

Original Instructions **Deviating mirrors for light curtains** Orion1 Mirror xxx



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Notes and warnings

- To guarantee the correct functioning of the AOPDs, we recommend the use of no more than three deviating mirrors to deviate the beams along the optical path.
- Each mirror used decreases the operating range of the AOPD. 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 surrounding environment of the AOPD.
- The length of the mirror has to be at least 100 mm greater than the length of the protected height of the light curtain.
- The mirror must be mounted so that its horizontal and vertical axis coincide with the corresponding axis of the AOPD.
- The mirror has to be solidly fixed to avoid accidental movements or strong vibrations.
- Given the limited mirror width, the entire system is particularly sensitive to small rotations along the vertical axis of the mirror and of the transmitter and the receiver.
- Hence particular attention has to be taken during system alignment and part fixing.
- To facilitate the installation of the system, mirror(s) and AOPD, the use of the Orion Laser is suggested.

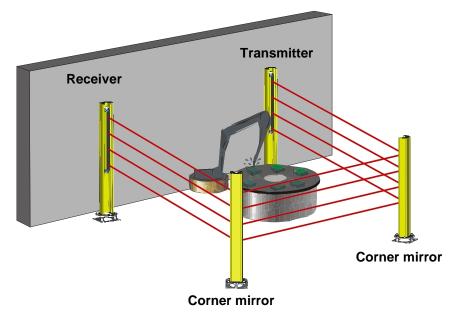


Figure 1- An area protection system composed of an AOPD, transmitter and receiver, and two mirrors (in Orion Stands).

Warning! The minimum installation distance must be respected. For more information about its calculation, please refer to the paragraph "Use of deviating mirrors" of the instruction manual the AOPD or EN ISO 13855:2010.



Installation

An Orion1 Mirror is mounted in an Orion Stand using the mounting kit JSM Orion11. The Orion Stand Plate can be used to simplify the installation.

- 1. Define the area to protect and the precise positions where the deviating mirrors, the transmitter and the receiver will be installed.
- 2. Place the floor stands in the desired positions. Fasten them (or the Orion Stand Plates) to the floor and make sure that their axes are perpendicular to the floor.
- 3. Mount the mirror in the stand. See Figure 2.
- 4. Install the deviating mirrors, transmitter and receiver respecting the warnings given previously.
- 5. Orientate the mirrors to about 45° with respect to the optical path.
- 6. Insert the Orion Laser pointer in the upper part of the transmitter and orientate the transmitter so 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.
- 7. Repeat the same procedure inserting the pointer in the lower part of the transmitter. If necessary, repeat these procedures until the desired result is achieved.
- 8. Orientate the first mirror so that the laser beam hits the second mirror as described above.
- 9. Orientate the second mirror according to the same procedure so that the laser beam hits the receiver.
- 10. Insert the Orion Laser pointer in the upper part of the receiver and orientate the receiver so that the laser beam, reflected by the two mirrors, hits the transmitter.
- 11. Repeat the same procedure inserting the laser pointer in the lower part of the receiver.

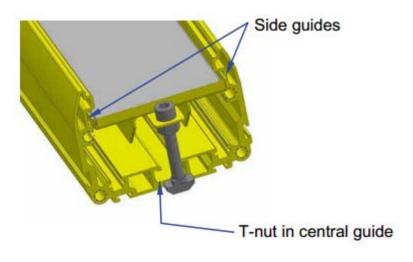
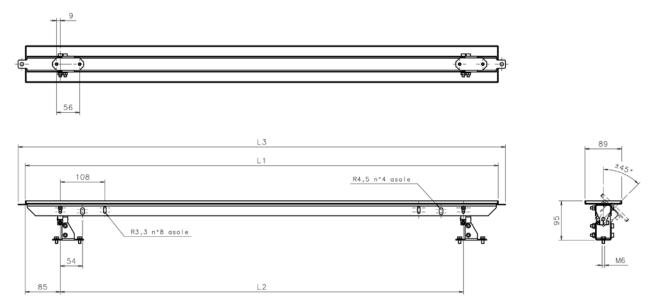


Figure 2 – Mounting of the mirror in the stand



Dimensions

Orion1 Mirror 060 to 190, including mounting kit JSM Orion10 (accessory)

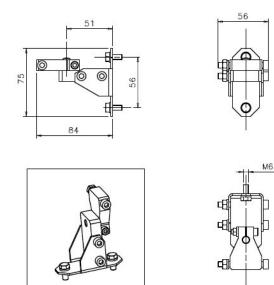


NB: All dimensions in millimetres.

Model	L1 [mm]	L2 [mm]	L3 [mm]	
Orion1 Mirror 060	545	376	580	
Orion1 Mirror 090	845	676	880	
Orion1 Mirror 120	1145	976	1180	
Orion1 Mirror 165	1595	1426	1630	
Orion1 Mirror 190	1845	1676	1880	

NB: The overall dimensions of the Orion1 Mirror mounted in the Orion Stand are available in the Orion Stand Instruction manual.

Fixing kit JSM Orion10



NB: All dimensions in millimetres.

Fixing kit JSM Orion11



Consists in 2 T-nuts.

Model overview

Туре	Article number	Corresponding AOPDs
		Orion1-4-xx-015-x
Orion1 Mirror 060	2TLA022311R0100	Orion1-4-xx-030-x
		Orion1-4-xx-045-x
Orion1 Mirror 090	2TLA022311R0200	Orion1-4-xx-060-x
	21EA022311R0200	Orion1-4-xx-075-x
Orion1 Mirror 120	2TLA022311R0300	Orion1-4-xx-090-x
	21EA022311R0300	Orion1-4-xx-105-x
		Orion1-4-xx-120-x
Orion1 Mirror 165	2TLA022311R0400	Orion1-4-xx-135-x
		Orion1-4-xx-150-x
Orion1 Mirror 100		Orion1-4-xx-165-x
Orion1 Mirror 190	2TLA022311R0500	Orion1-4-xx-1 80-x
JSM Orion10	2TLA022310R0800	Orion1 Mirror, mounting kit on wall
JSM Orion11	2TLA022310R0900	Orion1 Mirror – Mounting kit in protective stand