Online data sheet

ELG3-0450P591

ELG

SWITCHING AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
ELG3-0450P591	1029489

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

Detailed technical data

Features

Technology	Sender/receiver
Minimum detectable object (MDO)	Parallel beam: ≥ 35 mm ... 65 mm
Beam separation	30 mm
Number of beams	≥ 16
Detection height	450 mm
Evaluation beams	Parallel beam

Performance

Maximum range	3 m
Minimum range	≥ 0 mm
Working range	2 m
Response time	Parallel beam ≥ 14 ms [1]

[1] With resistive load.

Interfaces

Switching output	2 x PNP (Q and /Q)
Connection type	M12, 4-pin male connector

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

[1] Typical value.
[2] Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

Output load capacitive	100 nF
Output load inductive	1 H
Initialization time	1 s
Dimensions (W x H x D)	34 mm x 526 mm x 29 mm
Housing material	Aluminum
Indication	LED
Synchronization	Optical
Enclosure rating	IP 65
Circuit protection	U_V connections, reverse polarity protected, Output Q short-circuit protected, Interference pulse suppression
Weight	≥ 1,500 g
Switching frequency	500 kHz
Front screen	PMMA
Output mode	Q dark switching [2)]

[1)] Typical value.
[2)] Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

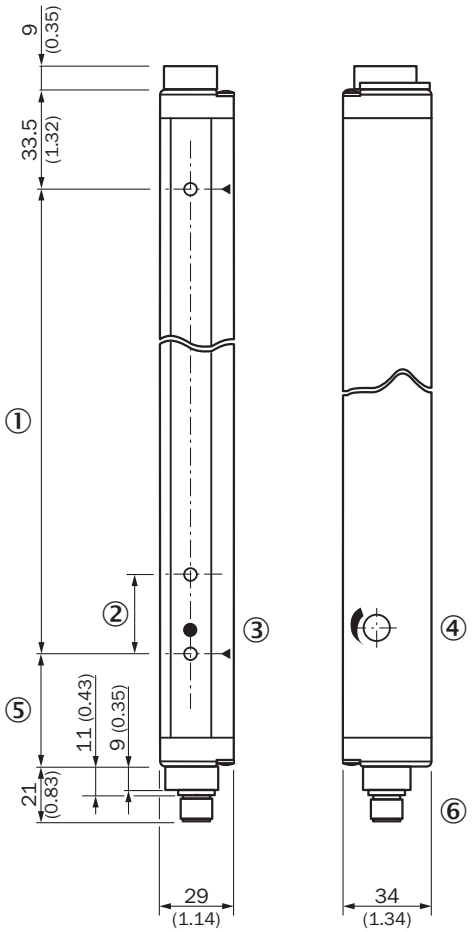
Ambient data

Protection class	III
EMC	EN 60947-5-2
Ambient temperature	Operation: –25 °C ... +55 °C Storage: –40 °C ... +70 °C
Ambient light immunity	Indirect: ≤ 150,000 lx [1)]
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
Shock load	10 g / DIN EN 60068-2-29 / 16 ms

[1)] Sunlight.

Dimensional drawing (Dimensions in mm (inch))

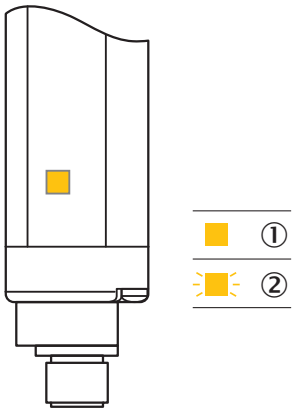
ELG3/ELG6



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

Adjustments

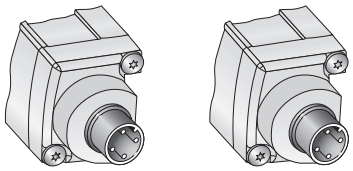
LED display receiver



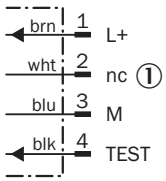
① No object in the light path (alignment OK)
② Contamination control

Connection type and diagram

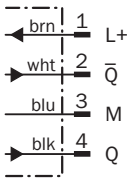
ELG3/ELG6 Sender Connector M12, 4-pin Receiver Connector M12, 4-pin



Sender



Receiver

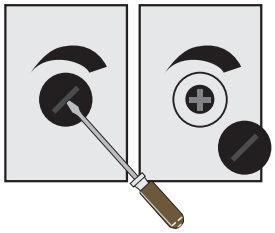


① Not assigned

Concept of operation

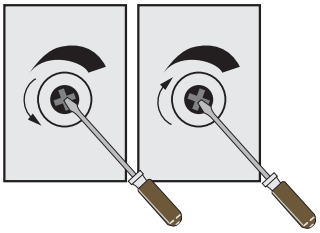
Sensitivity adjustment

1. Remove cap



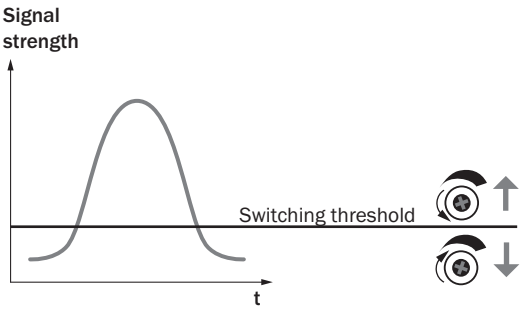
Remove cap with screw driver.

2. Potentiometer adjustment

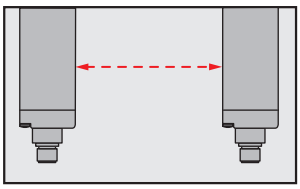


Turn left = for a lower range.
Turn right = for a higher range.

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.de/ELG

	Brief description	Type	Part no.
Terminal and alignment brackets			
	4 pieces, Mounting kit 1, rotatable, swivel mount, plastic	BEF-2SMKEAKU4	2019649
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 5 m	DOL-1204-G05M	6009866

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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Contacts and other locations –www.sick.com