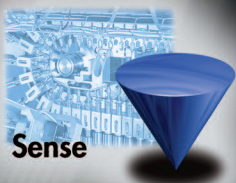


CARLO GAVAZZI
Automation Components



The BFL Series

*Infrared Light Curtains
for Elevator Door Protection*



SenseSwitchControlSafetyFieldbus

BFL, the invisible screen for your safety

The BFL series is the brand new Carlo Gavazzi infrared light curtain for lift door control.

The secure and safe operation of the closing doors in elevators is the aim of these specialised sensors. BFL light curtains detect a person or an object in order to avoid physical contact with the doors: whenever a beam is broken, the output signal generated by BFL causes the re-opening of the doors.



**Time
Saving**



**Diagnostic
Warning**



**Space
Optimization**



**Inventory
Reduction**



**Cost
Saving**



**Long Term
Reliability**

Save money and time...

Fast and economical installation, diagnostic LEDs, reliability, high immunity to light even if reflected from shiny objects, robust plastic housing means less downtime for your elevators door operations!

High technology...

Our technicians have applied the most sophisticated and up-to-date technology to make lift door control as safe and user friendly as you would like it to be. A 100% made in Italy quality is our guarantee of success, first class design and performance for a wide range of new and existing lifts.

Choose your item

Code	Diodes	Beams	IP	Output
BFL104E200I	22	104	IP65	Opto-mosfet
BFL194E200I	40	194	IP65	Opto-mosfet
BFL104E200	22	104	IP54	Opto-mosfet
BFL194E200	40	194	IP54	Opto-mosfet

Supply Specifications

Power supply	10-30 VDC 18-27 VAC rectified (23 to 27 Vp)
Rated operational current	TX max. 20 mA RX max. 10 mA

Output Specifications

Output	Opto-mosfet NC/NO - PNP/NPN/Voltage free
Protected by	Short circuit and polarity inversion

General Specifications

Operating range	0 to 4 m
Protected height	20.5 to 1850 mm
Distance between the diodes	
BFL194E200x	46.8 mm
BFL104E200x	93.6 mm
Beam pattern	
BFL104E200x	
< 70 cm:	Direct beams
70 to 140 cm:	3 beams
> 140 cm:	5 beams
BFL194E200x	
< 35 cm:	Direct beams
35 to 70 cm:	3 beams
> 70 cm:	5 beams
Light immunity	> 100 kLux
Reaction time	
BFL104E200x	~ 40 ms
BFL194E200x	~ 55 ms
Alarm OFF delay	500 ms
Transmitting signal power level	Self-adaptive
Connecting cable	Length 4 m

Distance between bottom beam and housing bottom	20.5 mm
Distance between top beam and housing bottom	1846 mm
LEDs indication	1 green/red, 1 yellow (TX) 1 green/red, 1 yellow (RX)
Indication LEDs position	Approx. 10 cm from the top of the housing
Environment (EN 60529)	
BFLxxxE200I	Degree of protection IP 65
BFLxxxE200	Degree of protection IP 54
Housing	
Dimensions	TX, RX 30 x 2001 x 9.7 mm
Material	Plastic (PC-ABS)
Weight	TX, RX Approx. 1 Kg
Mounting	
Dynamic	Standard mounting
Static	Optional KIT: BFLMOUNT
CE Marking	Yes
UL Approvals	Yes
According to	EN 81-70

Timeout function

This function allows up to 5 non-adjacent diodes to be ignored if they have been obstructed for more than 10 seconds, in order to enable detectors, defaced by vandalism, to continue working until they are repaired or replaced. BFL shows the faulty condition with the yellow LED flashing.

Blanking function

The blanking function allows to inhibit parts of the light curtain beam pattern.

If, at power-on, some LEDs are covered and this function is enabled, the BFL deactivates hidden channels and saves this configuration. After removing the cover, the BFL works normally, but without the deactivated channels.

Accessories

BFLDIN and BFLBOX

If the power supply of your system is not DC or rectified AC, Carlo Gavazzi provides the solution!

BFLDIN and BFLBOX are power supply units with an SPST output relay and a built-in buzzer.

The former is included in the Mini DIN-rail housing, suitable for both back and front panel mounting, the latter includes the BFLDIN unit and ensures the IP55 protection degree.

BFLDIN

The BFLDIN is available in two versions: BFLDIND23 and BFLDIND48.

The first one provides a power supply from 100 to 240 V AC/DC, the second one from 24 to 48 V AC/DC: BFLDIN helps you where a DC or rectified AC supply voltage is not available. Its 5A SPST relay and the built in buzzer repeat the status of the BFL output. You can program the relay working mode and the buzzer by DIP switches.



BFLBOX

If you need a much higher IP protection degree or to mount the power supply unit on the car top where a DIN rail is not available, BFLBOX is “the” solution: it includes the BFLDIN in a plastic case that can be very easily fixed with 4 screws.

Like BFLDIN, it is available in two versions: BFLBOXD23 and BFLBOXD48.



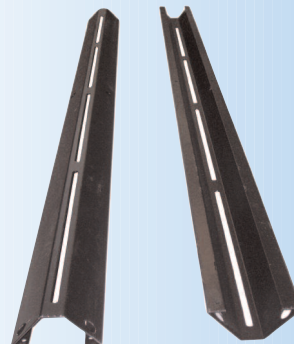
Protections

BFLPS

The BFLPS series provides the protection of our BFL lift light curtains in those freight elevators where forklift trucks might damage the light curtains.

The BFLPS is a very robust metallic protection made by iron alloy, which does not affect the performance of the light curtain!

This protection must be fixed by screws on the freight elevator cabin.



More lights, more performance, more safety, the BFL is up-to-date...

New BFL beats Old BFL 6 to 1.

We provide you 6 output solutions in one model only!

IP 65 Protection Degree.

Line available also with IP65 Protection Degree.

Housing material.

No more stealing of aluminium with the robust PC ABS plastic housing!

Blanking function.

Allows to inhibit part of the light curtain beam pattern.

Wide power supply range.

Whatever your power supply is, BFL can be connected, also with rectified only voltage.

104 or 194 criss-cross beams mean more resolution.

We offer you a new line of infrared beams protection grids with an increased number of beams.



Other important features...

Dynamic or Static mounting.

You can mount BFL either to the car door wings or to the slam post.

LEDs indications.

They make it very easy to understand if anything is not working with the BFL Series.

High movement cable.

It is certified according to the EN 50396 European Norm for low voltage cable.

Timeout function.

No system shutdown, even if the BFL device is partially damaged or locked due to vandalism.

Protected against polarity reversal and short circuit.

No more damages due to human error.

Automatic level adjustment.

You do not have to worry either about dirt and dust on the lens, or about reflections and/or cross-talk.

Totally immune to ambient light.

You can install them with direct sunlight exposure.

Designed according to EN81-70 requirements.

BFL improves the use of elevators for people with disabilities.

UL Approvals.

In accordance with the American requirements.

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