

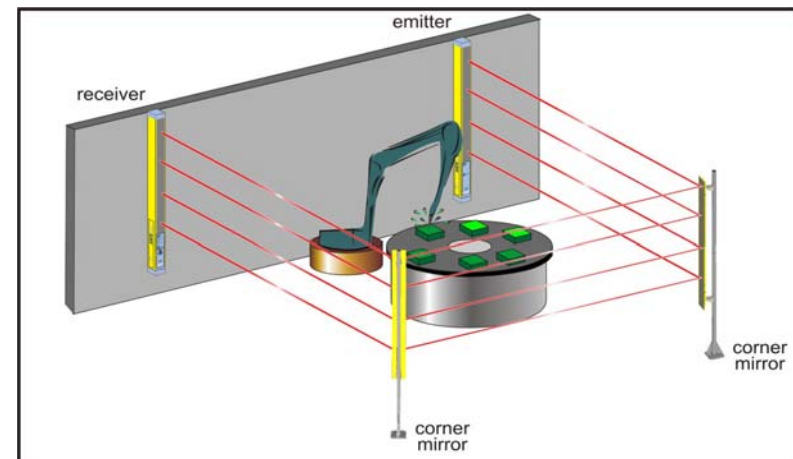
SG-DM SERIES

Deviating mirrors

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 direction.
- 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, of than.
- 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 SE-S floor stand or the SG-PS Protective Stands Armor is recommended; the mirror is fixed using the two fixing brackets and four screws provided in the package. The use of the "SE-DM K DEVIATING MIRROR FIXING KIT" (cod.95ACC2530) is recommended when installing the devices in environments characterised 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 Datlogic SG-LP laser pointer is suggested.

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



DECLARATION OF CONFORMITY

DATALOGIC AUTOMATION declare under our sole responsibility that these products are conform to the 2004/108/CE, Directive and successive amendments



WARRANTY

DATALOGIC AUTOMATION warrants its products to be free from defects.

DATALOGIC AUTOMATION will repair or replace, free of charge, any product found to be defective during the warranty period of 36 months from the manufacturing date.

This warranty does not cover damage or liability deriving from the improper application of DATALOGIC products.

DATALOGIC AUTOMATION Via Lavino 265
40050 Monte S.Pietro - Bologna - Italy
Tel: +39 051 6765611 Fax: +39 051 6759324
www.automation.datalogic.com e-mail: info.automation@datalogic.com

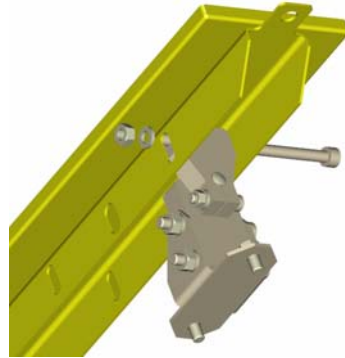
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INSTALLATION

SE-S/BOSCH BAR "stand alone" mounting

- The mounting requires the bracket kit ST-DM 95ASE1940.
- Define the area to protect and the precise positions where to install the deviating mirrors and the emitting and receiving units of the light curtain.
- Fix the floor stands, in the defined points, verifying that their axis are perpendicular to the floor.
- 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 remove the M6x50 UNI 5931 screw from the bracket itself, couple the bracket assembly to the carter's buttonhole and tighten back the screw.
- Orient the mirrors to about 45° respect to the optic direction.
- Insert the SG-LP 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 an central point of the vertical axis and at the same height at which the pointer is installed.
- 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.
- Orient the first mirror in order that the laser beam hits the second mirror as described above.
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.
- Orient the second mirror according to the same modes used previously guaranteeing that the laser beam hits the receiving unit.
- Insert the SG-LP 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.
Repeat the same procedure inserting the laser pointer in the lower part of the unit.



