

Photobeam 5000

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Invented for life



- ▶ Quad beam detection
- ▶ Environmental discrimination circuit
- ▶ Beam power control to reduce cross-talk

The Photobeam 5000 Series consists of the single channel quad beam ISC-FPB1-W60QS, ISC-FPB1-W120QS, ISC-FPB1-W200QS, and the four channel quad beam ISC-FPB1-W60QF, ISC-FPB1-W120QF, and ISC-FPB1-W200QF detectors with separate transmitters and receivers.

The detector series uses four pulsed infrared beams that are designed to activate an alarm when all four beams are simultaneously blocked. False alarm immunity is increased by the utilization of four beams compared to single or dual beam models.

The detector series also features interlocked upper and lower beams, signal voltage LED, and optional environmental discrimination circuitry.

System overview

Consisting of a separate transmitter and receiver, it is designed to activate an alarm when an intruder passes within the direct line of sight between the transmitter and receiver.

Functions

Mounting features

Mounting and installing the detector is now easier than ever. Install the detector through easy-to-use mounting hole locations which provide an enlarged entry point of access to accept small to large, single or multiple cable set wires. Fastening screw locations eliminate the need for unnecessary crawling or bending during installation.

Multiple Channel Operation (4-channel models only)

Configure the detectors for up to four different channels. This allows multiple units to be used near one another without the possibility of receiver cross-talk. This is particularly useful when stacking multiple beam sets.

High Density mode (4-channel models only)

The High Density mode allows you to add an additional zones of protection to detect larger objects that only partly interrupt the beams of individual devices. This feature allows an alarm condition to be generated when beam pairs are interrupted on adjacent devices but not all four beams are interrupted on one device.

Selectable AND/OR mode (4-channel models only)

This feature allows an added level of detection by generating an alarm when four beams from two units are blocked simultaneously. Environmental conditions require higher false alarm tolerance against smaller objects passing through the detector's line of sight. To do this, set the AND/OR gate option to AND gate mode that only causes an alarm condition when all four infrared beams are interrupted simultaneously. High Security applications might require the detection of smaller objects passing through the detector's line of sight. To do this, set the AND/OR gate option to OR gate mode that causes an alarm condition when either the upper two beams or the lower two beams are interrupted.

Dust/insect cover features

The included foam sealing ensures that the detectors are properly secured from insects and other environmental elements such as humidity and temperature fluctuations. The improved cover design includes water flow channels to prevent water and dirt from accumulating in front of optic components, and eliminates the need for additional weatherproofing solutions.

Environmental Discrimination Circuit

Monitors gradual loss of signal due to dust, fog, rain, and snow. Normally closed output opens when signal loss reaches 90%. May be field configured to bypass alarm relay when activated.

Beam Power Control

The transmitter power output is field adjustable allowing the user to eliminate reflections and cross-talk from other units. This feature improves catch performance and false alarm immunity, and allows for reliable installation in most applications.

Test features

High visibility reception level LED improves ease of installation. Flash rate increases as installation alignment improves. Voltage output terminals also allow for improved alignment accuracy. Optical module alignment switch to allow for independent adjustment of upper and lower beam pairs.

Dual Modulated beam

The Dual Modulated Beam eliminates interference from external noise sources such as sunlight, car headlights, electrical interference, etc.

Certifications and approvals

Region	Certification	
Europe	CE	EMC, RoHS [ISC-FPB1-W60QF, ISC-FPB1-W120QF, ISC-FPB1-W200QF with or without BH12T heater]
	CE	EMC, RoHS [ISC-FPB1-W60QS, ISC-FPB1-W120QS, ISC-FPB1-W200QS with or without BH12T heater]

Technical specifications**Photobeam**

	ISC-FPB1-W60QS	ISC-FPB1-W120QS	ISC-FPB1-W200QS
Maximum indoor range	120 m (393 ft)	240 m (787 ft)	400 m (1312 ft)
Maximum outdoor range	60 m (196 ft)	120 m (393 ft)	200 m (656 ft)

*** Single channel quad beam series**

	ISC-FPB1-W60QF	ISC-FPB1-W120QF	ISC-FPB1-W200QF
Maximum indoor range	120 m (393 ft)	240 m (787 ft)	400 m (1312 ft)
Maximum outdoor range	60 m (196 ft)	120 m (393 ft)	200 m (656 ft)

*** Four channel quad beam series****Environmental considerations**

Operating temperature	-25°C to +60°C (-13°F to +140°F) (96% or less)
Storage temperature/humidity	-30°C to +70°C (-22°F to +158°F) Relative Humidity 96%
IP rating (indoor)	IP66

Mounting considerations

Location	Pole mount or surface mount
Horizontal adjustability	±90°
Vertical adjustability	±10°
Distance between upper and lower lens	245 mm (9.64 in)

Dimensions

Dimensions	103 mm x 398 mm x 99 mm (4.05 in. x 15.66 in. x 3.89 in.)
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Power requirements

