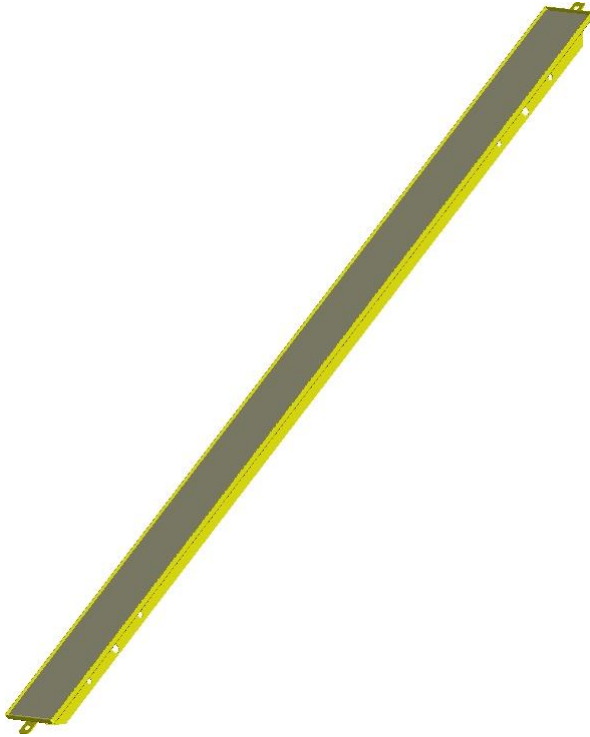


AO000236 ... AO000241

Instruction manual

Deviating Mirrors



AO000237 ... AO000241



AO000236

Notes and warnings

- To guarantee the correct functioning of the safety light curtains, we recommend the use of no more than three deviating mirrors to deviate the beam along the optic path.
- Each mirror used decreases the operating range of the safety light curtain by 15%, 20%, 25%. Apply a correction factor of 85% using one mirror, 65% using two mirrors, 50% for three mirrors.
- To maintain the correct functioning of the system, we advise to periodically clean the mirror surface using a damp non-abrasive cloth. The cleaning frequency depends on the system's surrounding environment.
- The
- mirror length has to be at least 100 mm superior to the length of the light curtain's protected area.
- The mirror has to be mounted in such a manner that its axis (horizontal and vertical) coincide with the corresponding safety device axis.
- The mirror has to be solidly fixed to avoid accidental movements or strong vibrations.
- The use of the AO000213 ... AO000218 protective armor stands is recommended. The mirror is fixed to these using the appropriate accessory mounting kit. The use of the mounting kit AO000244 is recommended when installing the devices in environments characterized by strong temperature variations and/or in presence of vibrations.
- Given the limited mirror width, the entire system is particularly sensitive also to small rotations along the vertical axis of the mirror and emitting and receiving units.
- Hence particular attention has to be taken during system alignment and part fixing.
- To facilitate system installation (mirror/s and safety light curtain) the use of the AO000219 laser pointer is suggested.

The drawing shows an area protection system composed of a safety light curtain and two mirrors.

