



## VLC100 Standard Automation Light Grids

A new dimension in vision-based  
automation light grids

$$a^2 + b^2 = \text{VLC100}$$



## The new geometric form in the light grid area

With its unique design, the VLC100 is a real head-turner. Other unique selling points that differentiate it from its “colleagues” in the light grid area are, for example, an integrated camera, an extremely fast response time of 20 ms during switching, mini resolution of 6 mm at near range, and sender and receiver in one device. Mounting, commissioning and the teach-in procedure are impressively simple.



### Special features

- ①. Integrated camera with concentrically arranged LEDs
- ②. Space-saving installation
- ③. Large field of view of 200 cm x 200 cm and a maximum range of 2.8 m

### Easy commissioning

- ④. Mounting with 2 screws
- ⑤. Self-adhesive reflective tape (sold by meter)
- ⑥. Electrical installation with only one cable
- ⑦. Automatic alignment

### Simple teach-in

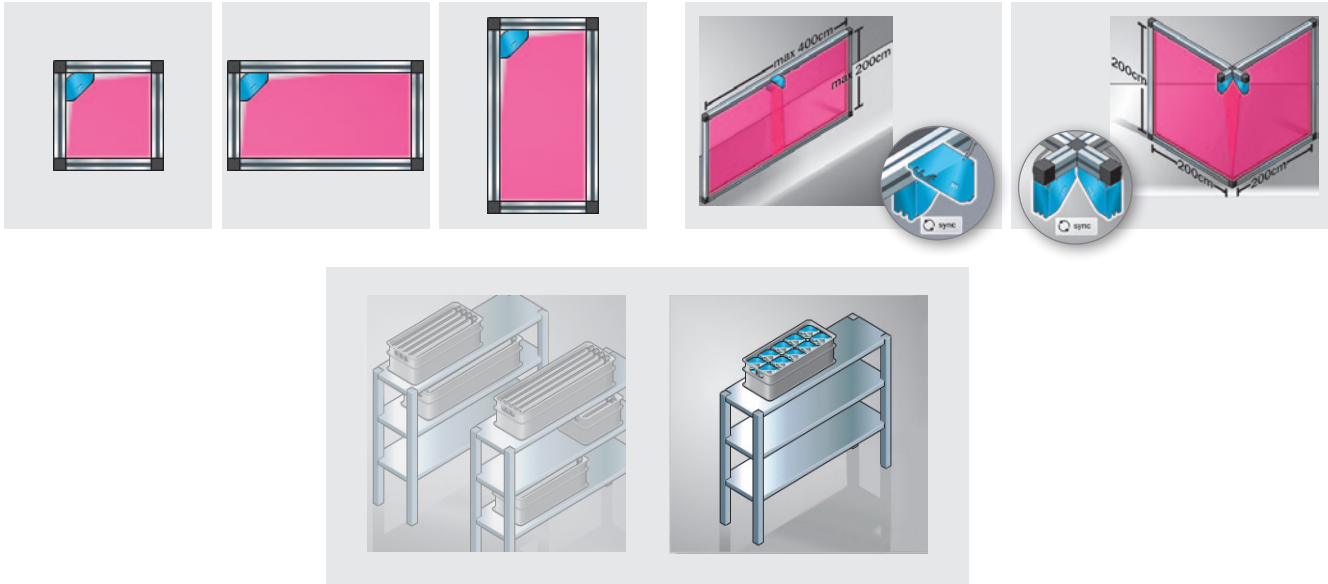
- ⑧. Press teach-in button ...
- ⑨. ... until green LED lights up.
- ⑩. Duration: 20 seconds

### Easy troubleshooting

- ⑪. Detects contamination, which can then be removed with a cloth
- ⑫. Detects interruptions in the reflective tape
- ⑬. Reflective tape can be easily replaced

The VLC100 always fits. While conventional light grids are often too short or too long when used in another application, the VLC100 is adaptable and its field of view and its geometry can be modified as required between a minimum of 40 cm x 40 cm and a maximum of 200 cm x 200 cm.

