

LB 03



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One-Way Light Barrier



BIRCHER REGLOMAT

One-Way Light Barrier

Simple and reliable

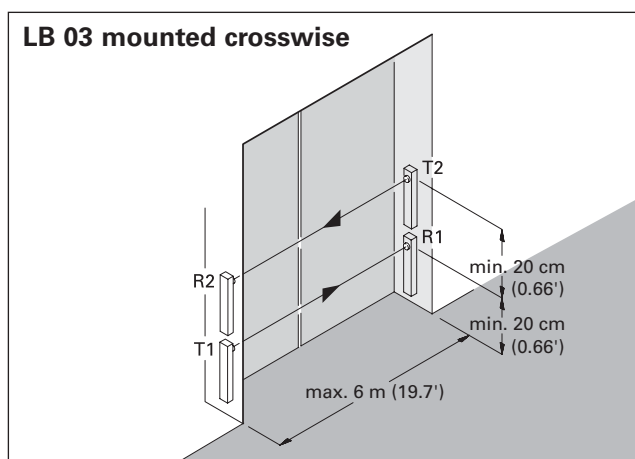
The LB 03 can be used for many applications. It is suitable for use wherever simple and reliable safeguarding by means of light barriers is required – up to a range of 6 m (19.7'). This comprehensive one-way light barrier system particularly convinces with its high functional reliability. The use of tried-and-tested technology ensures that excellent quality is achieved.

The LB 03 light barrier was developed on the basis of the proven Bircher Reglomat PLP 6 light barrier series. Like the PLP 6 series, it is characterized by its small design which enables space-saving and easy mounting, making it ideally suited for direct installation in profiles.

Installation and startup

The light barrier is suitable for use in accordance with IP65. Due to the fastening hole, it can easily be screw-fastened directly to the profile.

Of course it is also possible to mount two light barriers next to one another. The following installation requirements must be complied with:



The only adjustment that must be made when starting up the light barrier is the alignment of the transmitter and receiver. Alignment is made easier by the red LED on the receiver, which is visible from behind. The LED lights up as soon as the receiver "sees" the light emitted by the transmitter, which means the path for the light beam is free. In order to guarantee mechanical protection, e.g. against vandalism, the IR elements cannot be positioned from the outside when the unit is mounted.

The four versions

The LB 03 type is also electrically compatible with the PLP. With the four different output types, all requirements of the interface are met. The LB 03 is available either with an NPN or PNP output. In addition, the switching mode of the output can either be active or passive. Active means that the output switches when the path for the light beam is free. In passive switching mode, the output switches on detection of an object.

Your benefit

- high functional reliability due to the use of proven technology
- one light barrier for the entire range from 0 to 6 m (0 to 19.7')
- low current consumption
- vandal-proof
- no adjustments / no programming necessary
- easy installation
- higher immunity to disturbing light

Testing

The function of the LB 03 light barrier can be tested by switching off the operating voltage (+UB). The fact that there is no separate test input for transmitter switch-off makes both the installation and the test procedure a lot easier.

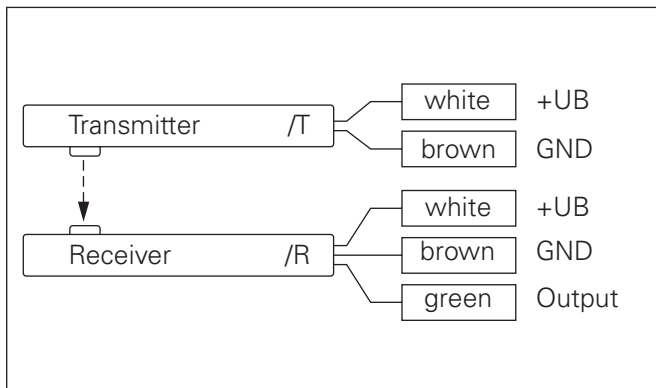
Electrical connection

Installation of the LB 03 light barrier is much easier than with the previous model or similar products. In particular the fact that there is no test input makes electrical connection of the LB 03 very easy and uncomplicated.

