

Model Number

SLC30-450-S

Slave module for master slave mode

Features

- Sensing range up to 15 m
- Resolution 30 mm (hand protection)
- Protection field height up to 1650 mm
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Master/Slave detection, Plug and Play
- Start/Restart disable
- Protection degree IP67
- Integrated function display
- Pre-fault indication
- Safety outputs OSSD in potential-separated semiconductor design or with monitored, compelled connection NC-contacts
- Optional with ATEX certificates for zone 2 and 22 and protection degree IP66 (Option 133)

Accessories

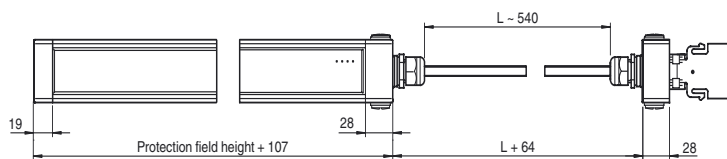
PG SLC-450

Protective glass panes for SLC series

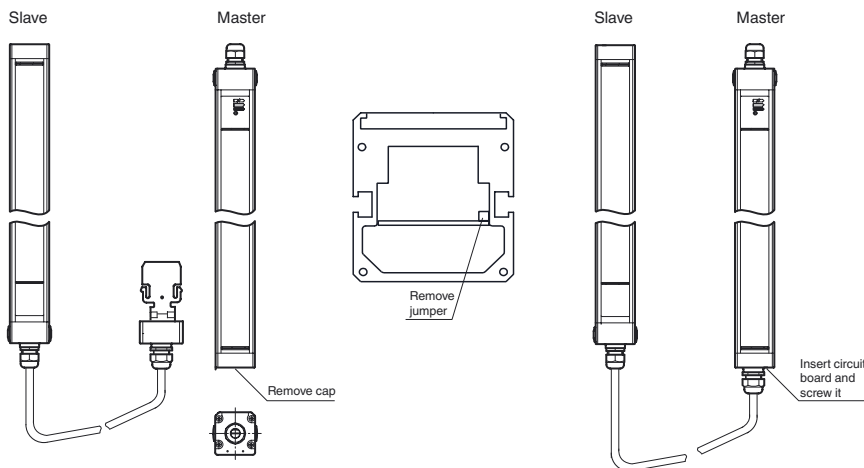
BA SLC

laser alignment aid for safety light curtains series SLC

Dimensions



Electrical connection



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Technical data**General specifications**

| | |
|---------------------------------------|--------------------------|
| Effective detection range | 0.2 ... 15 m |
| Light source | IREC |
| Light type | modulated infrared light |
| Approvals | TÜV, UL |
| Tests | IEC/EN 61496 |
| Safety type according to IEC/EN 61496 | 4 |
| Marking | CE |
| Width of protected area | 0.2 ... 15 m |
| Protection field height | 450 mm |
| Number of beams | 24 |
| Operating mode | in the master |
| Optical resolution | 30 mm |
| Angle of divergence | < 5 ° |

Functional safety related parameters

| | |
|--------------------------------|----------|
| Safety Integrity Level (SIL) | SIL 3 |
| Performance level (PL) | PL e |
| Category | Cat. 4 |
| Mission Time (T _M) | 20 a |
| PFH _d | 1.35 E-8 |
| Type | 4 |

Indicators/operating means

| | |
|----------------------|---------------|
| Operating display | in the master |
| Diagnostics display | in the master |
| Function display | in the master |
| Pre-fault indication | in the master |
| Controls | in the master |

Electrical specifications

| | | |
|------------------------|----------------|-------------|
| Operating voltage | U _B | from master |
| No-load supply current | I ₀ | from master |
| Protection class | | III |

Input

| | |
|----------------|---------------|
| Test input | in the master |
| Function input | in the master |

Output

| | |
|---------------|---------------------------------------|
| Safety output | in the master |
| Signal output | in the master |
| Response time | depends on height of protective field |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | 0 ... 55 °C (32 ... 131 °F) |
| Storage temperature | -25 ... 70 °C (-13 ... 158 °F) |
| Relative humidity | max. 95 %, not condensing |

