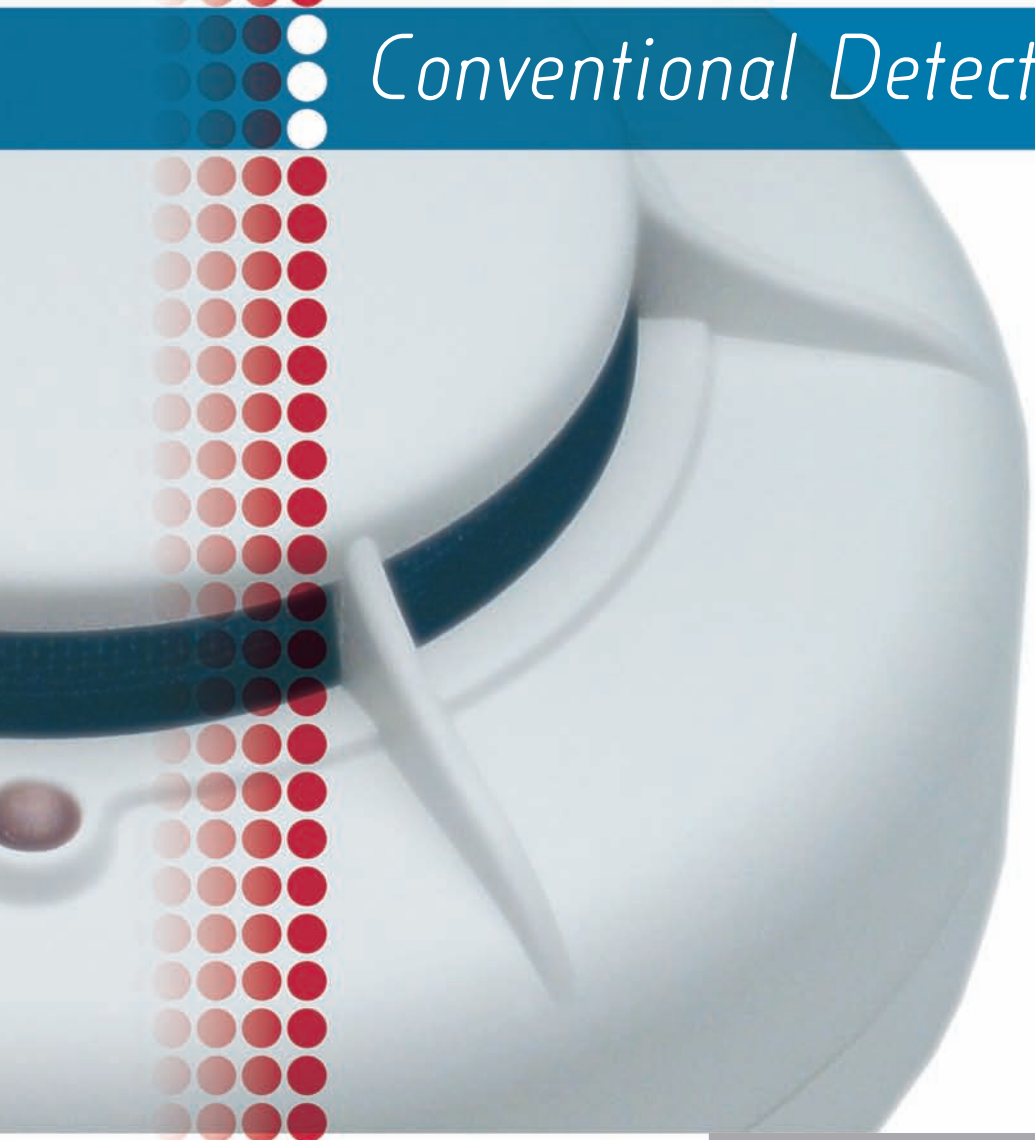
Conventional Detectors



ECO1000

SYSTEM SENSOR®

The world's finest manufacturing facility

System Sensor's European products are researched, designed and manufactured at our 10,000m² state-of-the-art facility in Trieste, Italy. Quite simply, it's the best of its kind. Advanced technology and manufacturing processes coupled with dedicated staff ensure precision manufacturing and incomparable quality control. And 100% testing ensures that nothing leaves our doors unless it's in perfect working order and capable of providing years of trouble-free protection.

