

Conventional Auto-Aligning Beam Detector



Product overview

Product	Auto-Aligning Beam Detector
Part No.	29650-069

Compliance



Product information

The Conventional Auto-Aligning Beam Detector is a compact detector for detecting smoke in large open areas such as warehouses, theatres, churches and sports centres. It is made up of a ground level controller, a detector head with an operating range of between eight and 50 metres and a single prism. The operating range may be increased to 100m by using the 29600-526 Extension Kit.

- Ground level controller - avoids expensive lifting gear
- Allows for two detector heads per system controller
- Each detector adjusts from eight to 100 metres
- Laser assisted alignment for quick installation
- Automatic compensation for building movement
- Contamination Compensation

Technical data

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Supply voltage	14 V – 36 V dc
Operating current:	
1 Detector Head	6 mA
2 Detector Heads	8.5 mA
Alignment mode current with 1 or 2 Detector Heads	37 mA
Response threshold:	
Default	35%
Range	10-60%
Operating distance	8 - 100 m
Optical wavelength	850 nm
Delays (user settable)	
Default	35%
Alarm or Fault	2 - 30 seconds
Operating temperature	-10°C to 55°C
Storage temperature	-40°C to 85°C
Humidity (no condensing or icing)	0% to 93% RH
IP Rating	IP54
Contact rating	100 mA @ 36 V dc
Cable length (system controller to detector)	100 m - 2 core
Standards & approvals	EN 54-12, CPR, VdS
Dimensions:	
Controller with base	230mm height x 202mm width x 87mm depth
Detector with base	131mm height x 134mm width x 134mm depth
Universal bracket	135mm height x 135mm width x 71mm depth
Reflector	100mm height x 100mm width x 10mm depth
Weight:	
Controller with base	1000g
Detector with base	500g
Universal bracket	200g
Reflector	100g
Housing material	Polycarbonate
Colour	Grey/Black

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Operation

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 infra-red (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. On interrogation by the control panel the detector will then transmit an alarm value. To protect distances from 50 m to 100 m four prisms are required.

The operating range of each detector can be increased up to 100 metres by using the extension kit which consists of three additional prisms. For large areas an additional detector head can operate off of one controller.

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 three seconds after the removal of a fault.

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Electrical Considerations

The Conventional Auto Aligning Beam Detector requires a 14 to 36 V dc power supply. It can be interfaced into an Apollo addressable loop using an Intelligent Switch Monitor- Part No. SA4700-100 / SA4700-300, or an XP95 Mini Switch Monitor - Part No. 55000-760. Power to the detector can be supplied using an EN 54 approved power supply or directly from the addressable loop - please refer to the Quick Start Guide supplied with the product for details.

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.

EMC Directive 2014/30/EU

The Conventional Auto-Aligning Beam Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this data sheet.

A copy of the Declaration of Conformity is available from Apollo on request.

Conformity of the Conventional Auto-Aligning Beam Detector with the EMC Directive does not confer compliance with the directive on any apparatus or systems connected to it.

Construction Products Regulation 305/2011/EU

The Conventional Auto-Aligning Beam Detector complies with the essential requirements of the Construction Products Regulation 305/2011/EU.

A copy of the Declaration of Performance is available from Apollo on request.

Accessories Part Nos.

29650-070	Additional detector head 8 - 50 m
29600-526	Extension Kit 100 m
29600-527	Universal bracket - for use with detector head and prism mounting plates
29600-528	Surface mounting plates for prisms
29600-529	Prism mounting plate - 4 prisms 50 - 100 m
29600-530	Prism mounting plate - 1 prism 8 - 50 m