Protective Stands mounting

- The mounting requires the bracket kit ST-PS-DM 95ASE1770.
- Define the area to protect and the precise positions where to install the deviating mirrors and the emitting and receiving units of the light curtain.
- Seat the mirrors into the correct version of SG-PS product, already coupled with the SG-SB base, using the ST-PS-DM kit (refer to the "deviating mirrors mounting" section of the SG-PS cod. 856001400 user manual for the assembly details). The following table collects the suggested couplings between products and corresponding deviating mirror.

Deviating mirror model	Corresponding safety light curtain model
SG-DM 600	SEx-xx-015
SG-DM 600	SEx-xx-030
SG-DM 600	SGx-xx-015
SG-DM 600	SGx-xx-030
SG-DM 600	SGx-xx-015
SG-DM 600	SGx-xx-030
SG-DM 600	SEx-xx-045
SG-DM 600	SGx-xx-045
SG-DM 600	SGx-xx-045
SG-DM 900	SEx-xx-060
SG-DM 900	SGx-xx-060
SG-DM 900	SGx-xx-060
SG-DM 900	SEx-xx-075
SG-DM 900	SEx-xx-060

SG-DM 900	SGx-xx-060
SG-DM 900	SGx-xx-060
SG-DM 900	SEx-xx-075
SG-DM 900	SGx-xx-075
SG-DM 900	SGx-xx-075
2x SG-DM 150 / SG-DM 900	SEx-x2-050
2x SG-DM 150 / SG-DM 900	SG2-S2-050
2x SG-DM 150 / SG-DM 900	SG4-S2-050
2x SG-DM 150 / SG-DM 900	SG2-B2-050
2x SG-DM 150 / SG-DM 900	SG4-B2-050
2x SG-DM 150 / SG-DM 900	SG4-BLR2-050
2x SG-DM 150 / SG-DM 900	SG4-BSR2-050
SG-DM 900	SG4-40-060
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SG-DM 1200	SEx-xx-090
SG-DM 1200	SGx-xx-090
SG-DM 1200	SGx-xx-090
SG-DM 1200	SEx-xx-105
SG-DM 1200	SGx-xx-105
SG-DM 1200	SGx-xx-105
3x SG-DM 150 / SG-DM 1200	SEx-x3-080
3x SG-DM 150 / SG-DM 1200	SG2-S3-080
3x SG-DM 150 / SG-DM 1200	SG4-S3-080
3x SG-DM 150 / SG-DM 1200	SG2-B3-080
3x SG-DM 150 / SG-DM 1200	SG4-B3-080
3x SG-DM 150 / SG-DM 1200	SG4-BLR3-080
3x SG-DM 150 / SG-DM 1200	SG4-BSR3-080
4x SG-DM 150 / SG-DM 1200	SEx-x4-090
4x SG-DM 150 / SG-DM 1200	SG2-S4-090
4x SG-DM 150 / SG-DM 1200	SG4-S4-090
4x SG-DM 150 / SG-DM 1200	SG2-B4-090
4x SG-DM 150 / SG-DM 1200	SG4-B4-090
4x SG-DM 150 / SG-DM 1200	SG4-BLR4-090
4x SG-DM 150 / SG-DM 1200	SG4-BSR4-090
SG-DM 1200	SG4-40-090
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SG-DM 1650	SEx-xx-120
SG-DM 1650	SGx-xx-120
SG-DM 1650	SGx-xx-120
SG-DM 1650	SEx-xx-135
SG-DM 1650	SGx-xx-135
SG-DM 1650	SGx-xx-135
SG-DM 1650	SEx-xx-150
SG-DM 1650	SGx-xx-150
SG-DM 1650	SGx-xx-150
4x SG-DM 150 / SG-DM 1650	SEx-x4-120
4x SG-DM 150 / SG-DM 1650	SG2-S4-120
4x SG-DM 150 / SG-DM 1650	SG4-S4-120
4x SG-DM 150 / SG-DM 1650	SG2-B4-120
4x SG-DM 150 / SG-DM 1650	SG4-B4-120
4x SG-DM 150 / SG-DM 1200	SG4-BLR4-120
4x SG-DM 150 / SG-DM 1200	SG4-BSR4-120
SG-DM 1650	SG4-40-120
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SG-DM 1900	SEx-xx-165
SG-DM 1900	SGx-xx-165
SG-DM 1900	SGx-xx-165
SG-DM 1900	SGx-xx-180
SG-DM 1900	SGx-xx-180