With the VLC100's one-device concept, there is no need for variants. In addition to the flexibility of the field of view, it is also possible to synchronize two sensors with each other. By doing that, the field of view can be lengthened or a second area around a corner can be activated.



The one-device concept is a real advantage to the customer because of the low storage costs.



### Typical applications

The standard automation light grid VLC100 was developed first and foremost to monitor protrusions and for edge detection. As the replacement product of the Optotrap (OTD), the VLC100 with its innovative camera technology can easily replace the OTD in the areas of application where it is used – and with significantly less effort required for mounting.

#### Fields of application

- Courier Express Parcel, Postal & Cargo
- Warehouse and Distribution
- Airport
- Wood
- Automotive
- Building Automation
- Beverage

A new dimension of vision-based automation light grids



### Product description

The VLC100 is based on innovative camera technology, developed for monitoring protrusions and edge detection. With just one component, the VLC100 is mounted in a corner of the monitored area in such a way that it is protected and saves space. One sensor covers a great variety of sensors for monitored

areas. By synchronizing two VLC100, the monitored area can be expanded up to 4 m x 4 m. Reduce costs due to one part to stock that covers many applications. This makes it easy to install since only one part is needed, instead of a sender, receiver, and third, controller box.

### At a glance

- Sensing range up to 2.8 m
- Resolution 6 mm up to 18 mm
- One device only: integrated sender and receiver
- Intuitive one-button operation
- Automatic alignment
- Synchronization of 2 systems
- Easy teach-in function

### Your benefits

- Flexible and individual design of detection area
- Quick commissioning without additional software
- Intuitive, time-saving operation
- No variants: one device concept for all detection areas
- Reduced storage, shipping and commissioning costs
- No expert knowledge required
- High reliability and simple maintenance



### Additional information

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→ [www.mysick.com/en/VLC100](http://www.mysick.com/en/VLC100)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

### Features

Technology	Camera system
Task	Switching camera system
Minimum detectable object (MDO) <sup>1)</sup>	6 mm ... 18 mm

<sup>1)</sup> Dependence on the range.

### Performance

Minimum range	≥ 100 mm
Response time <sup>1)</sup>	≥ 20 ms

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

### Interfaces

Inputs	Teach input
Connection type	Short cable (0.39 m) with connector M12, 8-pin

### Mechanics/electronics

Wave length	850 nm
Supply voltage $V_s$ <sup>1)</sup>	DC 24 V
Power consumption <sup>2)</sup>	690 mA
Ripple	± 5 %
Output load capacitive	2.2 µF
Output load inductive	2.2 H
Initialization time	6 s
Dimensions (W x H x D)	90 mm x 50 mm x 90 mm
Housing material	Aluminum
Indication	4 x LED
Enclosure rating	IP 54
Circuit protection	$V_s$ connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Weight	355 g
Front screen	Glass
Output mode <sup>3)</sup>	/Q

<sup>1)</sup> Typical value.

<sup>2)</sup> 165 mA at 24 V without output load.

