

Applications

The SG safety light curtain family provides solutions for automation where access to hazardous areas must be controlled. In particular, safety curtains can be used to stop machine movement in the following industries.

- Automated manufacturing

SG2 Series

Milling Machine



Situation: Protect operator hand's from injury from moving parts.

Solution: The machine's movement stops immediately even if only one of the safety light curtain beams is interrupted.

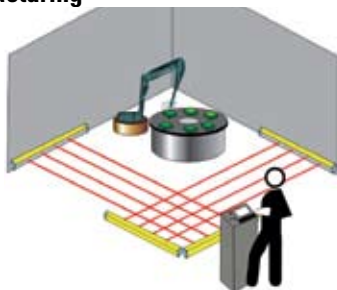
Machine Restart Prevention



Situation: Avoid accidental machine restart when an operator is performing maintenance.

Solution: A safety light curtain can stop a machine when the operator enters a hazardous area. A manual restart is then necessary to restart the production cycle. Horizontal light curtains are positioned and actually connected to the restart of the main light curtain in the areas where the operator may not be visible when doing maintenance.

Robotic Manufacturing



Situation: Protect operator from being hit or crushed by a robotic arm's movement.

Solution: The robot stops when the operator enters a hazardous area and interrupts the optic grid, usually placed on the floor.

SG4 Series

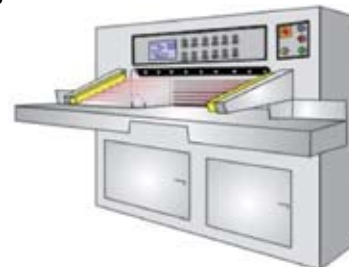
Operating Point Protection on a Drilling Machine



Situation: An operator positions a part before machining and removes it when done and must be protected from injury while working.

Solution: When the operator's hand interrupts the light beam, the SG4 series of safety light curtains stop the machine's movement because the light curtain can be installed directly on the machine near the hazard.

Paper Cutting Machines



Situation: These machines typically cut paper to a specific size for newspapers or special applications and the operator needs to be protected against injury from the cutter blades.

Solution: Installed directly on the machine near the hazardous area, the SG4 series of safety light curtains stop the machine when the operator's hand interrupts the light beam.


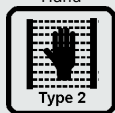

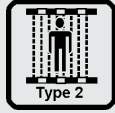


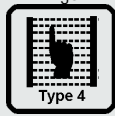
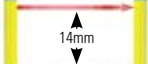

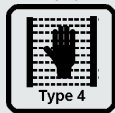
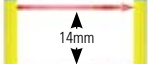

Machine Press



Situation: Protect operator from either being pinned between the top and bottom portions of a machine press, or struck by the machined part while it is moving.

Solution: If even one beam of the SG4 series safety light curtain is interrupted by an operator's hand or finger, while the press is moving, the mobile tool bar will stop.

Part Numbers

| Item | Safety Category | Protection Type | Resolution | Included Functions | Part Number | |
|---|---|---|---|---|---|-----------------|
|  | Type 2 | Hand  |  30mm | Basic Model - Test/Reset | SG2-30-□-00-X | |
| | | Presence  |  50mm | Basic Model - Test/Reset | SG2-50-□-00-X | |
| | | |  90mm | Extended Model - Test/Reset, Auto/Manual Restart, EDM | SG2-50-□-00-E-C | |
| | | Type 4 | Finger  |  14mm | Basic Model - Test/Reset | SG2-90-□-00-X |
| | | | |  30mm | Extended Model - Test/Reset, Auto/Manual Restart, EDM | SG2-90-□-00-E-C |
| | | Type 4 | Hand  |  14mm | Test/Reset, Auto/Manual Restart, EDM | SG4-14-□-00-E |
| |  30mm | | | Test/Reset, Auto/Manual Restart, EDM | SG4-30-□-00-E | |





| Controlled Height Code | |
|------------------------|------|
| Controlled Height | Code |
| 150mm* | 015* |
| 300mm | 030 |
| 450mm | 045 |
| 600mm | 060 |
| 750mm | 075 |
| 900mm | 090 |
| 1050mm | 105 |
| 1200mm | 120 |
| 1350mm | 135 |
| 1500mm | 150 |
| 1650mm | 165 |
| 1800mm | 180 |

* Not applicable to SG2 Presence Control series.




In place of □ enter the Controlled Height code. See table on the right.

Accessories

M12 Unshielded Axial Connector Cable, UL 2464

| Item | # of Poles | Used For | Cable Length | Part Number |
|---|---------------|---|---------------|---------------|
|  | 4 |  SG4 & SG2 Emitters | 3m | CS-A1-02-U-03 |
| | | | 5m | CS-A1-02-U-05 |
| | | | 10m | CS-A1-02-U-10 |
| | | | 15m | CS-A1-02-U-15 |
| | | | 25m | CS-A1-02-U-25 |
| | 5 |  SG2 Basic Model Receivers | 3m | CS-A1-03-U-03 |
| | | | 5m | CS-A1-03-U-05 |
| | | | 10m | CS-A1-03-U-10 |
| | | | 15m | CS-A1-03-U-15 |
| | 8 |  SG4 & SG2 Extended Model Receivers | 3m | CS-A1-06-U-03 |
| | | | 5m | CS-A1-06-U-05 |
| | | | 10m | CS-A1-06-U-10 |
| 15m | | | CS-A1-06-U-15 | |
| 25m | CS-A1-06-U-25 | | | |

