Eazy Beam

Beam Detector

Ravel ®
Reliability at reach

Product Overview

This device can be installed easily and quickly by a single person in single point of wiring & commissioning. It has special feature to compensate automatically for natural building movement to continuously maintaining alignment by building movement tracking technology.

Salient Features

- Auto alignment
- Easy Installation
- Standalone Detector

Features

- Alignment mode switch, alignment directional buttons and configuration switches for alarm response threshold
- 2 Green LEDs and 1 Yellow LED for alignment status.
- System status   : Green LED flashing every 10 sec in normal condition
  Red LED flashing every 10 sec in alarm condition
  Yellow LED flashing every 10 sec for obscuration or every 5 sec for contamination in Fault condition
- Flat front face with enclosed optics. Cleaning the optics does not affect alignment.
- UL approval Pending.

Specifications

Operating voltage	:	14 to 36 VDC
Operating current	:	All operational modes – 5mA; Fast alignment mode – 33mA
Operating temperature	:	-20 to +55°C
Storage temperature	:	-40 to +85°C
Relative humidity (non-condensing or icing)	:	0 to 93%
IP rating	:	Ip55
Housing flammability rating	:	UL94 V0 polycarbonate

Optical Specifications

Fault level / Rapid obscuration (Δ ≤ 2 seconds)	:	≥85%
Maximum angular misalignment of Reflective Detector	:	±0.5°
Maximum angular misalignment of Reflector	:	±5°
Maximum angular alignment of Reflective Detector	:	±4.5° (±70° with adjustment bracket accessory)

Detection Performance

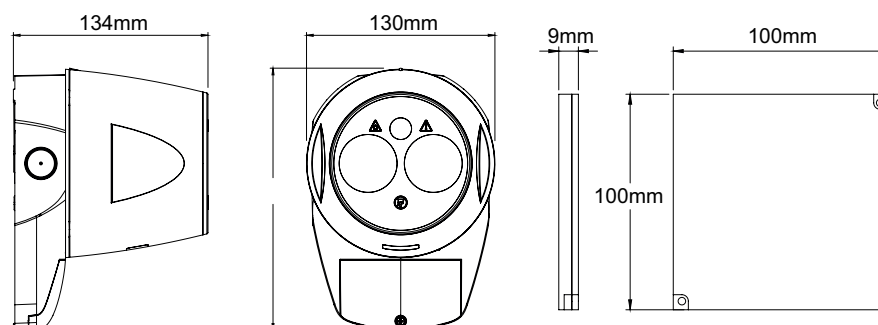|		
Detection range	:	0 to 50m 0 to 120m with Reflective Long Range Kit
Alignment method	:	Laser assisted, Auto-Alignment™. Manual alignment – optional setting
Auto-Alignment™ protocol	:	Background check, Box search, Adjust and Centre
Building Movement Tracking™	:	Compensates for natural shifts in alignment from building movement*
Contamination Compensation	:	Compensates for gradual build-up of contamination on the optical surfaces
Light Cancellation Technology™	:	Compensates for high levels of sunlight and artificial lighting
Optical wavelength – smoke detection	:	850nm near infrared (invisible)
Integrated laser – laser alignment	:	650nm visible. Class IIIa <5mW
Dynamic Beam Phasing	:	Allows beam detectors to be mounted facing each other with the reflectors in the middle. Eliminates false alarms caused by crosstalk between beams
Signal output	:	Individual Alarm and Fault relays (VFCO) 2A @ 30 VDC

Programmable User Settings

Alarm response threshold levels	:	25% (1.25dB) – Fastest response to smoke 35% (1.87dB) – Default value 55% (3.46dB) – High immunity to false alarms, slow response to smoke 85% (8.23dB) – Highest immunity to false alarms, slowest response to smoke. Configured via the integrated user interface
Delay to Alarm	:	10 seconds, for momentary partial obstruction of the beam path
Delay to Fault	:	10 seconds, for momentary obstruction of the beam path

Design Parameters

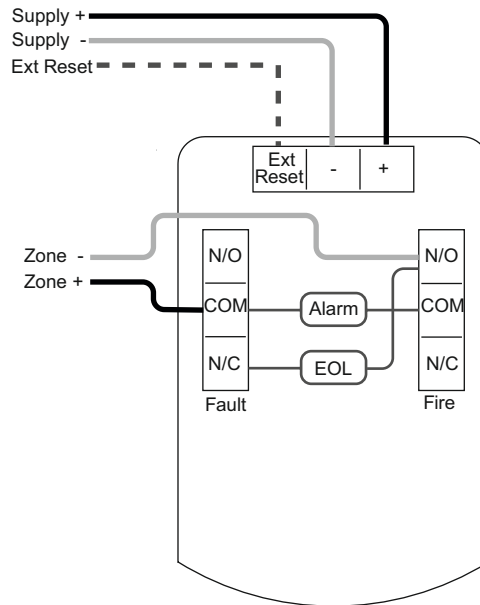|		
Separation distance between Detector and Reflector	:	5 to 50m 50 to 120m with Reflective Long Range Kit
Beam path clearance	:	1m in diameter from centre line between Detector and Reflector
Detector dimensions	:	130W x 181H x 134D in mm (see diagram)
Reflector dimensions	:	Up to 50m separation distance – Single reflector 100mm x 100mm x 9mm Up to 120m separation distance – Four reflectors arranged in a square patter 200mm x 200mm x9mm
Product weight	:	Detector – 0.7kg; Reflector – 0.1kg
Multi-detector arrangement	:	Dynamic Beam Phasing allows for Detectors to face each other with the reflectors in the middle
Housing colour	:	White RAL9016, UV stable

Field Wiring

Cable gauge and type	:	2 core, dedicated, 0.5 to 1.6mm (24 to 14 AWG) System compatible with fireproof and non-fireproof cable meeting local installation standards
Cable entry	:	3 knock-out locations capable of accepting M20, ½" or ¾" glands
	:	4 drill-out locations capable of accepting glands up to 21mm diameter

Test And Maintenance

Alarm test	:	Optical alarm test using Commissioning and Maintenance Kit accessory

Ordering information

Model No	Part No	Description
EazyBeam	R60-024-1547	Beam Detector - 50Mtrs
EazyBeam	R60-024-1560	Beam Detector - 120Mtrs

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*Ravel reserve the right to change the specification without prior notice.

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