



## Switching automation light grids ELG, ELG Short Range

ELG1-0150P531



**Model Name** > [ELG1-0150P531](#)  
**Part No.** > [1026741](#)



*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:	16
Detection height:	150 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 237 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: 800 g  
Front screen: PMMA  
Output mode <sup>4)</sup>: Q dark switching  
Switching frequency: 500 kHz  
Synchronization: Optical

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

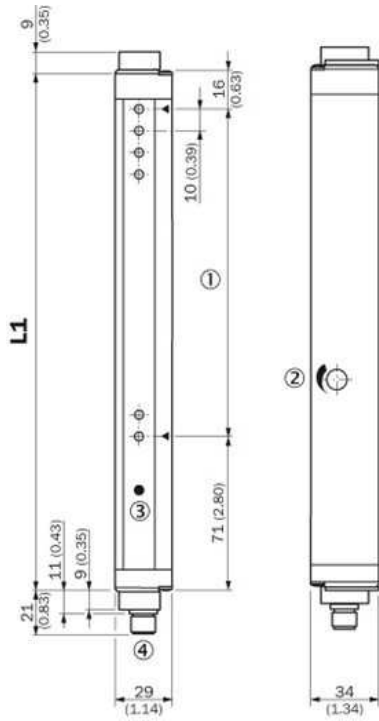
### Ambient data

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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>

1) Sunlight

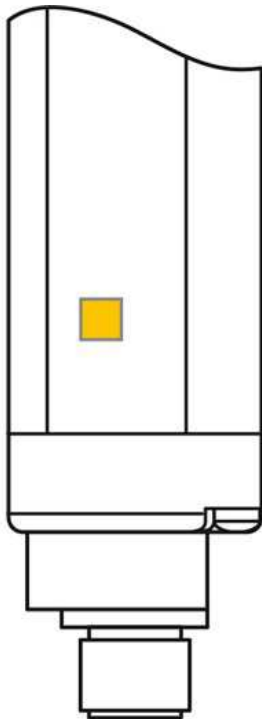
## Dimensional drawing



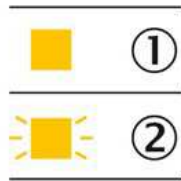
### L1

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

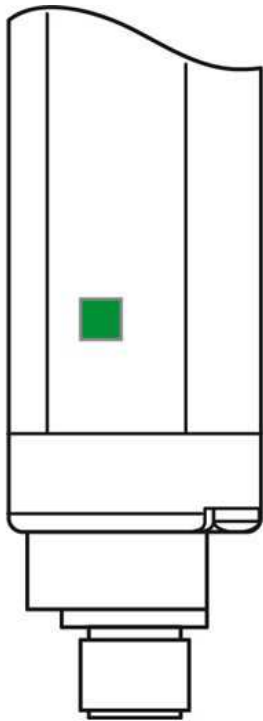
## LED display receiver



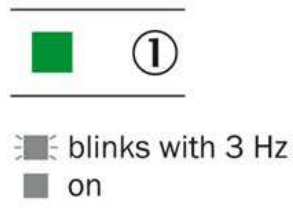
- |1| No object in the light path
- |2| Pollution indication



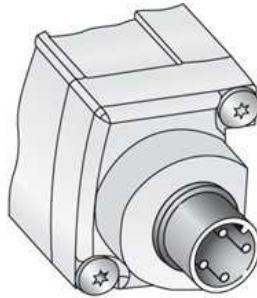
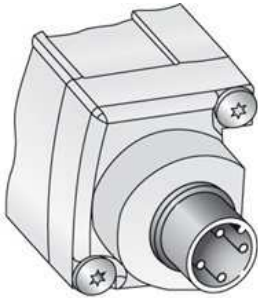
LED display sender



|1| Supply voltage

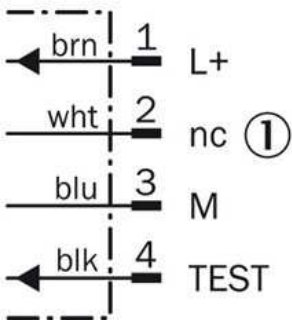


Connection type and diagram

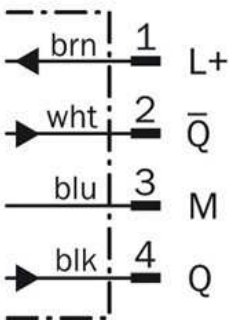


|1| not connected

Sender



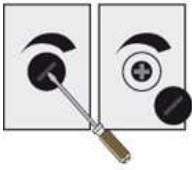
Receiver



## Special functions

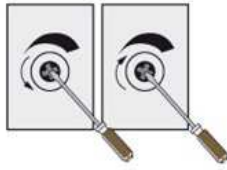
### Sensitivity adjustment

#### 1. Remove cap



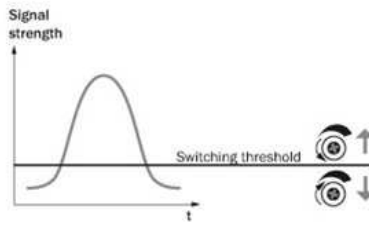
Remove cap with screw driver.

#### 2. Potentiometer adjustment

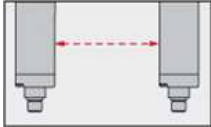


Turn left = for a lower range.  
Turn right = for a higher range.

### Sensitivity adjustment



### Optical synchronisation



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

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