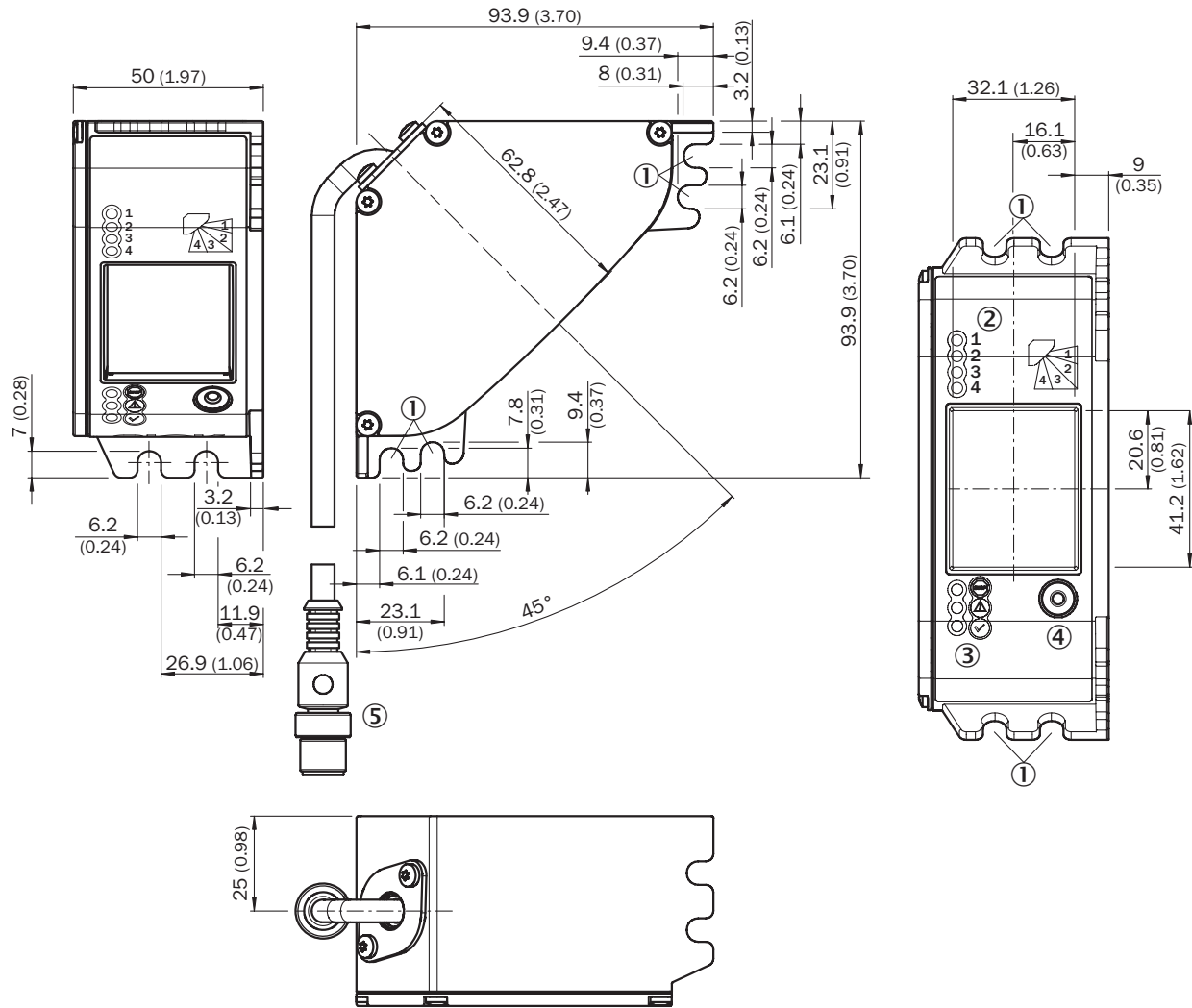
<sup>3)</sup> /Q = active, in case all beams are free.

## Ordering information

Working range	Switching output	Model name	Part no.
2 m x 2 m	2 x PNP	VLC100-0201000	1054540

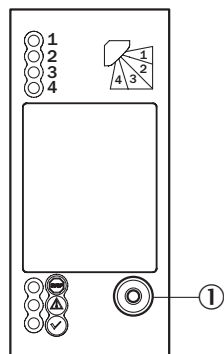
Dimensional drawing

dimensions in mm



- ① Mounting hole, Ø 3.2 mm
- ② LED display, field segments
- ③ Status indicator: LEDs green, yellow, red
- ④ Teach-in button
- ⑤ Connector M12, 8-pin

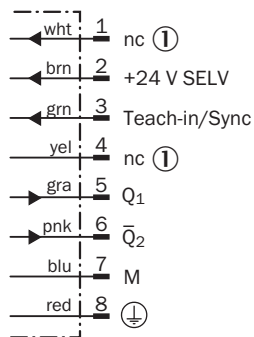
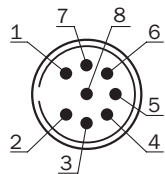
Adjustments



