

Installation manual

Accessories Laser scanner for ELKA barriers



Translation of the original installation instructions

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1 Preface

These operating instructions must be available on site at all times. It should be read thoroughly by all persons who use, or service the appliances. Improper usage or servicing or ignoring the operating instructions can be a source of danger for persons, or result in material damage. If the meaning of any part of these instructions isn't clear, then please contact ELKA-Torantriebe GmbH u. Co. Betriebs KG (hereinafter called "ELKA") before you use the appliance.

This applies to all setup procedures, fault finding, disposal of material, care and servicing of the appliance. The accident prevention regulations and applicable technical regulations (e.g. safety or electrical) and environment protection regulations of the country in which the appliance is used also apply.

All repairs on the appliances must be carried out by qualified persons. ELKA accepts no liability for damage which is caused by using the appliance for purposes other than those for which it is built.

ELKA cannot recognise every possible source of danger in advance. If the appliance is used other than in the recommended manner, the user must ascertain that no danger for himself or others will result from this use. He must also ascertain that the planned use will have no detrimental effect on the appliance itself. The appliance should only be used when all safety equipment is available and in working order. All faults which could be a source of danger to the user or to third persons must be eliminated immediately. All warning and safety notices on the appliances must be kept legible.

All electrical periphery equipment which is connected to the appliance must have a CE Mark, which ensures that it conforms to the relevant EEC regulations. Neither mechanical nor electrical alterations to the appliance, without explicit agreement of the manufacturer, are allowed. All alterations or extensions to the appliance must be carried out with parts which ELKA have defined as suitable for such alterations, and be carried out by qualified personnel. Please note that with any alteration of the product, no matter whether mechanical or electrical, the warranty expires and the conformity is revoked. Only the use of ELKA accessories and original ELKA spare parts is allowed. In case of any contravention ELKA disclaims liability of any kind.



INFORMATION!

The operation of the system within CEN countries must also be conformant with the European safety-relevant directives and standards.

We reserve the right to make technical improvements without prior notice.

1.1 Symbol explanation

**WARNING!**

Remarks regarding the safety of persons and the gate opener itself are marked by special symbols. These remarks have to be absolutely observed in order to avoid accidents and material damage.

**DANGER!**

...points to an imminent dangerous situation, which can cause death or serious injuries if it is not avoided.

**WARNING!**

...points to a potentially dangerous situation, which can cause death or serious injuries if it is not avoided.

**ATTENTION!**

...points to a potentially dangerous situation, which can cause minor or slight injuries if it is not avoided.

**ATTENTION!**

...points to a potentially dangerous situation, which can cause property damage if it is not avoided.

**REMARK!**

Important notice for installation or functioning.

1.2 Copyright

The operating manual and the contained text, drawings, pictures, and other depictions are protected by copyright. Reproduction of any kind – even in extracts – as well as the utilization and/or communication of the content without written release certificate are prohibited. Violators will be held liable for damages. We reserve the right to make further claims.

2 The use with P-series barriers

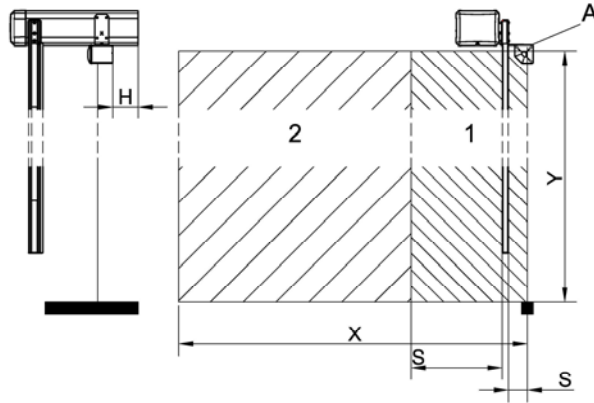
2.1 P 2500-5000 (standard) with one laser scanner



If, in accordance with DIN EN 12453, a protection with an electro-sensitive protective device for presence detection is required for this barrier type (Device E), at least one laser scanner must be installed.



