Conventional Auto-Aligning Beam Detector

Instruction Sheet

R10112GB0

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1 Conventional Auto-Aligning Beam Detector

The Conventional Auto-Aligning Beam Detector is a compact detector for detecting smoke in large open areas such as warehouses, theatres, churches and sports centers.

It comprises of a ground level Controller, a Detector Head with an operating range of 8m-50m and a single prism. The operating range of each detector head can be increased up to 100 m by using the Extension kit (FFS0672 5275).

One controller can operate up to a maximum of two separate detector heads.

1.1 Function

A built-in laser provides rapid initial alignment and thereafter the detector head will continuously automatically align and compensate for any building movement.

The status of each detector can be monitored through the Controller which is sited at ground level to avoid the need for expensive lifting gear.

The detector head operates both as a transmitter and a receiver. A well-defined IR beam is projected to a prism mounted on the opposite wall, which is reflected back to the receiver. In the event of smoke partially obscuring the light an imbalance between the transmitted and received light will occur.

Distances from 18 to 50m can be protected with one prism. To protect distances from 50m to 100m, four prisms are required. In distances from 8 to 18 m short range mask on a single prism is required.

1.2 Features

- Ground level Controller avoids expensive lifting gear
- Automatic compensation for building movement
- Laser assisted alignment for quick installation
- Up to 2 detectors per Controller
- Each detector adjusts from 8m to 100m
- EN54:12 approved

The detector is factory set to a beam obscuration of 35% which is the best setting for most factories and warehouses. The setting can be changed to 25% for offices and clean areas such as theatres or to 50% for hostile areas such as mills or foundries. The detector compensates automatically for gradual contamination of the lenses in order to avoid false alarms. The detector is non-latching and resets 30 seconds after an alarm event ceases and in 3 seconds after the removal of a fault.

1.3 Electrical considerations

The Conventional Auto-Aligning Beam Detector requires a 14 to 28VDC power supply. It can be interfaced onto the Esmi Sense FDP and FX 3NET system using addressable input modules. See connection drawings on page 6.

Power to the detector can be supplied using an EN54 approved power supply or Esmi Sense FDP and FX 3NET control panels - please refer to the Quick Start Guide supplied with the product for details.

1.4 Further information

The Conventional Auto-Aligning beam detector must be installed in accordance with the Quick Start Guide supplied with the product. This guide contains more information on the following topics:

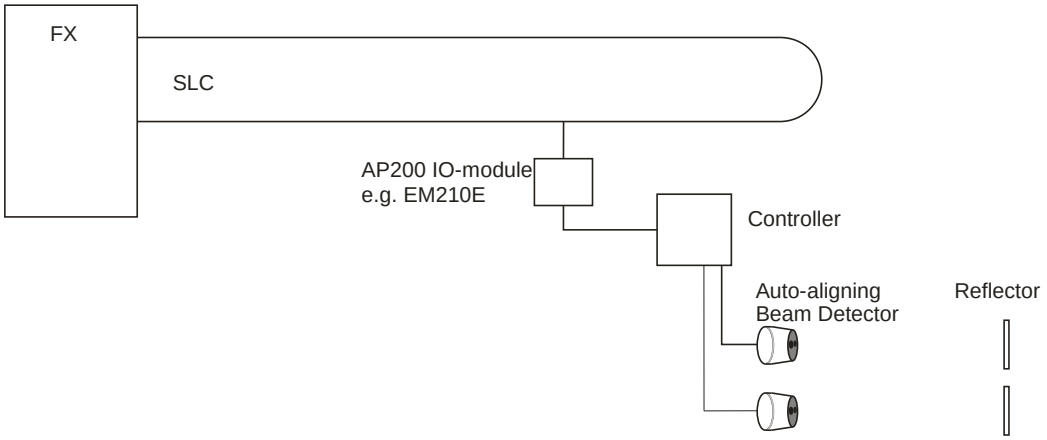
- System design
- Installing beam detectors
- Targeting, aligning and commissioning the Auto-Aligning Beam Detector
- Troubleshooting

1.5 LED fault indication

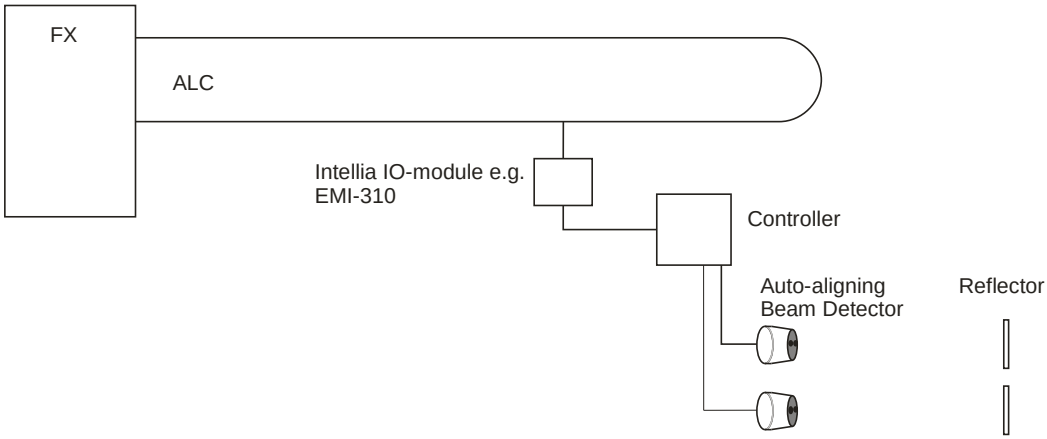
A fault is indicated by the amber LED flashing every 10 seconds.