Mechanical specifications

| | |
|-------------------|---|
| Housing length L | 560 mm |
| Protection degree | IP67 |
| Connection | M20 cable gland , terminal compartment with screw terminals, lead cross-section max. 1.5 mm ² |
| Material | |
| Housing | extruded aluminum profile, RAL 1021 (yellow) coated |
| Optical face | Plastic pane |
| Mass | Per 1650 g |

General information

| | |
|-------------------|---------------|
| System components | |
| Emitter | SLC30-450-T-S |
| Receiver | SLC30-450-R-S |

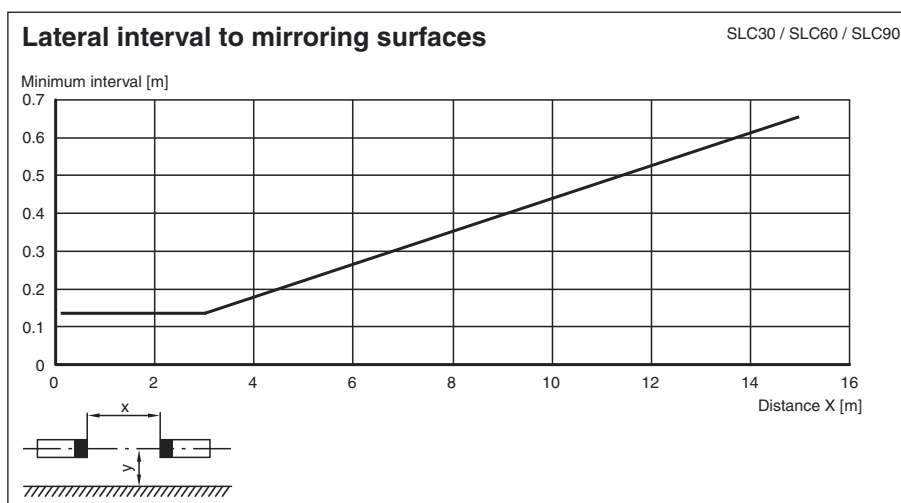
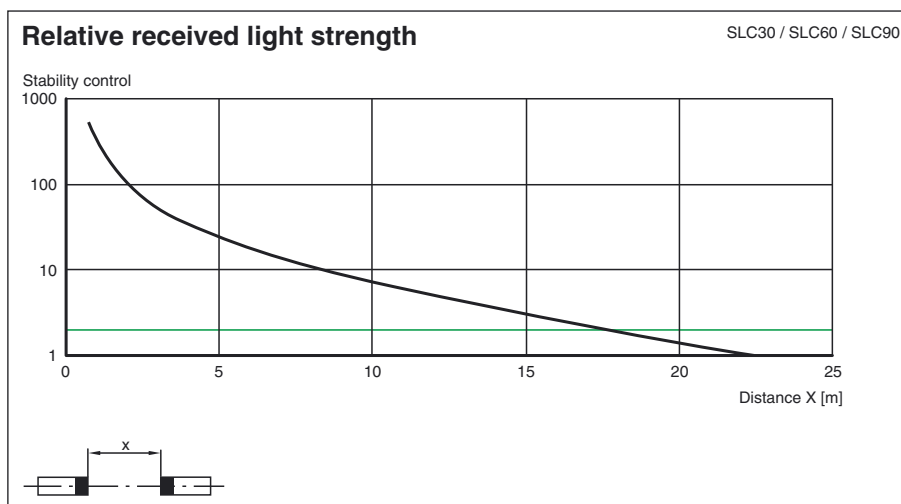
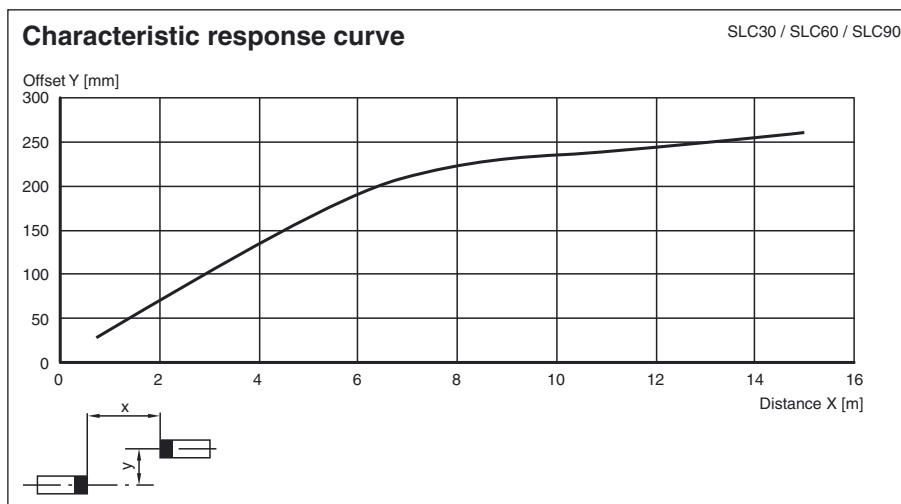
Compliance with standards and directives

