Low-profile Plug-in Heat Detectors
EC20FTU-3, EC20RRU-3

Shown with base, ordered separately

Overview

EC Series low-profile plug-in 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, EC Series heat detectors are a low-cost solution for electronic conventional heat detection applications.

The installation and maintenance advantages of EC Series heat 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 heat detectors are manufactured to strict international ISO 9001 standards. All electronics employ surface mount technology (SMT) for smaller size and greater immunity to RF noise. A corrosion-resistent conformal coating is used to seal components against dust and humidity.

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.

Standard Features

- **Rate-compensated technology**
  Reduces the effects of thermal lag that slows the response of standard rate-of-rise and fixed temperature detectors.

- **At-a-glance alarm indication**
  An on-board high-intensity LED glows bright red when the unit is in alarm, making response a simple and straightforward operation.

- **Non-polarized**
  Simplifies installation of field wiring.

- **Simple to install, difficult to vandalize**
  Twist-and-lock design saves installation and maintenance time. Field-configurable locking mechanism prevents unauthorized removal.

- **Flexible mounting options**
  Compatible standard base mounts to 1-gang, 4" octagonal, BESA, or European single-gang boxes.

- **Attractive appearance with clean, modern lines**
  Low-profile design blends easily with surroundings, extending less than 2½" (61 mm) from the ceiling, including base.

Application

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.

DATA SHEET **85001-0553**
Not to be used for installation purposes. **Issue 2**

Caution
Not a life safety device

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

The heat sensor in this device only provides a source of information to supplement the information provided by photoelectric or ionization smoke detectors which may be located nearby. The heat detector by itself does NOT provide life safety protection. Under no circumstances should heat detectors be relied on as the sole means of fire protection.
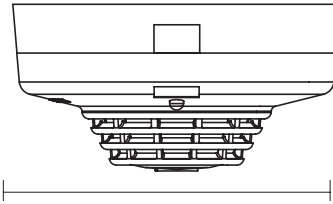
This detector will NOT sense fires that start in areas where heat cannot reach the detector. Heat from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

Heat detectors should be installed according to latest recognized edition of national and local fire alarm codes.
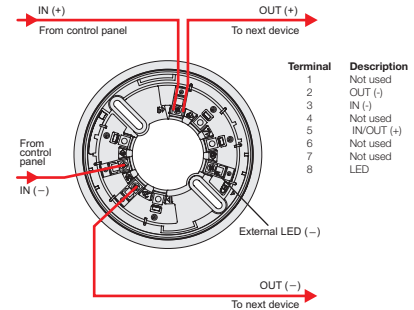
Mounting

Standard base mounts to the following electrical boxes:

- North American 3½ 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

Wiring

CSBU-1 Standard detector bases provide plug-in tamper-resistant mounting and include screw terminals for connection of installation wires. Bases will accept #18 AWG (0.75mm²), #16 (1.0mm²), #14 AWG (1.5mm²) and #12 AWG (2.5mm²) wire sizes.

Terminal	Description
1	Not used
2	OUT (-)
3	IN (-)
4	Not used
5	IN/OUT (+)
6	Not used
7	Not used
8	LED

Compatibility

Panel model	Zone model	Maximum Detectors		Zone ID	
		UL	ULC	UL	ULC
QuickStart	ZA8-2, ZB16-4	39	30	100	100
EST3	IDC8/4	46	30	00	0.0
FireShield	CPU	23	23	100	100

Specifications

Model	EC20FTU-3 Fixed Temperature	EC20RRU-3 Rate-of-Rise
Incorporated Rate-of-Rise	No	Yes
Operating Voltage Range	14 - 30 Vdc	
Operating Current	64µA	
Alarm Current	100 mA (max.) limited by control panel	
Alarm Threshold	135° F (58° C)	
Operating Environment	Temperature: 32° F to 100° F Humidity: (0° C to 38° C) 20-95% RH (non condensing)	
Storage Environment	Temp.: 32° F to 120°F (0° C to 49° C)	
Maximum Spacing	50 ft (15.2 m) centers	
Construction	White molded high-impact fire-retardant plastic	
UL Compatibility ID	A	
Compatible Bases	See Ordering Information	

Ordering Information

Model	Description	Shipping Wt., lb (kg)
EC20FTU-3	Low-profile Plug-in Fixed Temperature Heat Detector	0.25 (0.11)
EC20RRU-3	Low-profile Plug-in Rate-of-Rise Heat Detector	
CSBU-1	Standard detector base	0.11 (0.05)
CSB4U-1	4" Standard detector base	
CRB4U-1	4" Detector base with relay	
CSBU-3	Detector base with resistor	
EC-LED	Remote Alarm LED	0.4 (0.18)
C-TRIM	Trim skirt for standard base	0.4 (0.18)
C-PST	Detector picker/sensitivity tester	1.4 (0.64)

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