When the safety field of the sensor is the protection against vehicle collision with the boom, the reference (reflector) must be installed (according to DIN EN 12453, Device E). See also instructions "laser scanner LZR-H100".



Drawing 1

	Corresponds to:	Remark:
A	Scanner A	
X	Field dimension	X = max. 9.9m
Y	Field dimension	Y = max. 9.9m
1	Safety field	Scanner A
2	Opening field	Scanner A
S	Safety area	At least 200mm to barrier boom
H	Mounting height	(see note below)

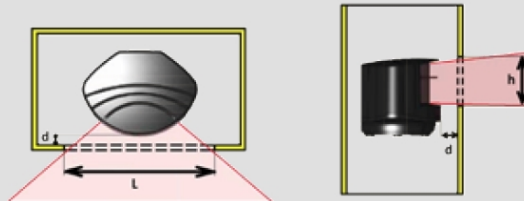
Table 1



The mounting height H depends on the demands that are required by DIN EN 12453 (Device E).

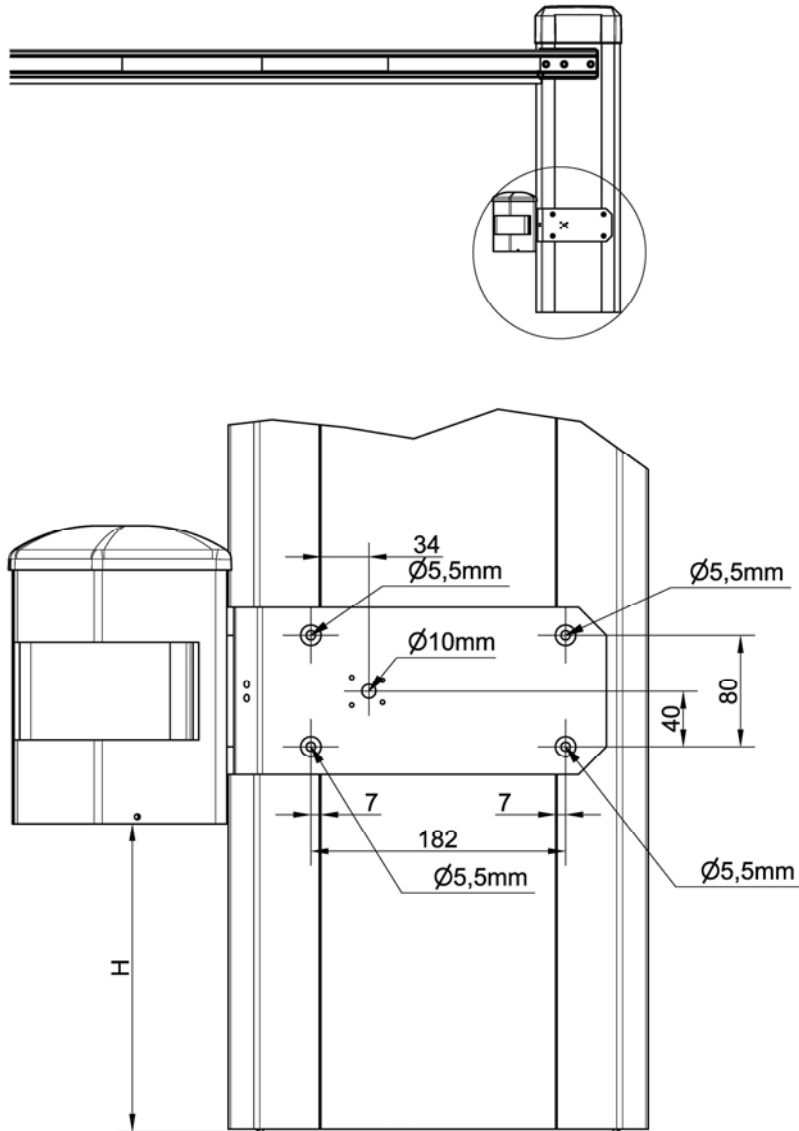


When mounting the laser scanner, ensure the correct positioning inside of the additional housing. The viewing window and the detection field of the laser scanner must not be reduced by using the additional housing or any other (on-site) covers.