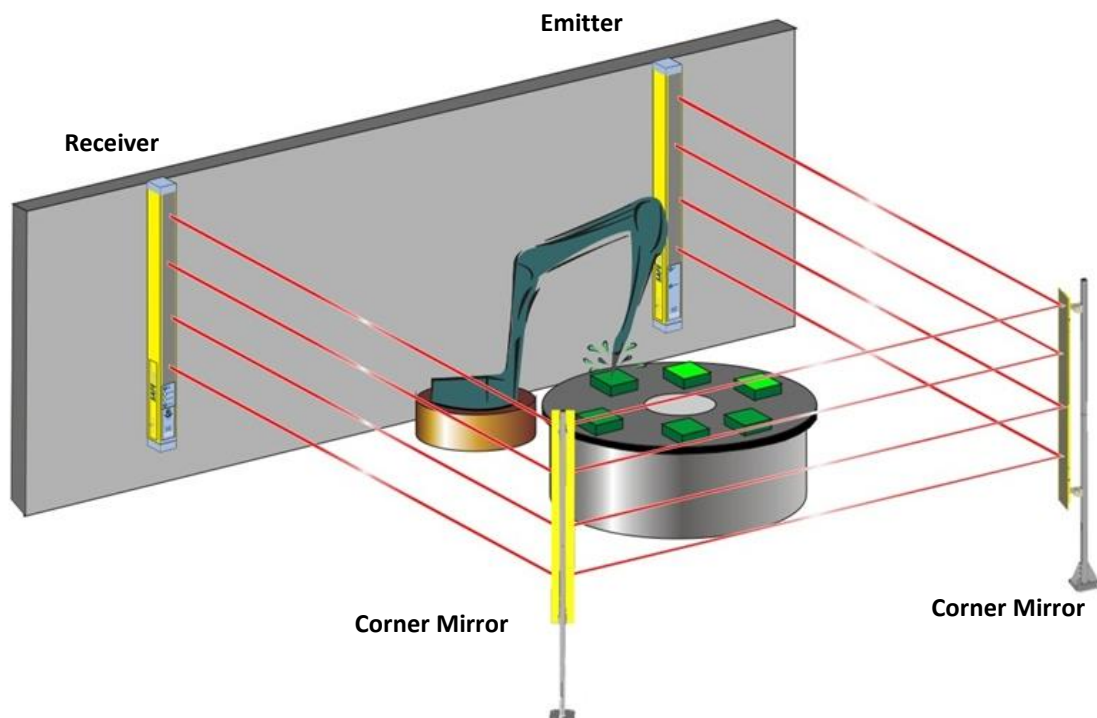


Fig. 1

INSTALLATION

Installation "stand alone"

- Mounting requires the stand alone bracket mounting kit AO000250 (not included).
1. Define the area to protect and the precise positions where the deviating mirrors and the emitting and receiving units of the light curtain will be installed.
 2. Fix the floor stands, in the defined points, verifying that their axes are perpendicular to the floor.
 3. Install the deviating mirrors and emitting and receiving units on the floor stands respecting the warnings given previously. To mount the brackets on the mirror's carter insert the M6x50 UNI 5931 screw, coupling the bracket assembly to the carter's slot and tighten the screw (**Fig.**).
 4. Orient the mirrors to about 45° with respect to the optic path.
 5. Insert the AO000219 laser pointer in the upper part of the emitting unit; orient the unit in order that the laser beam hits the surface of the first mirror in a central point of the vertical axis and at the same height at which the pointer is installed.
 6. Repeat the same procedure inserting the pointer in the lower part of the unit; if necessary repeat these procedures until the desired result is achieved.
 7. Orient the first mirror in order that the laser beam hits the second mirror as described above.
 8. For the angular adjustment rotate the fixing brackets on the relative pins and fix the screws when the required position is reached. For adjustments of the vertical axis use the holes present of the mirror's body and/or modify the inclination of the floor stand using washers.
 9. Orient the second mirror according to the same modes used previously guaranteeing that the laser beam hits the receiving unit.
 10. Insert the AO000219 laser pointer in the upper part of the receiving unit and, orientating this unit, in order that the laser beam, reflected from the two mirrors, hits the emitting unit.
 11. Repeat the same procedure inserting the laser pointer in the lower part of the unit.

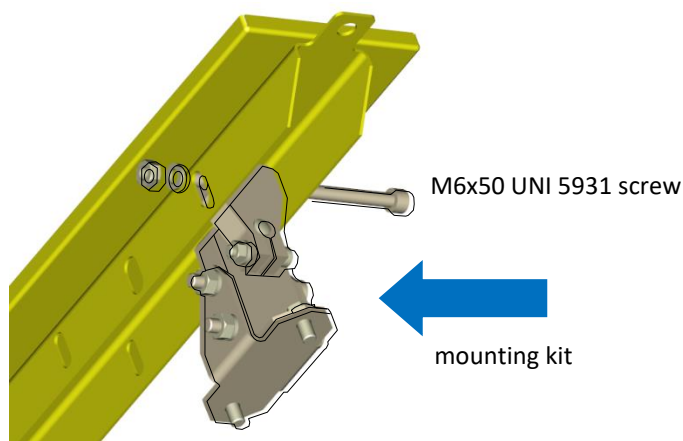


Fig. 2

Installation on protective armor stands

The various models of deviating mirrors can be installed into the Protective Armor Stands.

The AO000213 ... AO000217 protective armor stand is an accessory to which both safety light curtains and deviating mirrors can be mounted.

Corresponding Models

MIRROR	CORRESPONDING SAFETY LIGHT CURTAIN
AO000237	OY320100 / OY320130
	OY320101 / OY320131
	OY320102 / OY320132
AO000238	OY320103 / OY320133
	OY320104 / OY320134
	OY360110
AO000239	OY320105 / OY320135
	OY320106 / OY320136
	OY360111
	OY360112
AO000240	OY320107 / OY320137
	OY320108 / OY320138
	OY320109 / OY320139
	OY360113
AO000241	OY32010A / OY32013A
	OY32010C / OY32013C

DIMENSIONS

AO000236 (drawing including stand alone bracket mounting kit)