If the drift compensation function has reached its limit the amber LED flashes once every 10 seconds and an error code is displayed on the ground level Controller. The detector will continue to function, but maintenance procedures should be carried out at the earliest opportunity.

1.6 Connection to addressable loop

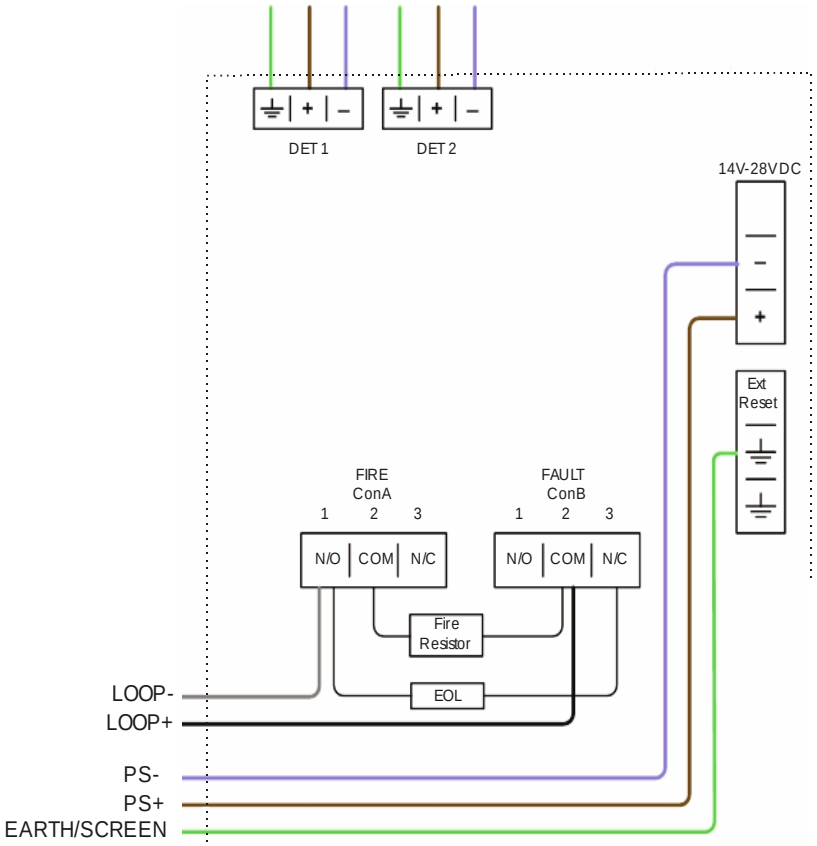


Connection of Auto-aligning Beam Detector to FX-SLC addressable loop.



Connection of Auto-aligning Beam Detector to FX-ALC addressable loop.

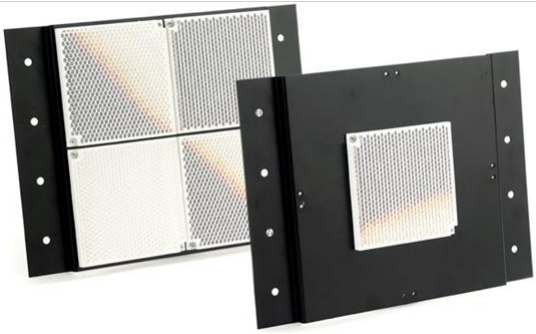
1.7 Wiring diagram



Wiring diagram in Controller unit

1.8 Accessories

Universal Bracket (for use with detector head and prism mounting plates)



Surface Mounting Plate for prisms

Prism Mounting Plate (4 prisms 50-100m)

Prism Mounting Plate (1 prism 18-50m)

1.9 Dimensions

Product	Dimensions w*h*d	Weight
Controller with base	202*230*87mm	1000g
Detector with base	134*134*131mm	500g
Universal bracket	135*135*71mm	200g
Reflector	100*100*10mm	100g

1.10 Product codes

Description	Code
Conventional Auto-Aligning Beam Detector	FFS06725273
Additional Detector Head 8-50m	FFS06725274
Extension Kit 100m	FFS06725275
Universal Bracket (for use with detector head and prism mounting plates)	FFS06725276
Surface Mounting Plate for prisms	FFS06725277
Prism Mounting Plate (4 prisms 50-100m)	FFS06725278
Prism Mounting Plate (1 prism 18-50m)	FFS06725279