d (mm)	l_{min} (mm)	h_{min} (mm)
50	240	52
100	360	59
150	480	66

Mounting bracket laser scanner A:



Drawing 2

2.2 P 2500-5000 with two laser scanners

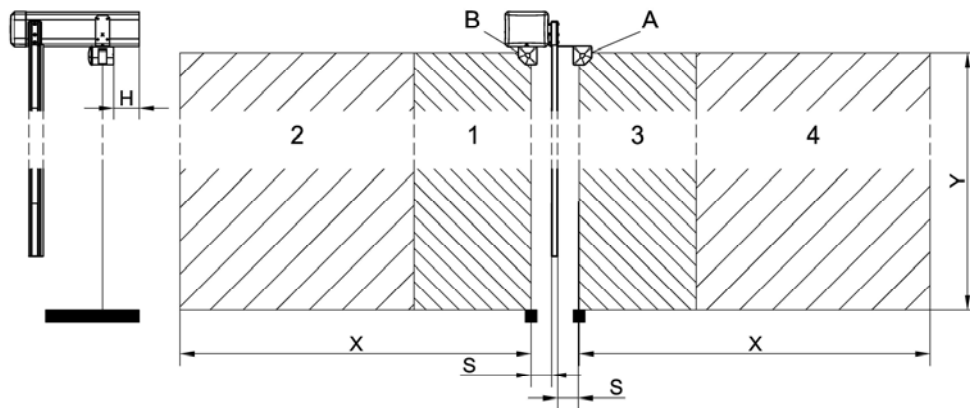


If, in accordance with DIN EN 12453, a protection with an electro-sensitive protective device for presence detection is required for this barrier type (Device E), at least one laser scanner must be installed.

When using swinging supports, folding skirts or folding top and bottom skirts, at least two laser scanners must be mounted to ensure the safety of this barrier type.



When the safety field of the sensor is the protection against vehicle collision with the boom, the reference (reflector) must be installed (according to DIN EN 12453, Device E). See also instructions "laser scanner LZR-H100".



Drawing 3

	Corresponds to:	Remark:
A	Scanner A	
B	Scanner B	
X	Field dimension	X = max. 9.9m
Y	Field dimension	Y = max. 9.9m
1	Safety field	Scanner B
2	Opening field	Scanner B
3	Safety field	Scanner A
4	Opening field	Scanner A
S	Safety area	Max. 200mm to barrier boom
H	Mounting height	(see note below)

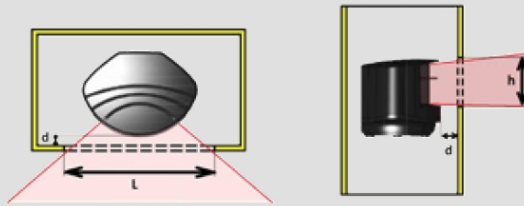
Table 2



The mounting height H depends on the demands that are required by DIN EN 12453 (Device E).