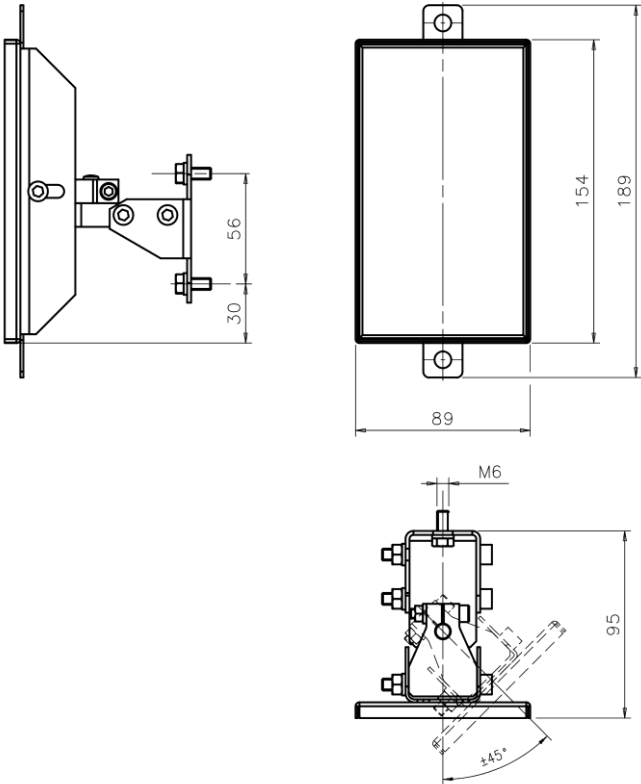


Fig. 3

Models AO000237 ... AO000241 (drawing including stand alone bracket mounting kit AO000250)

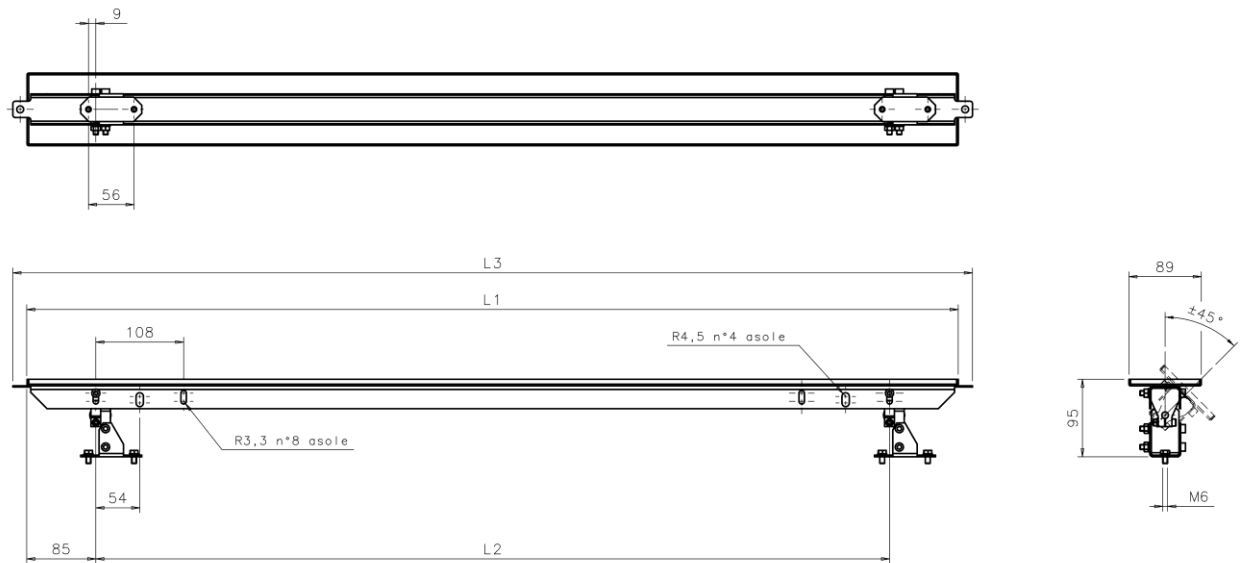


Fig. 4

Model	Description	L1 (mm)	L2 (mm)	L3 (mm)
AO000237	Deviating Mirror H = 600mm	545	376	580
AO000238	Deviating Mirror H = 900mm	845	676	880
AO000239	Deviating Mirror H = 1200mm	1145	976	1180
AO000240	Deviating Mirror H = 1650mm	1595	1426	1630
AO000241	Deviating Mirror H = 1900mm	1845	1676	1880
AO000250	stand alone bracket mounting kit			



NOTE

The overall dimensions of the mirrors mounted in the protective armor stand are available in the AO000213 ... AO000218 instruction manual.