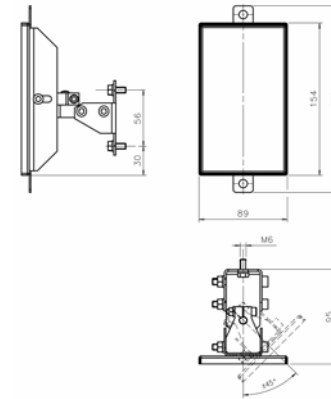


- Place the Protective Stand armor, with inside the assembled mirrors, to the assigned zones. Fix the SG-SB ground supports on the assigned points, checking that their axis are perpendicular to the ground; use the outfit spherical level to perform a fine tuning of the plane if necessary.
- Orient the mirrors to about 45° respect to the optic direction; the Protective Stand ensures an adjusting range around the vertical axis of ±15° once fixed to the ground.
- Insert the SG-LP laser pointer in the upper part of the SG-PS bar groove corresponding to 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.
- 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.
- Orient the first mirror in order that the laser beam hits the second mirror as described above.
- For the angular adjustment rotate the upper Protective Stands plate partially loosening the M12 screws that lock the plates, tighten again the screws once the required position is achieved, check the planar condition using the spherical level (refer to the SG-PS cod. 856001400 user manual for the details)

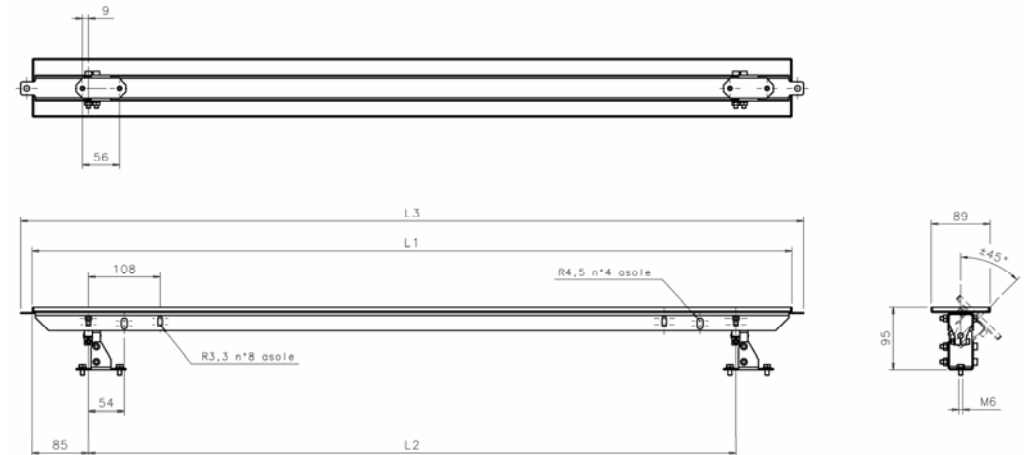
NOTE: The laser pointer, due to mechanical tolerance problems in the matching with the aluminium bar, provides an approximate indication and hence small corrections may be necessary in the unit alignment using the normal ALIGNMENT PROCEDURE described in the safety light curtain instruction manual.

DO NOT move the mirrors as the laser beam guarantees the perfect alignment.

Overall dimensions (Model 150, including stand alone bracket mounting kit)



Overall dimensions (Models from 600 to 1900 including stand alone bracket mounting kit)



Versione	L1 (mm)	L2 (mm)	L3 (mm)
SG-DM 600	545	376	580
SG-DM 900	845	676	880
SG-DM 1200	1145	976	1180
SG-DM 1650	1595	1426	1630
SG-DM 1900	1845	1676	1880

NB: the SG-DM couplet with the Protective Stand armor overall dimensions are available in the dedicated user manual.