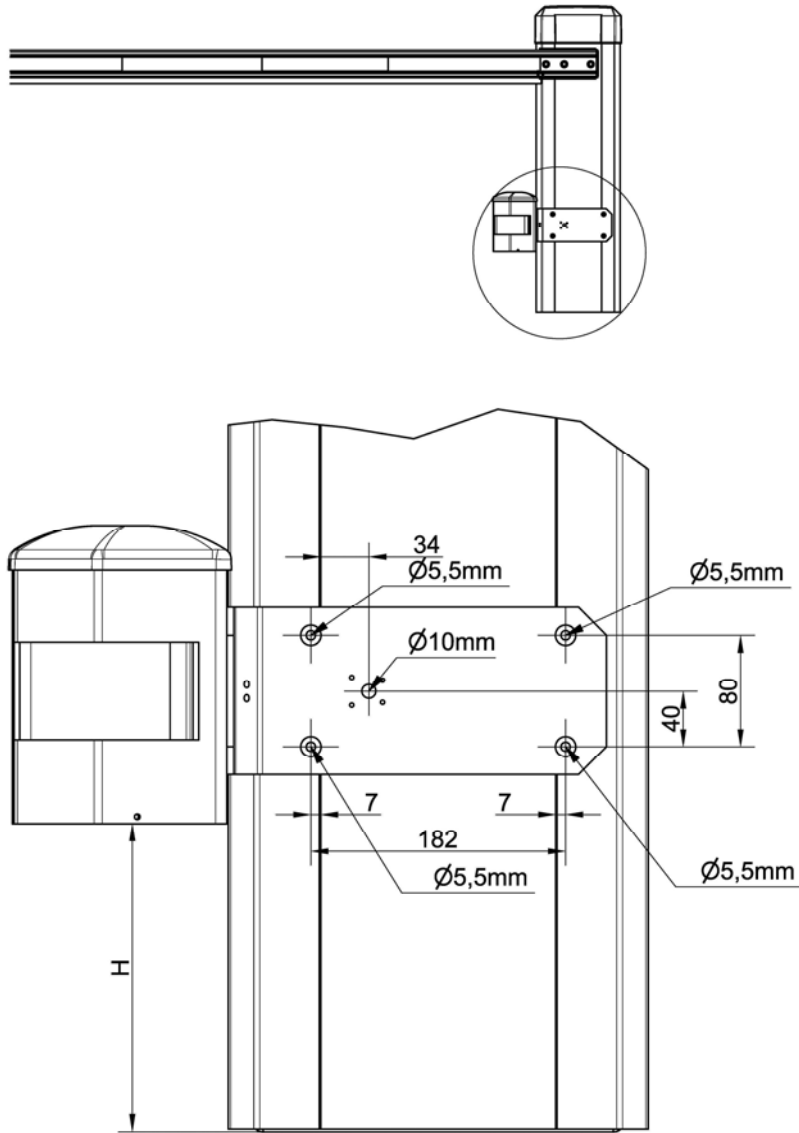


When mounting the laser scanner, ensure the correct positioning inside of the additional housing. The viewing window and the detection field of the laser scanner must not be reduced by using the additional housing or any other (on-site) covers.

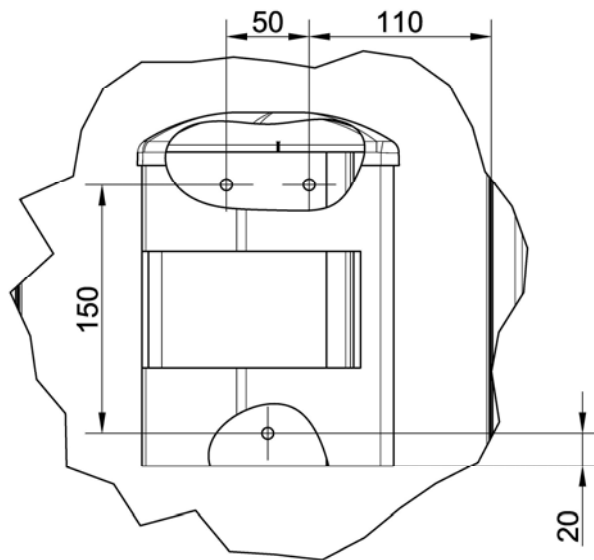
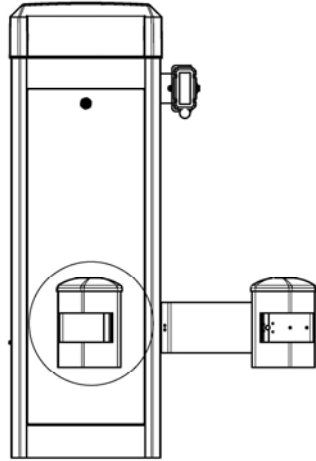


d (mm)	l_{min} (mm)	h_{min} (mm)
50	240	52
100	360	59
150	480	66

Mounting bracket laser scanner A:



Drawing 4

Door installation laser scanner B:*Drawing 5*

3 The use with ES-series barriers

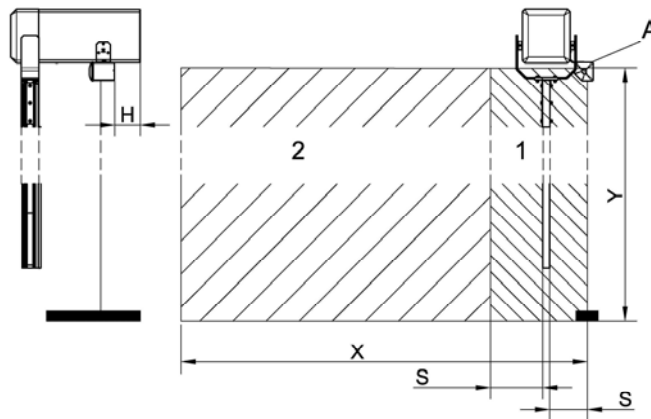
3.1 ES 50-80 (standard) with one laser scanner



If, in accordance with DIN EN 12453, a protection with an electro-sensitive protective device for presence detection is required for this barrier type (Device E), at least one laser scanner must be installed.



When the safety field of the sensor is the protection against vehicle collision with the boom, the reference (reflector) must be installed (according to DIN EN 12453, Device E). See also instructions "laser scanner LZR-H100".



Drawing 6

	Corresponds to:	Remark:
A	Scanner A	
X	Field dimension	X = max. 9.9m
Y	Field dimension	Y = max. 9.9m
1	Safety field	Scanner A
2	Opening field	Scanner A
S	Safety area	At least 200mm to barrier boom
H	Mounting height	(see note below)

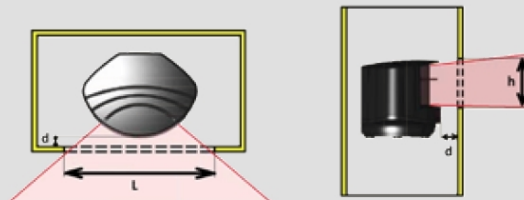
Table 3



The mounting height H depends on the demands that are required by DIN EN 12453 (Device E).

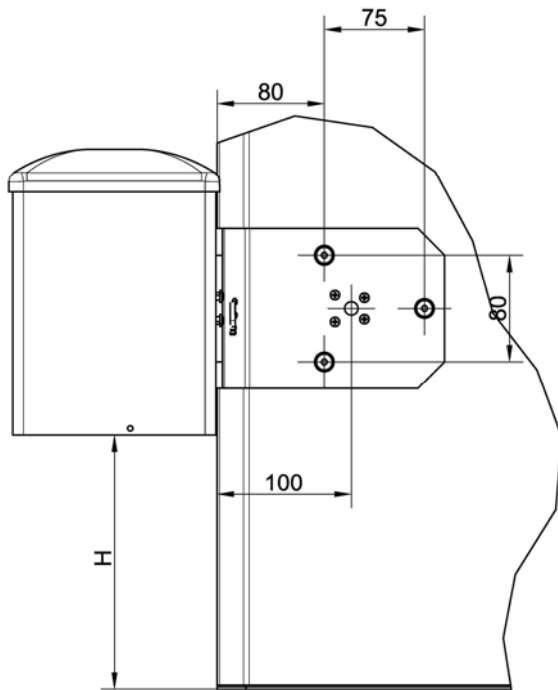
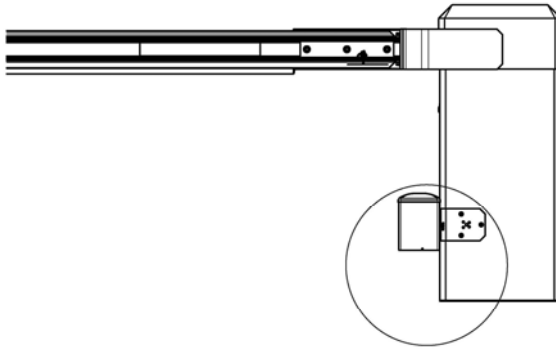


When mounting the laser scanner, ensure the correct positioning inside of the additional housing. The viewing window and the detection field of the laser scanner must not be reduced by using the additional housing or any other (on-site) covers.