| | |
|--------------------------------|---|
| Directive conformity | |
| Machinery Directive 2006/42/EC | EN ISO 13849-1:2008 EN 61496-1:2004/A1:2008 |
| EMC Directive 2004/108/EC | EN 61000-6-4:2007 + A1:2011 |
| Standard conformity | |
| Standards | IEC 61496-2:2006 EN 50178:1997 |

Approvals and certificates

| | |
|---------------|--|
| CE conformity | CE |
| UL approval | cULus Listed |
| CCC approval | Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval. |
| TÜV approval | TÜV |

Curves/Diagrams



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Notes

Response times of cascading units

If cascading units are set up, the response time of the entire SLC, consisting of a master and a slave, must be determined. The overall number of beams for master and slave can be determined from technical data sheets. Depending on the type of output, the resulting response time can be read from the table.

| Number of beams | Response time in milliseconds | |
|-----------------|-------------------------------|--------------|
| | Semiconductor output | Relay output |
| 8 | 10 | 30 |
| 16 | 10 | 30 |
| 24 | 12 | 32 |
| 32 | 14 | 34 |
| 40 | 16 | 36 |
| 48 | 18 | 38 |
| 56 | 20 | 40 |
| 64 | 22 | 42 |
| 72 | 24 | 44 |
| 80 | 26 | 46 |
| 88 | 28 | 48 |
| 96 | 30 | 50 |

Example: Master: SLC14-300/31 32 beams
Slave: SLC60-90-S+ 24 beams
56 beams

56 beams, OSSD relay --> response time = 40 ms.

Notes

Master slave mode

Master: SLC... (semiconductor)
or
SLC.../31 (relay)
Slave: SLC...-S

Using slaves makes it possible to lengthen protective fields or to form protective fields that lie in more than just one level. When you select slaves that can be connected, you should take into consideration that the maximum number of 96 light rays must not be exceeded.

There are slaves for transmitters and receivers. These may simply be connected to the master light curtain. As many as 2 slaves may be connected respectively to the transmitter and receiver unit.

Installation:

- 1 The end cap should be screwed off for the light curtain (without cable gland).
- 2 The plug-in jumper on the connectors of the printed circuit board, which is now visible, should be removed.
- 3 The slave is designed so that the cap located on the cable connector can be plugged directly onto the open end of the light curtain with the printed circuit board.
- 4 After you have screwed on the connection cap, the system is complete.

System accessories

- Mounting set SLC
- Test rods SLC14/SLC30/SLC60
- Protective glass pieces for SLC (to protect the optically functional surface)
- Lateral screwed connection SLC
- Profile alignment aid
- Laser alignment aid SLC
- Mirror for SLC (for securing hazardous areas on multiple sides)
- Ground pillar UC SLP/SLC
- Housing for pillar
Enclosure UC SLP/SLC
- Collision protector
Damping UC SLP/SLC