- ① Teach-in button

## Connection type and diagram


### Connector M12, 8-pin




① Not connected

## Recommended accessories

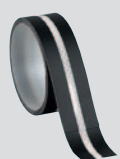
### Mounting brackets/plates

	Short description	Model name	Part no.
 Illustration may differ	Mounting kit for mounting the sensor on profile frame	Mounting kit	2045375

### Plug connectors and cables

	Short description	Model name	Part no.
 Illustration may differ	Female connector, M12, 8-pin, straight, 2 m, PVC, shielded	DOL-1208-G02MA	6020633
	Female connector, M12, 8-pin, straight, 5 m, PVC, shielded	DOL-1208-G05MA	6020993
	Female connector, M12, 8-pin, straight, 5 m, PUR halogen free, 360° shielded	DOL-1208-G05MACR	6037517

### Reflectors

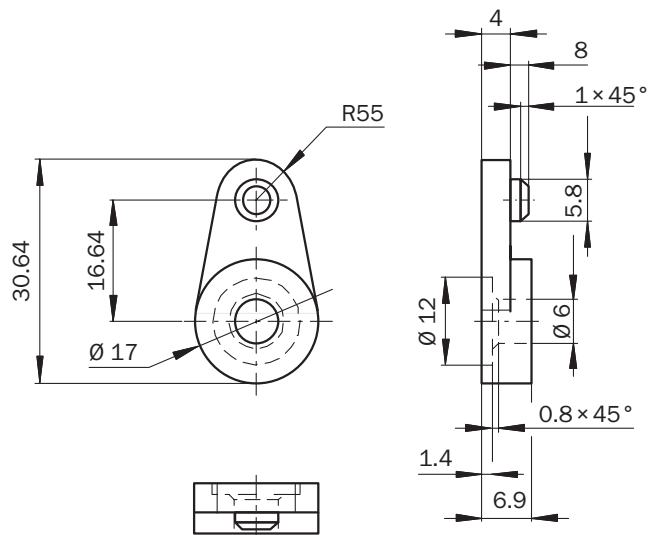
	Short description	Model name	Part no.
	Heavy duty reflective tape, abrasion-resistant (1,000 mm x 37 mm x 0.8 mm), protective field height max 1 m x 1 m, self-adhesive, 2 pieces	Reflective tape Heavy Duty	2046005
	Heavy duty reflective tape, abrasion-resistant (1,500 mm x 48 mm x 0.8 mm), protective field height max 1.5 m x 1.5 m, self-adhesive, 2 pieces	Reflective tape Heavy Duty	2051582
	Heavy duty reflective tape, abrasion-resistant (2,000 mm x 48 mm x 0.8 mm), protective field height max 2 m x 2 m, self-adhesive, 2 pieces (4 x 1 m)	Reflective tape Heavy Duty, 2 m	2061272