d (mm)	l_{min} (mm)	h_{min} (mm)
50	240	52
100	360	59
150	480	66

Mounting bracket laser scanner A:



Drawing 7

3.2 ES 50-80 with two laser scanners

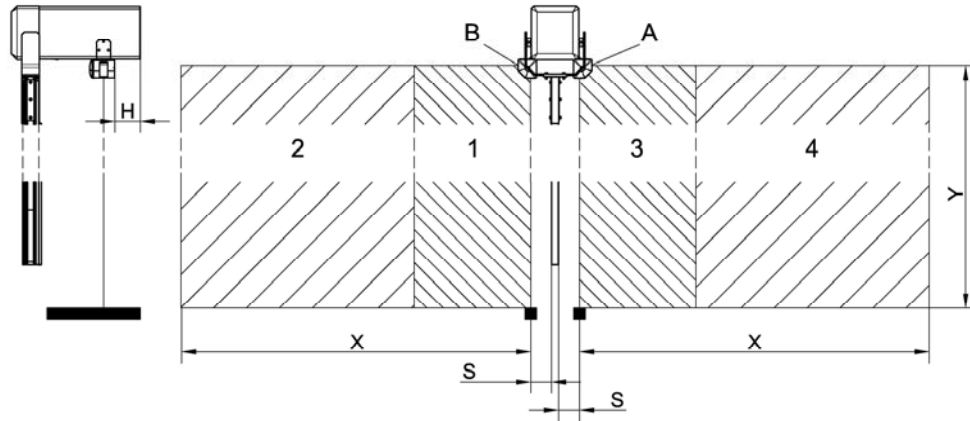


If, in accordance with DIN EN 12453, a protection with an electro-sensitive protective device for presence detection is required for this barrier type (Device E), at least one laser scanner must be installed.

When using swinging supports, folding skirts or folding top and bottom skirts, at least two laser scanners must be mounted to ensure the safety of this barrier type.



When the safety field of the sensor is the protection against vehicle collision with the boom, the reference (reflector) must be installed (according to DIN EN 12453, Device E). See also instructions "laser scanner LZR-H100".



Drawing 8

	Corresponds to:	Remark:
A	Scanner A	
B	Scanner B	
X	Field dimension	X = max. 9.9m
Y	Field dimension	Y = max. 9.9m
1	Safety field	Scanner B
2	Opening field	Scanner B
3	Safety field	Scanner A
4	Opening field	Scanner A
S	Safety area	Max. 200mm to barrier boom
H	Mounting height	(see note below)

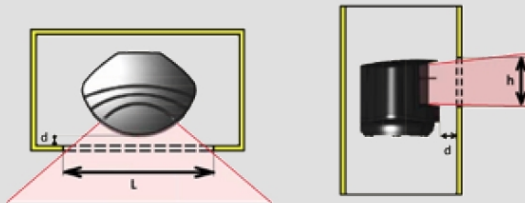
Table 4



The mounting height H depends on the demands that are required by DIN EN 12453 (Device E).

