



## Switching automation light grids ELG, ELG Short Range

ELG1-0100P531



**Model Name** > [ELG1-0100P531](#)  
**Part No.** > [1026807](#)



*Illustration may differ*

**At a glance**

- Up to 16 beams with 10 mm and 112 with 30 mm beam separation
- Range up to 5 m
- Potentiometer for sensitivity setting
- Ambient light up to 150,000 lux
- Tough, aluminum housing
- PNP/NPN output and a test input
- Optical synchronization

**Your benefits**

- Efficient and effective way to combine multiple sensors in one housing with one connector
- Simple commissioning thanks to a larger optical aperture angle and manual fine adjustment option
- Optical synchronization enables quick installation and cost-effective connection
- The ELG Short Range reliably detects objects, even under challenging ambient conditions



**Features**

Technology:	Sender/receiver
Task:	Switching light grid
Minimum detectable object (MDO):	Parallel beam: $\geq 15$ mm
Beam separation:	10 mm
Number of beams:	11
Detection height:	100 mm
Evaluation beams:	Parallel beam

**Performance**

Maximum range:	7 m
Minimum range:	$\geq 0$ mm
Working range:	3 m
Response time <sup>1)</sup> :	Parallel beam 14 ms

<sup>1)</sup> With resistive load

**Interfaces**

Output type:	2 x PNP (Q and /Q)
Connection type:	Connector M12, 4-pin

Test input: PNP

### Mechanics/electronics

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Wave length: 880 nm  
Supply voltage  $V_s$  <sup>1)</sup>: DC 15 V ... 30 V  
Power consumption sender <sup>2)</sup>: < 100 mA  
Power consumption receiver <sup>3)</sup>: < 100 mA  
Ripple: < 5 Vpp  
Output load capacitive: 100 nF  
Output load inductive: 1 H  
Initialization time: 1 s  
Dimensions (W x H x D): 34 mm x 187 mm x 29 mm  
Housing material: Aluminum  
Indication: LED  
Enclosure rating: IP 65  
Circuit protection: Output Q short-circuit protected  
Interference suppression  
VS connections reverse-polarity protected  
  
Weight: 700 g  
Front screen: PMMA  
Output mode <sup>4)</sup>: Q dark switching  
Switching frequency: 500 kHz  
Synchronization: Optical

1) 2) 3) Typical value <sup>4)</sup> Q = active in case one beam is interrupted, /Q = active in case all beam are free

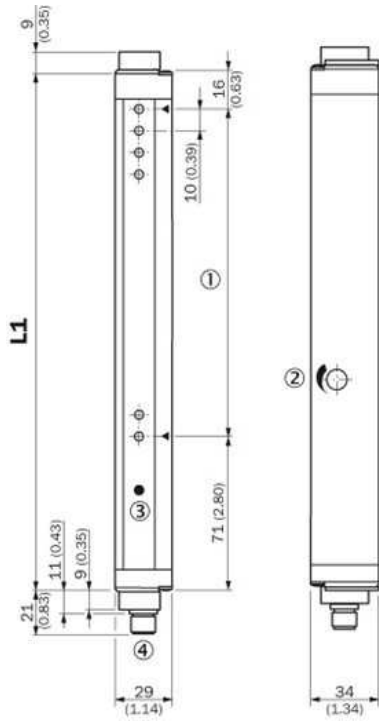
### Ambient data

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

<sup>1)</sup> Sunlight

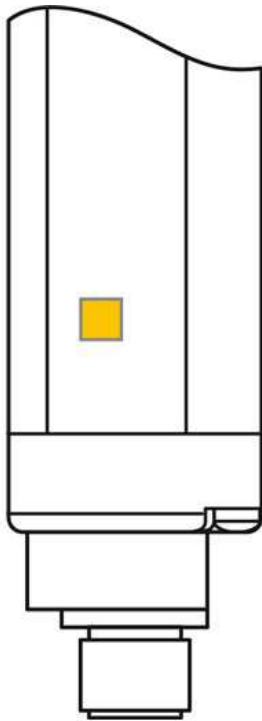
## Dimensional drawing



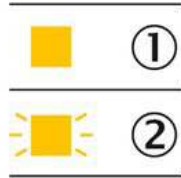
### L1

① 100 mm	187 (7.36)	1  Detection height
① 150 mm	237 (9.33)	2  Sensitivity adjustment
		3  Status indicator (ELGE)/Power on (ELGS)
		4  Connector M12, 4-pin

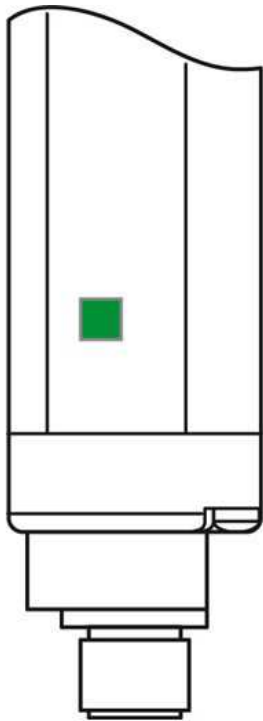
## LED display receiver



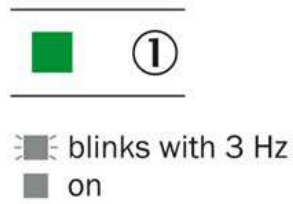
- |1| No object in the light path
- |2| Pollution indication



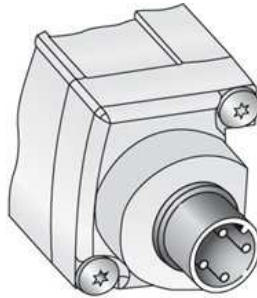
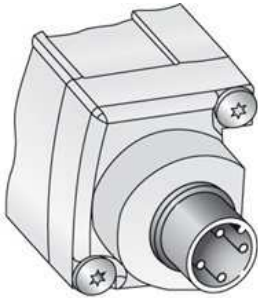
LED display sender



|1| Supply voltage

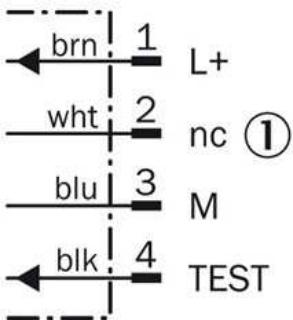


Connection type and diagram

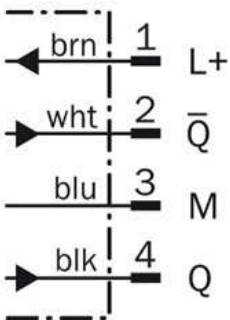


|1| not connected

Sender



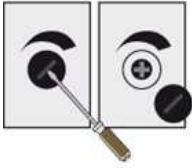
Receiver



## Special functions

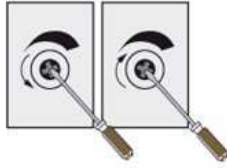
### Sensitivity adjustment

#### 1. Remove cap



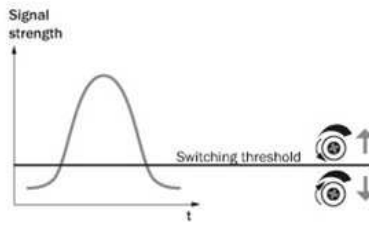
Remove cap with screw driver.

#### 2. Potentiometer adjustment

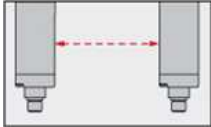


Turn left = for a lower range.  
Turn right = for a higher range.

### Sensitivity adjustment



### Optical synchronisation



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

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)