	ISC-FPB1-W60QS	ISC-FPB1-W120QS	ISC-FPB1-W200QS
Current draw	90 mA	95 mA	100 mA

* Single channel quad beam series

	ISC-FPB1-W60QF	ISC-FPB1-W120QF	ISC-FPB1-W200QF
Current draw	120 mA	124 mA	128 mA

* Four channel quad beam series

Voltage	10.5 VDC to 28 VDC.
Alarm output	Form C relay (COM, NC, NO) (dry contact) Duration – 2 sec Contact capacity – DC30V, 0.2A (resistive load) Resistance – 3.0 Ω or less
Tamper output	Form B, normally closed relay (dry-contact) Duration – Open when cover is open Contact capacity – DC30V, 0.1A (resistive load) Resistance - 3.0 Ω or less
EDC output	Form B, normally closed relay (dry-contact) Duration – Open when EDC is active Contact capacity - DC30V, 0.2A (resistive load) Resistance - 3.0 Ω or less

Interruption time

Interruption time	40 ms – 500 ms (adjustable)
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Trademarks

All hardware and software product names used in this document are likely to be registered trademarks and must be treated accordingly.

Ordering information

ISC-FPB1-W60QS

Single channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 60 m (196 ft) max outdoor range, 120 m (393 ft) max indoor range.
Order number **ISC-FPB1-W60QS**

ISC-FPB1-W120QS

Single channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 120 m (293 ft) max outdoor range, 240 m (787 ft) max indoor range.
Order number **ISC-FPB1-W120QS**

ISC-FPB1-W200QS

Single channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 200 m (656 ft) max outdoor range, 400 m (1312 ft) max indoor range.
Order number **ISC-FPB1-W200QS**

ISC-FPB1-W60QF

Four- channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 60 m (196 ft) max outdoor range, 120 m (393 ft) max indoor range.
Order number **ISC-FPB1-W60QF**

ISC-FPB1-W120QF

Four- channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 120 m (293 ft) max outdoor range, 240 m (787 ft) max indoor range.
Order number **ISC-FPB1-W120QF**

ISC-FPB1-W200QF

Four- channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 200 m (656 ft) max outdoor range, 400 m (1312 ft) max indoor range.
Order number **ISC-FPB1-W200QF**

Accessories

BH12T Photobeam Heater

Reduces the effects of frost, intense fog, cold, and damp conditions on photoelectric beam detectors. Shipped in packages of two.
Order number **BH12T**

ISC-FPB1-W30DS Photoelectric Detector

Provides an outdoor range of 30 m (100 ft) and an indoor range of 60 m (200 ft).
Order number **ISC-FPB1-W30DS**

ISC-FPB1-W60DS Photoelectric Detector

Provides an outdoor range of 60 m (200 ft) and an indoor range of 120 m (400 ft).
Order number **ISC-FPB1-W60DS**

ISC-FPB1-W90DS Photoelectric Detector

Provides an outdoor range of 90 m (300 ft) and an indoor range of 180 m (600 ft).
Order number **ISC-FPB1-W90DS**

ISC-FPB1-W60QS

Single channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 60 m (196 ft) max outdoor range, 120 m (393 ft) max indoor range.

Order number **ISC-FPB1-W60QS**

ISC-FPB1-W120QS

Single channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 120 m (293 ft) max outdoor range, 240 m (787 ft) max indoor range.

Order number **ISC-FPB1-W120QS**

ISC-FPB1-W200QS

Single channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 200 m (656 ft) max outdoor range, 400 m (1312 ft) max indoor range.

Order number **ISC-FPB1-W200QS**

ISC-FPB1-W60QF

Four-channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 60 m (196 ft) max outdoor range, 120 m (393 ft) max indoor range.

Order number **ISC-FPB1-W60QF**

ISC-FPB1-W120QF

Four-channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 120 m (293 ft) max outdoor range, 240 m (787 ft) max indoor range.

Order number **ISC-FPB1-W120QF**

ISC-FPB1-W200QF

Four-channel quad-beam photoelectric detector designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver. 200 m (656 ft) max outdoor range, 400 m (1312 ft) max indoor range.

Order number **ISC-FPB1-W200QF**

MP1 Metal Pole, 1 m (3 ft)

Straight metal poles measuring 1 m (3 ft) for pole mounting photoelectric detectors. Shipped in packages of two.

Order number **MP1**

MP2 Metal Pole, 1.2 m (4 ft)

Straight metal poles measuring 1.2 m (4 ft) for pole mounting photoelectric detectors. Shipped in packages of two.

Order number **MP2**

MP3 L-Curved Metal Pole

Curved metal poles for mounting to vertical surfaces for pole mounting photoelectric detectors. Shipped in packages of two.

Order number **MP3**

PC1A Weather Enclosure

Protects detectors when mounted outside. The enclosure's dimensions are 39.4 cm x 10.3 cm x 6 cm (15.5 in. x 4 in. x 2.4 in.). Shipped in packages of two.

Order number **PC1A**

PC3A Back-to-back Box

Allows back-to-back mounting of detectors on a pole. Shipped individually.

Order number **PC3A**

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