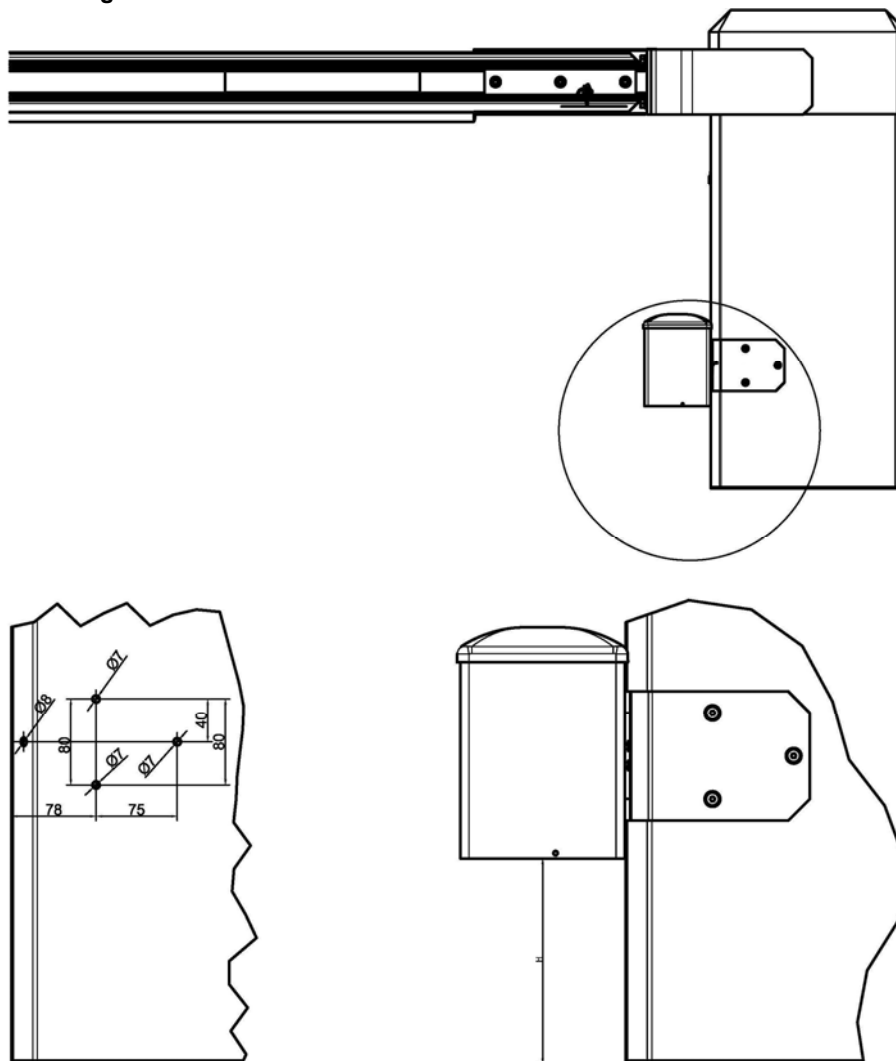


When mounting the laser scanner, ensure the correct positioning inside of the additional housing. The viewing window and the detection field of the laser scanner must not be reduced by using the additional housing or any other (on-site) covers.



d (mm)	l_{min} (mm)	h_{min} (mm)
50	240	52
100	360	59
150	480	66

Mounting bracket laser scanner A:



Drawing 9



The assembly takes place without additional cable protection. The lead of the laser scanner is inserted directly into the barrier housing.

Mounting bracket laser scanner B:

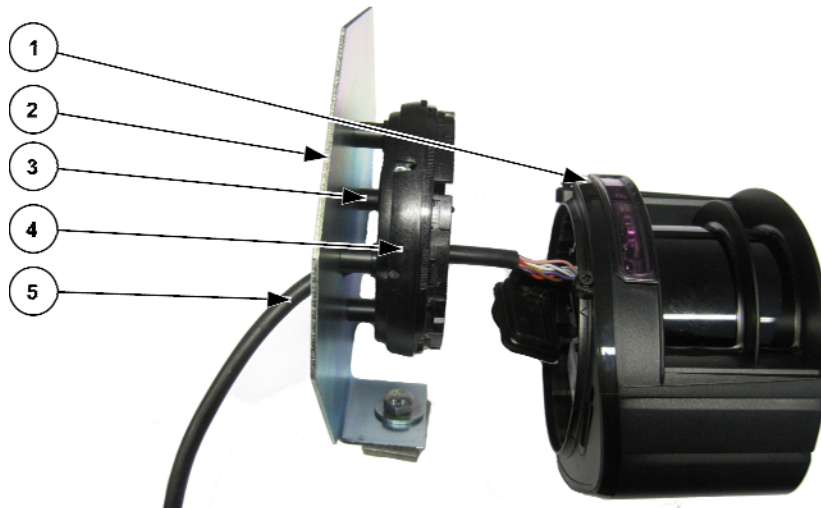


When a second laser scanner is used, it must be mounted mirror-inverted to the first laser scanner on the other side of the housing.