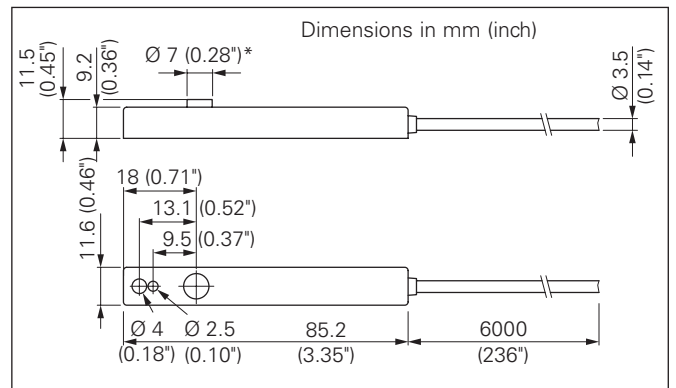
Furthermore, the connection cable is soldered to the electronics PCB and firmly sealed in the housing. The light barrier is protected against polarity reversal and the output of the receiver is short-circuit proof.

| Technical data | LB 03 | Notes |
|-------------------------------|--|--|
| Operating voltage +UB | 11–30 V DC | protected against polarity reversal |
| Operating current | max. 35 mA | at 24 V DC and +20° C (68° F) |
| Connection cable | transmitter: 2 x 0.25 mm ² (AWG23) receiver: 3 x 0.25 mm ² (AWG23) | fixed cable connection, length 6 m (19.7'), Ø 3.5 mm (0.14"), cable colour grey |
| Operating range | 0–6 m (0–19.7') | 2x signal reserve |
| Mounting distance | min. 0.2 m (0.66") | to ground and other light barriers |
| Technology | active infrared (AIR), approx. 880 nm | pulsed approx. 1 kHz |
| Aperture angle | ± 8° | |
| Signal output (versions) | LB 03 /NA: NPN active LB 03 /PA: PNP active LB 03 /NP: NPN passive LB 03 /PP: PNP passive | transistor output, short-circuit proof, response and drop-out time max. 5 ms residual voltage < 1 V at 50 mA |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 100 mA | permanent current |
| Function indication | LED red, lights up when light path is free | at the back of receiver |
| Testing | transmitter switch-off with operating voltage (+UB), test active if +UB ≤ 5 V DC | response and drop-out time max. 10 ms |
| Housing material | PMMA | color black |
| Housing dimensions | 11.6 x 85.2 x 9.2 mm (0.46" x 3.35" x 0.36") | W x H x D [with optic system D = 11.5 mm (0.45")] |
| Weight | approx. 240 g (8.47 ounce) | per set incl. cable |
| Protection class | suitable for use in accordance with IP65 | |
| Operating temperature | –20° C to +60° C (–4° F to 140° F) | |
| Air humidity | 0% to 90% relative | without condensation |
| Electromagnetic compatibility | EMC in accordance with directive 89/336 EEC, edition 1996, CE | EN 61000-6-2 / EN 61000-6-3 |

Connection diagram

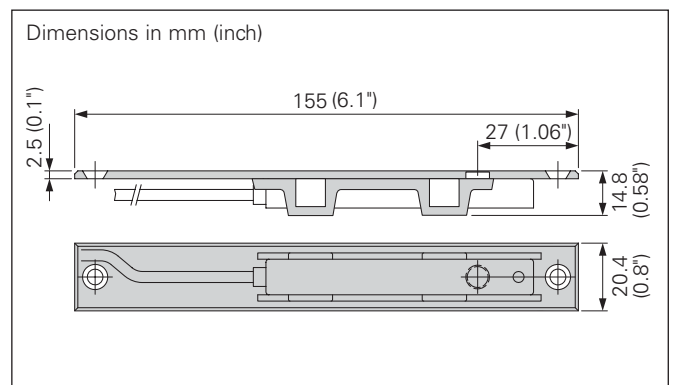


Dimensions

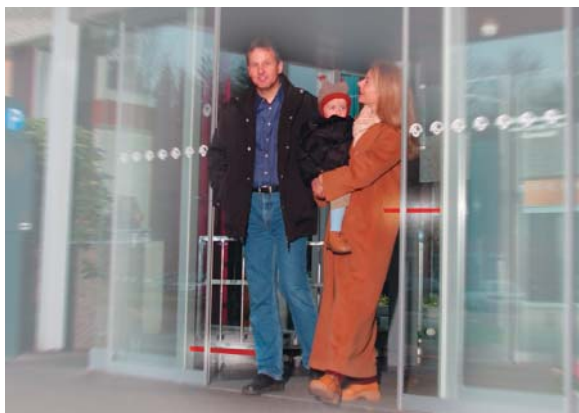


*recommended drilling hole Ø 9.5 mm (0.37")

Accessories – Cover plate



Applications



Ordering information

| Article no. | Designation |
|-------------|--|
| F111.61000 | LB 03 /NA |
| F111.61020 | LB 03 /NP |
| F111.61040 | LB 03 /PA |
| F111.61060 | LB 03 /PP |
| F511.51220 | Cover plate, set of 2 pieces, color: black |
| F511.51221 | Cover plate, color: black |

Your contact

Bircher Reglomat AG

Hauptstrasse 22
CH-9042 Speicher
Switzerland
Phone +41 (0)71 343 83 83
Fax +41 (0)71 343 83 80
info@reglomat.com
www.bircher-reglomat.com

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