



Switching automation light grids ELG, ELG Short Range

ELG3-0090P513



Model Name > [ELG3-0090P513](#)
Part No. > [1025443](#)



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):	Cross beam: ≥ 20 mm ... 35 mm
Beam separation:	30 mm
Number of beams:	4
Detection height:	90 mm
Evaluation beams:	Multiple scan

Performance

Maximum range:	3 m
Maximum range (PL150):	0 m
Minimum range:	≥ 0 mm
Working range:	2 m
Response time ¹⁾ :	Parallel beam 84 ms

¹⁾ With resistive load

Interfaces

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

Mechanics/electronics

Wave length: 880 nm
Supply voltage V_s ¹⁾: DC 15 V ... 30 V
Power consumption sender²⁾: < 100 mA
Power consumption receiver³⁾: < 100 mA
Ripple: < 5 Vpp
Output current $I_{max.}$: 100 mA
Output load capacitive: 100 nF
Output load inductive: 1 H
Initialization time: 1 s
Dimensions (W x H x D): 34 mm x 166 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 mode⁴⁾: Q dark switching
Switching frequency: 250 kHz
Synchronization: Optical

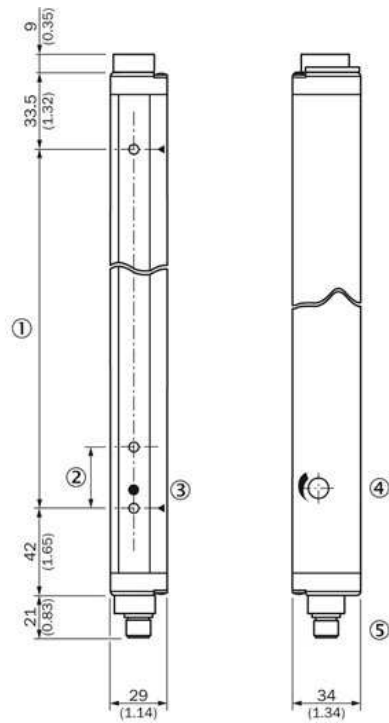
1) 2) 3) Typical value 4) Q = active in case one beam is interrupted, /Q = active in case all beam are free

Ambient data

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 lx¹⁾

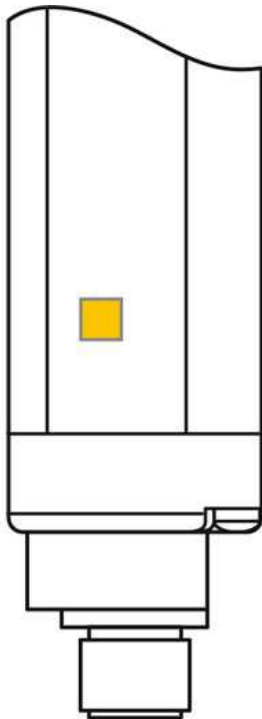
1) Sunlight

Dimensional drawing

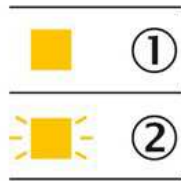


- |1| Detection height
- |2| Beam spacing ELG3: 30 mm
- |3| Status indicator (ELGE)/Power on (ELGS)
- |4| Sensitivity adjustment
- |5| Connector M12, 4-pin

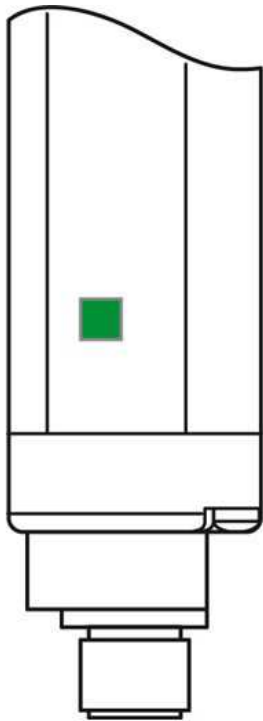
LED display receiver



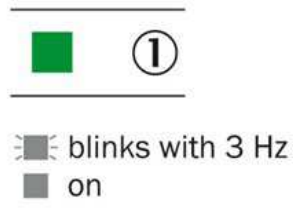
- |1| No object in the light path
- |2| Pollution indication



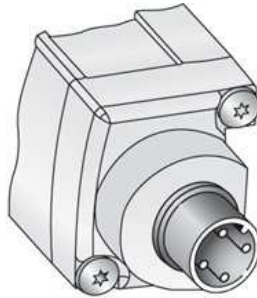
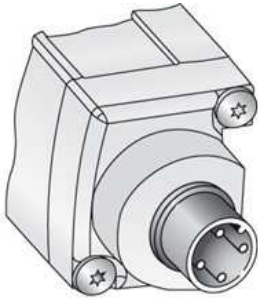
LED display sender



|1| Supply voltage

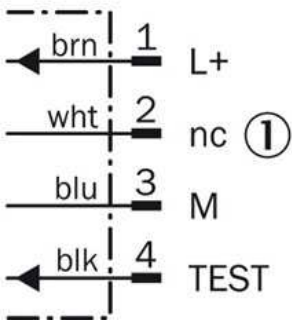


Connection type and diagram

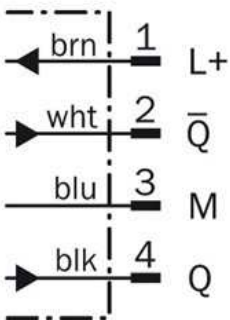


|1| not connected

Sender



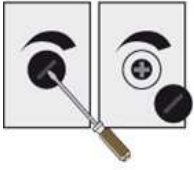
Receiver



Special functions

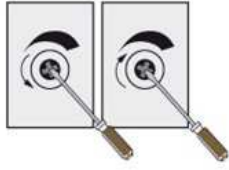
Sensitivity adjustment

1. Remove cap



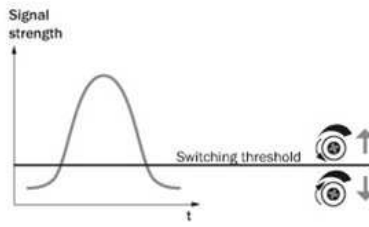
Remove cap with screw driver.

2. Potentiometer adjustment

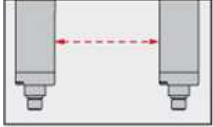


Turn left = for a lower range.
Turn right = for a higher range.

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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