



ELG3-0450P591

ELG

AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
ELG3-0450P591	1029489

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

Illustration may differ



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⁾

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.

Dimensions (W x H x D)	34 mm x 526 mm x 29 mm
Connection type	Male connector M12, 4-pin
Housing material	Aluminum
Display	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	500 kHz
Front screen	PMMA

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.

Performance

Maximum range	3 m
Minimum range	≥ 0 mm
Operating range	2 m
Response time	14 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.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Classifications

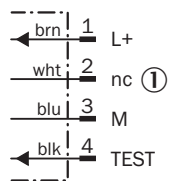
ECLASS 5.0	27270910
ECLASS 5.1.4	27270910

- 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

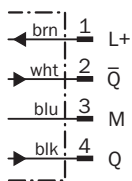
Connection type and diagram



Sender



Receiver



① Not assigned

LED display receiver



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

Specific features

Sensitivity adjustment

1. Remove cap



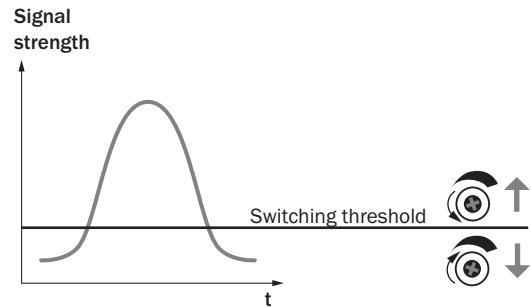
Remove cap with screw driver.

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.
Mounting systems			
	<ul style="list-style-type: none"> Description: Mounting kit 1, rotatable, swivel mount Material: Plastic Details: Plastic Packing unit: 4 pieces Suitable for: All protective field heights in small housing 	BEF-2SMKEAKU4	2019649
connectors and cables			
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded 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 Application: Uncontaminated zones, Zones with chemicals 	YF2A14-050VB3XLEAX	2096235

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com