



LIFE SAFETY & INCIDENT MANAGEMENT

Conventional 2-Wire Smoke & Heat Detectors

EC2 series

7270-1657-0523
7272-1657-0524

Overview

The Edwards conventional photoelectric smoke and heat detectors are interchangeable head and base detectors using Optica smoke sensing technology and high accuracy heat sensor that provides outstanding stability and excellent response to a wide range of fires.

Like their Signature series counterparts, EC2 smoke detectors feature a photoelectric chamber using Optica sensing technology providing multi criteria response discriminating real smoke from other nuisance sources. A single tri-color LED located on the housing provides alarm, trouble and standby indications

The EC2 series consist of 3 models;
EC2-OS is a multi criteria photoelectric smoke detector delivering a wide sensitivity range with discrimination to nuisance events and built in environmental compensation.

EC2-OSH is a multi criteria photoelectric smoke and heat detector delivering a wide sensitivity range with discrimination to nuisance events and built in environmental compensation but also includes a heat sensor with a 135 fixed threshold and rate of rise compensation.

EC2-H is a heat only detector comprised of a heat sensor with a 135 fixed threshold and rate of rise compensation.

EC2 series detectors are complimented by a range of standard and relay bases for a variety of electrical box applications

And, if they become dirty over time, the EC2 Series detectors automatically adjust the alarm threshold through built-in drift compensation.

Standard Features

- Self-diagnostic capability continually monitors operation
- Meets NFPA 72 sensitivity test requirements
- Head and terminal base design (base sold separately)
- Automatic drift compensation
- Tri-color status LED, solid red for alarm, flashing yellow for trouble and flashing green for standby
- Low-profile design blends into the ceiling
- Advanced nuisance discrimination from non fire sources like cooking smoke and non condensing water vapor

Engineering Specifications

The Edwards EC2 Series photoelectric smoke detector, is a low profile, self-diagnostic, two-wire detector that monitors its own sensitivity and operational status. The detector meets NFPA 72 field sensitivity testing requirements without the need for external meters. Built-in drift compensation automatically adjust the sensitivity if the detector gets dirty. Normal sensing occurs every 2 seconds. A sophisticated algorithm is started when a signal exceeding the alarm threshold value is sensed. To prevent nuisance conditions, multiple LED wavelengths and angles are used to determine alarm from real smoke conditions above the threshold level initiate an alarm. The patented optical sensing chamber oriented downward to sample air flow allowing for less maintenance and easy cleaning.



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Technical Specifications

Electrical	
Voltage	6.5 — 33VDC
Maximum ripple (peak to peak)	10% (Vp - p)
Typical standby current (24V)	88µA
Typical alarm current (24V)	up to 60 mA max, if not limited by control panel
Photoelectric Sensitivity	0.5% to 4.36%/ft
Operating temperature	32°F to 120°F (0°C to 49°C) for photo 32°F to 100°F (0°C to 38°C) for Heat & Photo/Heat
Operating humidity range	0 to 95% Non-condensing
RFI immunity	20 V/m min; 0-1000 MHz
Remote LED output current	5 mA min, 8.5 mA max
Drift compensation adjustment	1.0%/ft. max
Compatibility	FX5, FX10, SIGA-UM/MAB, RZI16-2, IDC8-4

Environmental	
Heat Sensor Ratings (EC2-H & EC2-OSH)	Fixed 135°F/ Rate of rise 15°F/min., >105°F (8.3°C/min., >40.6°C), FM response - Quick
Maximum wind velocity	0 to 4000 ft/min
Field wiring size	12-18 AWG
Reset voltage	2.5V max
Reset time	1 second max
UL two-wire compatibility identifier	S10A

Physical	
Color	White head and base
Detector head dimensions	4" D x 1.75" H (10 cm x 4.44 cm)

Regulations	
Listing	UL 268 7th ed, ULC, FM, CSFM

Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
EC2-OS	Smoke detector head only, photoelectric, two-wire	0.4 (0.16)
EC2-OSH	Smoke & Heat detector head only, photoelectric, two-wire w/integral 135 heat	0.4 (0.16)
EC2-H	Heat detector head only, 135 fixed/ROR	0.4 (0.16)
EC2-SB	Standard base, 4 terminals, 4" dia.	0.2 (0.09)
EC2-SB4	Standard base w/trim skirt, 4 terminals, 6" dia.	0.2 (0.09)
EC2-RB	Relay base, 4 terminals, aux. relay, 4" dia.	0.2 (0.09)
EC2-RB4	Relay base w/trim skirt, 4 terminals, aux. relay, 6" dia.	0.2 (0.09)
SIGA-LED	Remote Indicator, single gang, white	0.2 (0.09)
SIGA-TS	Trim Skirt (optional for non 4" bases)	0.1 (0.04)
SIGA-VA	Detector Cleaning Tool	0.2 (0.09)
SIGA-RTA	Detector Removal tool	0.2 (0.09)