EC Series Smoke and Heat Detectors

EC30U-3 PHOTOELECTRIC, EC10U-3 IONIZATION AND EC20 HEAT DETECTORS

EC20FTU-3, EC20RRU-3

EC30U-3

FEATURES

- **SENSITIVE TO VISIBLE AND INVISIBLE PRODUCTS OF COMBUSTION**
- **STABLE, RELIABLE DESIGN**
- **NON-POLARIZED**
- **AT-A-GLANCE ALARM INDICATION**
- **RATE-COMPENSATED HEAT DETECTOR TECHNOLOGY**

DESCRIPTION

The EC Series of low-profile plug-in smoke and heat detectors measure-up to the quality and performance standards that have made Edwards fire detection products the industry's best price-performance buy available today. Meticulously engineered to deliver high-performance features, superb reliability, and unbeatable quality, the EC Series is a low-cost solution for conventional detection applications.

The EC30U-3 photoelectric detector distinguishes itself as a performance leader in its class with its highly stable design that resists air movements caused by heating and air conditioning, and changing environmental conditions. This makes it a reliable performer ideally suited to modern building interiors.

The EC10U-3 ionization detector distinguishes itself as a performance leader in its class with automatic compensation that dramatically reduces the risk of nuisance alarms caused by changes in temperature, humidity and atmospheric pressure. While many comparable detectors routinely fall into alarm or trouble states when these conditions fluctuate, the EC10U-3 automatically compensates without compromising detection performance. The net result is a degree of reliability unparalleled among conventional detectors on the market today.

The EC20FTU-3 is a high-performance fixed-temperature heat detector with an alarm threshold of 135° F (58° C).

The EC20RRU-3 also has an alarm threshold of 135° F (58° C), but it incorporates an advanced rate compensation sensing element that causes the detector to become more sensitive when an increase in the rate of temperature rise is detected.

Thanks to their advanced thermistor technology, EC Series heat detectors are ideal for a wide range of applications where smoke detection is inappropriate. The EC20RRU-3 rate-of-rise detector is well suited to areas such as kitchens and shower rooms, where the ambient temperature is relatively constant, but where steam and smoke are present. The EC20FTU-3 fixed-temperature detector is ideal for laundries and industries where fluctuations in ambient temperature is expected.

Edwards recommends that all detectors be installed according to the latest recognized edition of national and local fire alarm codes.

The installation and maintenance advantages of EC Series detectors add value to these products throughout their service life. Their twist-and-lock design makes short work of installation and maintenance operations. A plastic breakout on the detector housing optionally prevents removal from the base except with a special tool.

A bright, easy-to-see LED on the detector glows steady when it is in alarm, thus eliminating much of the guesswork responding to front-panel indications. If a detector is removed for any reason while the panel is in its normal state, a zone trouble condition will result. This ensures the integrity of the alarm system at all times.
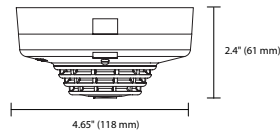
EC SERIES SMOKE DETECTORS SPECIFICATIONS
continues...

	EC30 Photoelectric Detector	EC10 Ionization Detector	EC20 Heat Detector
Operating Voltage Range	14 - 30 Vdc	14 - 30 Vdc	14 - 30 Vdc
Normal Operating Current	62μA	50μA	64μA
Alarm Current	100 mA (max.) limited by control panel	100 mA (max.) limited by control panel	100 mA (max.) limited by control panel
Alarm Sensitivity Range	1.38 - 3.08% obs/ft	0.65 to 1.08% obs/ft	135° F (58° C)
Test Feature	Sensitivity reading using Test/Picker Tool	Sensitivity reading using Test/Picker Tool	–
Ion Source	–	0.85μC Americium	–
OperatingEnvironment			
Altitude	Not Applicable	0 - 6,000 ft above sea level	Not Applicable
Temperature	32° F to 100° F (0° C to 38° C)	32° F to 100° F (0° C to 38° C)	32° F to 100° F (0° C to 38° C)
Humidity	20 - 95% RH (non condensing)	20-95% RH (non condensing)	20-95% RH (non condensing)
Air Velocity	0 - 5,000 ft/min (manufacturer rated) 0 - 300 ft/min (UL listed)	0 - 300 ft/min (manufacturer rated & UL listed)	Not Applicable
Storage Environment Temperature	32° F to 120° F (0° C to 49° C)	32° F to 120° F (0° C to 49° C)	32° F to 120°F (0° C to 49° C)
Maximum Spacing	30 ft (9.1 m) centers	30 ft (9.1 m) centers	50 ft (15.2 m) centers

MOUNTING

Standard base mounts to the following electrical boxes:

- North American 3 1/2 inch octagon boxes
- North American 4 inch octagon boxes
- North American 1-gang electrical boxes
- European 1-gang boxes with 60.3 mm fixing centers
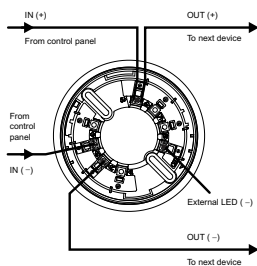- European BESA boxes

2.4" (61 mm)

4.65" (118 mm)

WIRING

The detector mounting bases
will accept #18 AWG (0.75mm²), #16 (1.0mm²), #14 AWG
(1.5mm²) and #12 AWG (2.5mm²) wire sizes.

CSBU-1: Standard detector base

Provides plug-in tamper-resistant mounting. Includes screw
terminals for connection of
installation wires.

IN (+)
From control panel
OUT (+)
To next device

From control panel

IN (−)

External LED (−)

OUT (−)
To next device

Terminal	Description
1	Not used
2	Out (-)
3	In (-)
4	Not used
5	In/out (+)
6	Not used
7	Not used
8	LED

ORDERING INFORMATION

Model	Description
EC30U-3	Low-profile plug-in photoelectric detector
EC10C-3	Low-profile Plug-in Ionization Detector
EC20FTU-3	Low-profile Plug-in Fixed Temperature Heat Detector
EC20RRU-3	Low-profile Plug-in Rate-of-Rise Heat Detector
CSBU-1	Standard detector base
CSB4U-1	4" standard detector base
CRB4U-1	4" relay detector base, 1.25A @ 30 Vdc
C-TRIM	Trim skirt for CSBU-1 base
EC-LED	Remote alarm LED indicator