



ELG3-0450P511

ELG

SWITCHING AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|---------------|----------|
| ELG3-0450P511 | 1025490 |

Other models and accessories → www.sick.com/ELG

Detailed technical data

Features

| | |
|--|---------------------|
| Sensor principle | Sender/receiver |
| Minimum detectable object (MDO) | 35 mm ¹⁾ |
| Beam separation | 30 mm |
| Number of beams | 16 |
| Detection height | 450 mm |
| Evaluation beams | Parallel beam |

¹⁾ Parallel beam.

Mechanics/electronics

| | |
|--|--------------------------------|
| Wave length | 880 nm |
| Supply voltage V_s | DC 15 V ... 30 V ¹⁾ |
| Power consumption sender | < 100 mA ¹⁾ |
| Power consumption receiver | < 100 mA ¹⁾ |
| Ripple | < 5 V _{pp} |
| Output current I_{max.} | ≤ 100 mA |
| Output load, capacitive | 100 nF |
| Output load, Inductive | 1 H |
| Initialization time | 1 s |
| Switching output | 2 x PNP ²⁾ |
| Output mode | Q dark switching ³⁾ |
| Dimensions (W x H x D) | 34 mm x 526 mm x 29 mm |
| Connection type | Male connector M12, 4-pin |

¹⁾ Typical value.

²⁾ Q / \bar{Q} .

³⁾ Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

⁴⁾ Operating in outdoor condition only with a external protection housing.

| | |
|---------------------------|--|
| Housing material | Aluminum |
| Indication | LED |
| Synchronization | Optical |
| Enclosure rating | IP65 4) |
| Circuit protection | U _V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression |
| Protection class | III |
| Weight | 1,500 g |
| Pulse frequency | 250 kHz |
| Front screen | PMMA |

¹⁾ Typical value.

²⁾ Q / Q̄.

³⁾ Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

⁴⁾ Operating in outdoor condition only with a external protection housing.

Performance

| | |
|------------------------|---------------------|
| Maximum range | 3 m |
| Minimum range | ≥ 0 mm |
| Operating range | 2 m |
| Response time | 28 ms ¹⁾ |

¹⁾ With resistive load.

Ambient data

| | |
|--------------------------------------|--------------------------------------|
| Shock resistance | 10 g / DIN EN 60068-2-29 / 16 ms |
| Vibration resistance | 5 g, 10 Hz ... 55 Hz (IEC 68-2-6) |
| EMC | EN 60947-5-2 |
| Ambient light immunity | Indirect: ≤ 150,000 lx ¹⁾ |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |

¹⁾ Sunlight.

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270910 |
| ECLASS 5.1.4 | 27270910 |
| ECLASS 6.0 | 27270910 |
| ECLASS 6.2 | 27270910 |
| ECLASS 7.0 | 27270910 |
| ECLASS 8.0 | 27270910 |
| ECLASS 8.1 | 27270910 |
| ECLASS 9.0 | 27270910 |
| ECLASS 10.0 | 27270910 |
| ECLASS 11.0 | 27270910 |
| ECLASS 12.0 | 27270910 |

| | |
|-----------------------|----------|
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| ETIM 7.0 | EC002549 |
| ETIM 8.0 | EC002549 |
| UNSPSC 16.0901 | 39121528 |

Dimensional drawing (Dimensions in mm (inch))

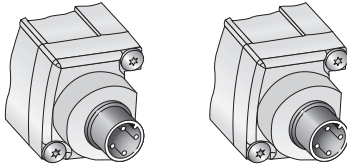
ELG3/ELG6



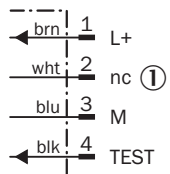
- ① Detection height
- ② Beam separation ELG3: 30 mm/ELG6: 60 mm
- ③ Status indicator (ELGE)/Power on (ELGS)
- ④ Sensitivity control
- ⑤ Distance to first beam; ELG3: 42.5 mm/ELG6: 72.5 mm
- ⑥ Connection

Connection type and diagram

Connection type and diagram

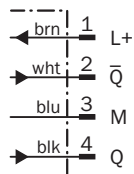


Sender



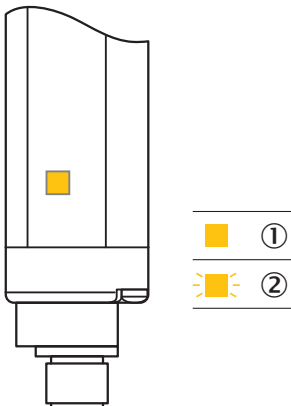
① Not assigned

Receiver



Adjustments

LED display receiver



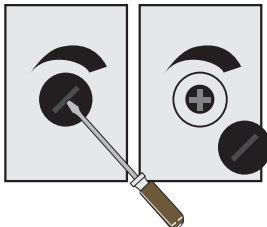
- ① No object in the light path (alignment OK)
- ② Contamination control

Concept of operation

Specific features

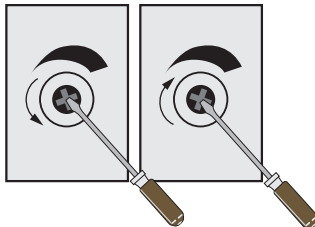
Sensitivity adjustment

1. Remove cap



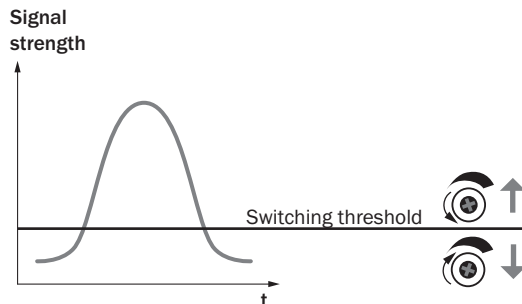
Remove cap with screw driver.

2. Potentiometer adjustment

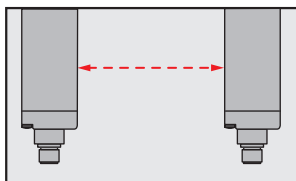


Turn left = for a lower range.
Turn right = for a higher range.

Sensitivity adjustment





Optical synchronisation



The light grid communicates via the light beams. A cable is not necessary for the optical synchronisation.

Recommended accessories

Other models and accessories → www.sick.com/ELG

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
| Terminal and alignment brackets | | | |
|  | 4 pieces, Mounting kit 1, rotatable, swivel mount, plastic | BEF-2SMKEAKU4 | 2019649 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF2A14-050VB3XLEAX | 2096235 |

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For us, that is “Sensor Intelligence.”

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