Mounting Brackets

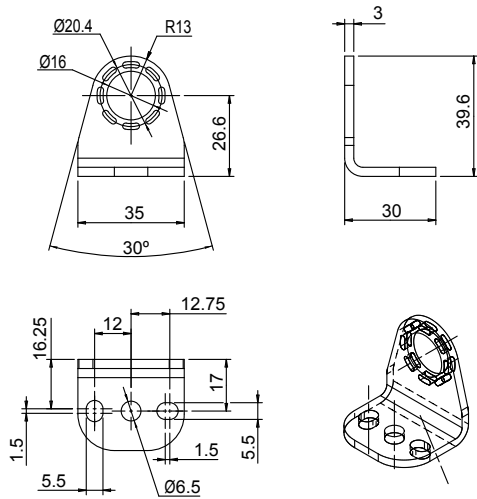
| Item | Description | Part Number |
|--|--|-------------|
|  | Angled mounting brackets (4 pc kit) | ST-KSTD |
|  | Anti-vibration supports (4 pc kit) | ST-K4AV |
| | Anti-vibration supports (6 pc kit) | ST-K6AV |
|  | Top-Bottom rotating mounting brackets (4 pc kit) | ST-K4ROT |

Laser Pointer

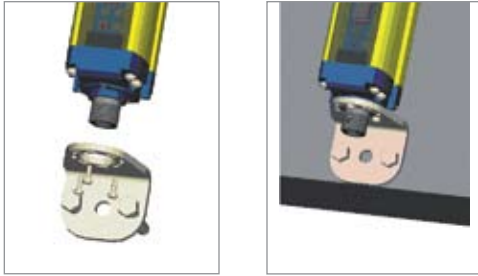
| Item | Description | Part Number |
|--|---|-------------|
|  | Laser pointer used to aide in aligning safety light curtains. | SG-LP |

Mounting Brackets Dimensions (mm)

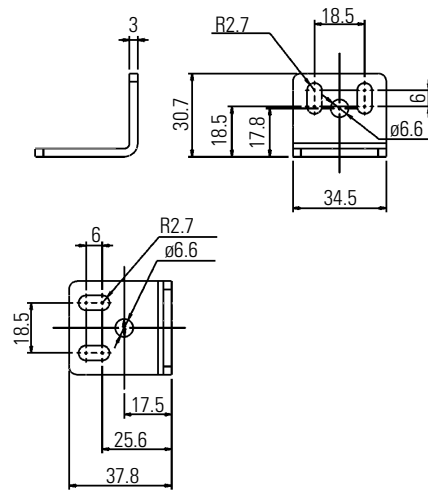
Rotating Mounting Bracket ¹ (ST-K4ROT)



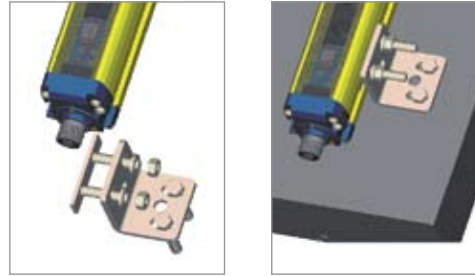
1. Supplied with the SG2 extended models only.



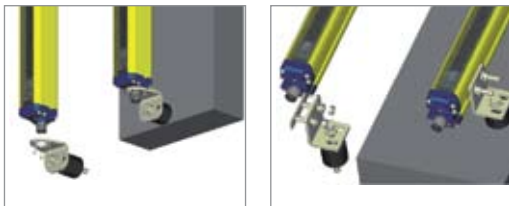
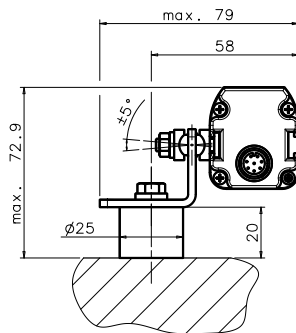
Angled Mounting Bracket ² (ST-KSTD)



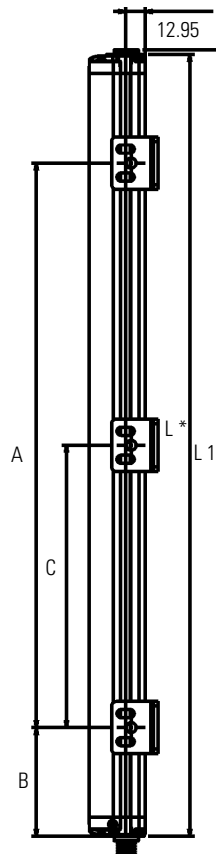
2. Supplied with SG2 standard models and all SG4 models.



Anti-vibration Support Brackets (ST-K4AV/ST-K6AV)



Mounting Bracket with Light Curtain (mm)



Mounting Bracket Dimension Table (mm)

| Height | L | A | B | C |
|--------|--------|------|-----|-----|
| 150* | 216.3 | 108 | 54 | - |
| 300 | 366.2 | 216 | 75 | - |
| 450 | 516.3 | 316 | 100 | - |
| 600 | 666.2 | 366 | 150 | - |
| 750 | 816.3 | 466 | 175 | - |
| 900 | 966.2 | 566 | 200 | - |
| 1050 | 1116.2 | 666 | 225 | - |
| 1200 | 1266.3 | 966 | 150 | 483 |
| 1350 | 1416.2 | 1066 | 175 | 533 |
| 1500 | 1566.3 | 1166 | 200 | 583 |
| 1650 | 1716.3 | 1266 | 225 | 633 |
| 1800 | 1866.3 | 1366 | 250 | 683 |

* Not applicable to SG2 Presence Control series.