4 Installation of the laser scanner into the pillar (article no. 819 000 300)



Drawing 10



Drawing 11

- 1 Laser scanner
- 2 Mounting plate
- 3 Plastic bush
- 4 Mounting base
- 5 Connecting cable

Mount the mounting base of the laser scanner on the mounting plate. Use the plastic bushes as spacers. Lead the connecting cable through the hole in the mounting plate.



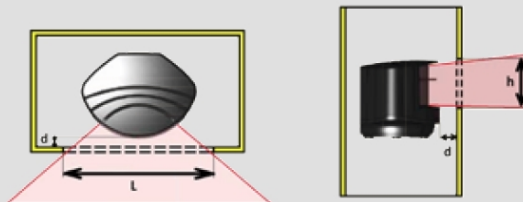
Drawing 12

- 1 Mounting plate
- 2 Mounting base
- 3 Fixing screws M4

Fasten the mounting base to the mounting plate by using the M4 mounting screws as shown in the drawing.



When mounting the laser scanner, ensure the correct positioning inside of the additional housing. The viewing window and the detection field of the laser scanner must not be reduced by using the additional housing or any other (on-site) covers.

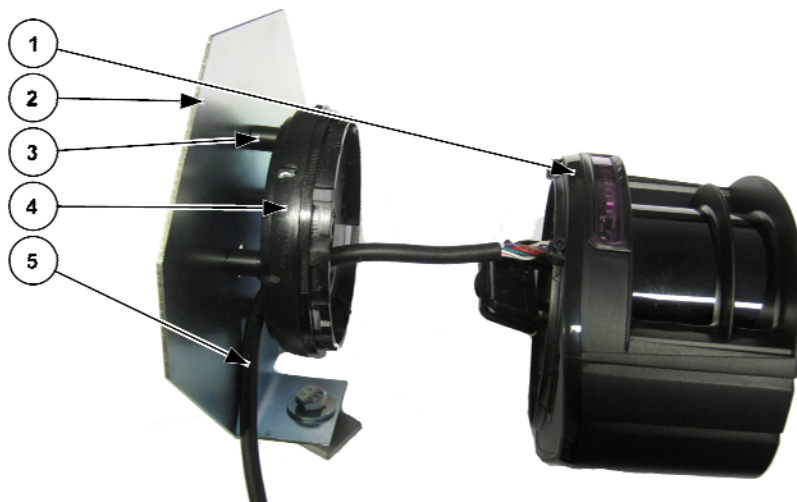


d (mm)	l_{min} (mm)	h_{min} (mm)
50	240	52
100	360	59
150	480	66

5 Installation of the laser scanner into the aluminum-housing (article no. 819 000 301)



Drawing 13



Drawing 14

- 1 Laser scanner
- 2 Mounting plate
- 3 Plastic bush
- 4 Mounting base
- 5 Connecting cable

Mount the mounting base of the laser scanner on the mounting plate. Use the plastic bushes as spacers. Lead out the connection cable under the mounting base laterally.



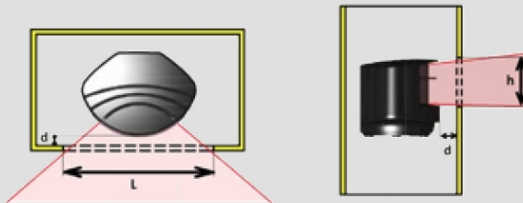
Drawing 15

- 1 Mounting base
- 2 Mounting plate
- 3 Fixing screws M4

Fasten the mounting base to the mounting plate by using the M4 mounting screws as shown in the drawing.



When mounting the laser scanner, ensure the correct positioning inside of the additional housing. The viewing window and the detection field of the laser scanner must not be reduced by using the additional housing or any other (on-site) covers.



d (mm)	l_{min} (mm)	h_{min} (mm)
50	240	52
100	360	59
150	480	66

6 Cable protective tube

The connection cable of the laser scanner must be protected (depending on the installation location) on the rear side against mechanical influences. If necessary, install the cable protection tube as shown in the following illustrations.



Drawing 16



Drawing 17



Drawing 18