Dimensional drawing accessories

dimensions in mm

Mounting brackets/plates

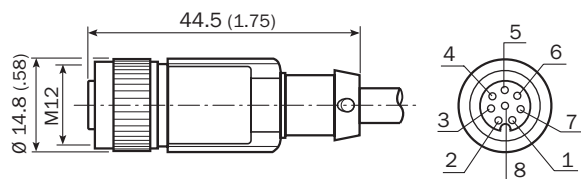
Mounting kit



Plug connectors and cables

DOL-1208-GxxMA

DOL-1208-GxxMACR

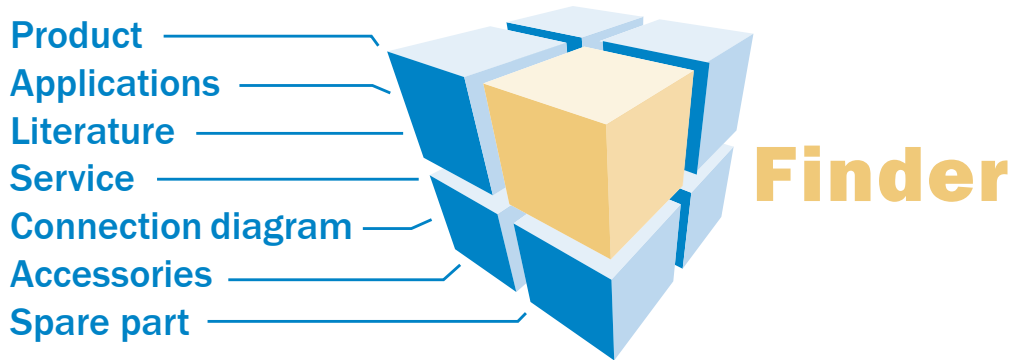








## Search online quickly and safely with the SICK “Finders”



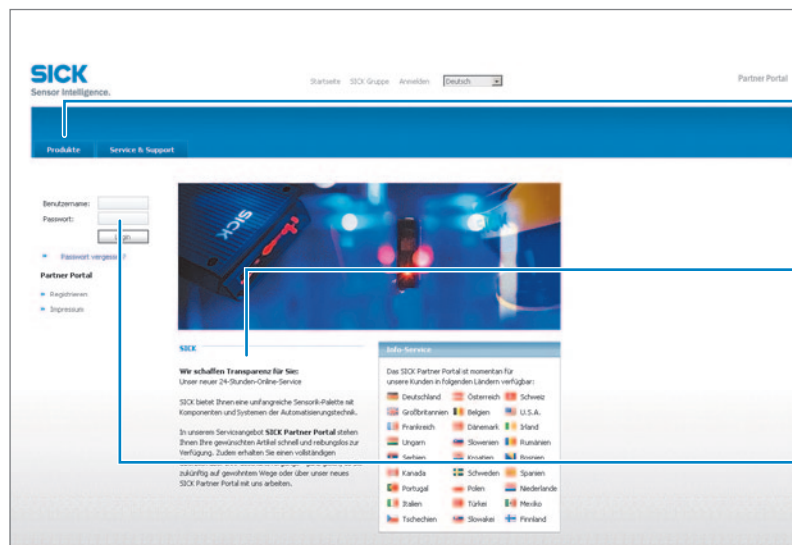
**Product Finder:** We can help you to quickly target the product that best matches your application.

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### Find out prices and availability

Determine the price and possible delivery date of your desired product simply and quickly.

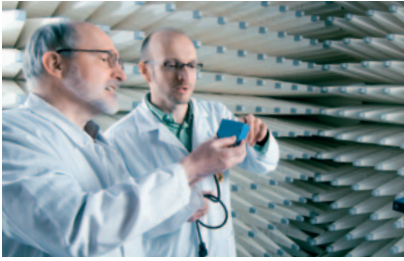
### Order online

You can go through the ordering process in just a few steps.

### Request or view a quote

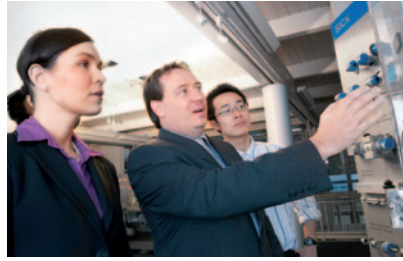
You can have a quote generated online here. Every quote is confirmed to you via e-mail.

## SICK at a glance



### Leading technologies

With a staff of more than 5,000 and over 50 subsidiaries and representations worldwide, SICK is one of the leading and most successful manufacturers of sensor technology. The power of innovation and solution competency have made SICK the global market leader. No matter what the project and industry may be, talking with an expert from SICK will provide you with an ideal basis for your plans – there is no need to settle for anything less than the best.



### Unique product range

- Non-contact detecting, counting, classifying, positioning and measuring of any type of object or media
- Accident and operator protection with sensors, safety software and services
- Automatic identification with bar code and RFID readers
- Laser measurement technology for detecting the volume, position and contour of people and objects
- Complete system solutions for analysis and flow measurement of gases and liquids



### Comprehensive services

- SICK LifeTime Services – for safety and productivity
- Application centers in Europe, Asia and North America for the development of system solutions under real-world conditions
- E-Business Partner Portal [www.mysick.com](http://www.mysick.com) – price and availability of products, requests for quotation and online orders

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