We complement this unique offering with a global network of fire systems integration and distribution partners who serve end-users, consulting engineers and specifiers in more than forty countries. All share in our business expertise and, of course, our passion for perfection.

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Installation information: in order to ensure full functionality, refer to the installation instructions as supplied.

Outline Technical Specification

- Operating voltage: 8 - 30VDC (nominal 12 or 24VDC)
- Detector height: 42mm (optical) or 50mm (thermal & photo-thermal)
- Detector diameter: 102mm
- Detector weight: from 70g
- Single, multi-function LED indicator
- Standard base with remote LED output
- Dust tolerant optical chamber design
- Unique remote laser test unit

A major advance in conventional smoke detector technology

By combining advanced technology often found in top of the range analogue detectors with the ease of use and cost effectiveness of a conventional unit, System Sensor brings the ECO1000

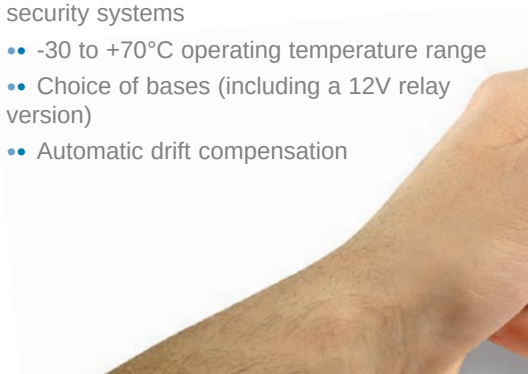
The range boasts many features previously only found in the more sophisticated - and therefore expensive – analogue addressable models. System Sensor is the first manufacturer to include such features in a conventional detector, improving the levels of protection and reducing false alarm rates in the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

Simple Routine Testing

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

Key Features

- Microprocessor based products provide a more intelligent solution
- Special algorithms provide both a constant sensitivity level between service intervals and eliminate spurious alarms resulting from electrical noise
- Photo–thermal model provides outstanding protection
- Laser-based remote test unit – no need for ladders and towers
- EN54 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



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. The low profile, unobtrusive design blends in with both traditional and modern premises, enabling them to be installed in any location.

ECO1002

The ECO1002 photo-thermal detector is a true multicriteria 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.

ECO1003

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 shortlived 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.

ECO1004T, ECO1005T, ECO1005

The ECO1000 family consists of three thermal detectors. 58°C fixed temperature (ECO1005T), 78°C fixed tempertature (ECO1004T), and a rate of rise detector (ECO1005).

The fixed operating point units are suitable for use in areas where rigid changes of temperature can normally be expected; the rate of rise device in areas where the temperature will usually be pretty stable.

	EC01002 Photo-thermal detector	EC01003 Photo-electric detector	EC01005T 58°C/EC01004T 78°C fixed temperature detectors	EC01005 rate of rise thermal detector
Operating voltage:	8V - 30V dc	8V - 30V dc	8V - 30V dc	8V - 30V dc
Typical stand-by current @ 25°C:	60uA at 24V dc	45uA at 24V dc	55uA/60uA at 24V	55uA/60uA at 24V
Maximum alarm current:	70mA at 28V	70mA at 28V dc	70mA at 28V dc	70mA at 28V dc
Operating temperature range:	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C
Thermal element trigger point:	+58°C	N/A	+58°C/+78°C	Rapid Change or +58°C
Maximum humidity:	95%RH	95%RH	95%RH	95%RH
Colour finish:	Approximates to RAL9016	Approximates to RAL9016	Approximates to RAL9016	Approximates to RAL9016
Case material:	ABS	ABS	ABS	ABS
Diameter:	102mm	102mm	102mm	102mm
Detector height (including base):	50mm	42mm	50mm	50mm
Weight:	78g	75g	70g	70g
Weight (including base):	123g	120g	115g	115g
Wire gauge for terminals:	0.4 –2mm²	0.4 –2mm²	0.4 –2mm²	0.4 –2mm²