



# Auto-Aligning Beam Detector With Laser Alignment

## FUNCTION

The Auto-Aligning beam detector is a compact detector for detecting smoke in large open areas such as warehouses, theatres, churches and sports centres. 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 100m by using the Extension Kit, which comprises three additional prisms. For large areas, up to a maximum of four separate detector heads can operate off of one controller.

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

## FEATURES

- Ground level Controller avoids expensive lifting gear
- Automatic compensation for building movement



Part no 29600-524

- Laser assisted alignment for quick installation
- Up to 4 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.



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The detector is non-latching and resets 30 seconds after an alarm event ceases and in 3 seconds after the removal of a fault.

### ELECTRICAL CONSIDERATIONS

The Auto-Aligning Beam Detector requires a 14 to 28V DC power supply. It can be interfaced onto the Apollo addressable loop using an Apollo Switch Monitor Unit (55000-843) or Mini Switch Monitor (55000-760). Please refer to PP2414 for details. Power to the detector can be supplied using an EN54 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.

### FURTHER INFORMATION

The 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

This guide is available on request or can be down-loaded from the Apollo website, [www.apollo-fire.co.uk](http://www.apollo-fire.co.uk). If further assistance is required, please contact the Technical Sales department on 02392 492 412.

Part no	Description
29600-524	Auto-Aligning Beam Detector 8-50m
29600-525	Additional Detector Head 8-50m
29600-526	Extension Kit 100m
29600-527	Universal Bracket (for use with detector head and prism mounting plates)
29600-528	Surface Mounting Plate for prisms
29600-529	Prism Mounting Plate (4 prisms- 50-100m)
29600-530	Prism Mounting Plate (1 prism 8-50m)

### TECHNICAL DATA

Supply Voltage	14-28 V DC
Supply Current (1 detector head)	
Prism targeting mode (FAST) @24V DC	50mA
Prism targeting mode (SLOW) @24V DC	16mA
Alignment mode @24V DC	10mA
Run mode (quiescent) @24V DC	10mA
Alarm (LED illuminated)	10mA
Fault (LED illuminated)	10mA
Alarm thresholds	
25%	1.25dB
35%	1.87dB
50%	3.00dB
Operating temperature	-10°C to 55°C
Humidity (Non-Condensing)	0 to 93%RH
IP rating	54
Material	Flame Retardant ABS
Colour	Grey/Black
NB: The operating current (constant) for each additional detector is min 1.8mA, typical 2.0mA	

### DIMENSIONS AND WEIGHT

Dimensions (controller with base)	
Width	202mm
Height	230mm
Depth	81mm
Weight	1000g
Dimensions (detector with base)	
Width	135mm
Height	135mm
Depth	135mm
Weight	500g
Dimensions (universal bracket)	
Width	135mm
Height	135mm
Depth	71mm
Weight	200g
Dimensions (reflector)	
Width	100mm
Height	100mm
Depth	10mm
Weight	100g