

High-resolution and high-speed detection of the smallest objects









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Product description

The high-resolution HLG light grid from SICK is the ideal solution for all applications in which very flat or small objects need to be detected. The HLG is particularly useful when the packages do not have a uniform leading or trailing edge, such as pillow and wedge-shaped

objects (bags and single serving size food packages). Its 2 mm resolution, fast 3 ms response time, and low switching hysteresis are ideal for fast mail handling systems, packaging machines with high throughput, and part ejection verification on molding and stamping machines.

At a glance

- 2 mm resolution
- Response time 3 ms
- Detection height 50 mm
- Cable synchronization
- PNP or NPN with both Q and Qnot outputs (NO/NC)
- 1 x test, 1 x teach-in input
- Connector M12, 8-pin

Your benefits

- Reliable object detection throughout the entire working range ensures consistent and reliable operation
- High availability thanks to its ability to detect very flat objects
- The HLG's short response time allows the use of higher conveyor speeds directly leading to higher throughput
- Cable synchronization provides more reliable use and higher machine uptime
- Highest measurement resolution provides smallest minimum detectable object size, for exact counting and true leading edge detection of conveyed objects, for more machine control and increased throughput

→ www.mysick.com/en/HLG

Detailed technical data

Features

Technology	Sender/receiver
Task	Switching light grid
Minimum detectable object (MDO)	Parallel beam: ≥ 2 mm
Number of beams	26

Performance

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

¹⁾ With resistive load.

Interfaces

Connection type	Connector M12, 8-pin
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Mechanics/electronics

Wave length	950 nm
Supply voltage V_s ¹⁾	DC 15 V ... 30 V
Power consumption sender ¹⁾	< 100 mA
Power consumption receiver ¹⁾	< 100 mA
Ripple	< 5 V_{PP}
Output current I_{max}	100 mA
Output load capacitive	100 nF
Output load inductive	1 H
Initialization time	0.8 s
Dimensions (W x H x D)	34 mm x 123 mm x 29 mm
Housing material	Aluminum
Indication	LED
Synchronization	Cable
Enclosure rating	IP 54
Circuit protection	V_s connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Weight	135 g
Front screen	PMMA
Output mode ²⁾	Q dark switching
Teach input	PNP

¹⁾ Typical values.

²⁾ Q = active in case one beam is interrupted; /Q = active in case all beams are free.

Ambient data

Protection class	III
EMC	EN 60947-5-2
Ambient temperature	Operation: -25 °C ... +55 °C Storage: -40 °C ... +70 °C
Ambient light safety ¹⁾	Indirect: ≤ 50,000 lux
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
Shock load	10 g/ DIN EN 60068-2-29 / 16 ms

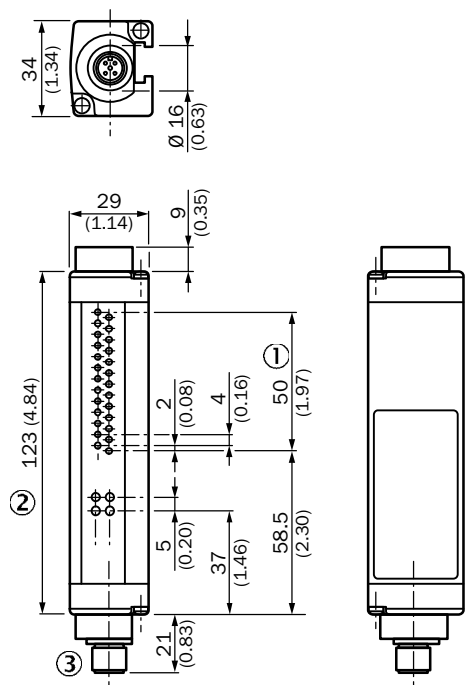
¹⁾ Sunlight.

Ordering information

Please note: Sender and receiver are only offered as a pair.

Beam separation	Working range	Detection height	Switching output	Model name	Part no.
2 mm	1.5 m	50 mm	2 x PNP (Q and /Q)	HLG2-050F811	1029853
			2 x NPN (Q and /Q)	HLG2-050E811	1041849

Dimensional drawing

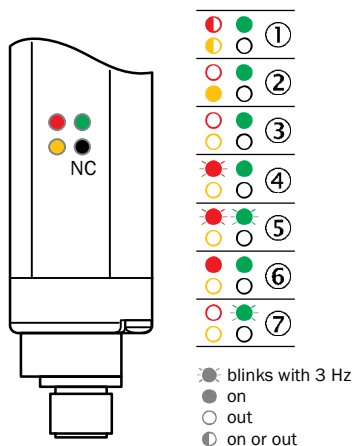


All dimensions in mm (inch)

- ① Detection height: 50 mm
- ② Status indicator/power on
- ③ Connector M12, 8-pin

Adjustments

Receiver, LED indication

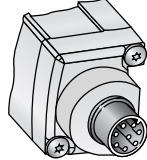
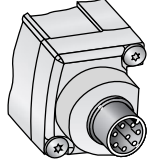


- ① Supply voltage
- ② No object in the light path
- ③ Light path interrupted
- ④ Synchronization error
- ⑤ Less received signal during teach-in
- ⑥ Device error
- ⑦ Activated teach-in procedure

Connection type and diagram

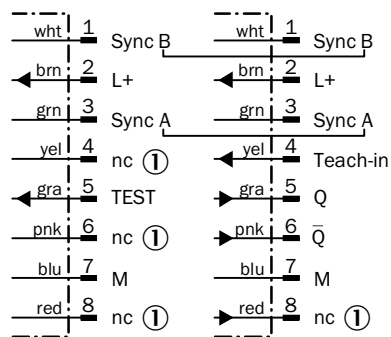
**Sender
Connector
M12, 8-pin**

**Receiver
Connector
M12, 8-pin**



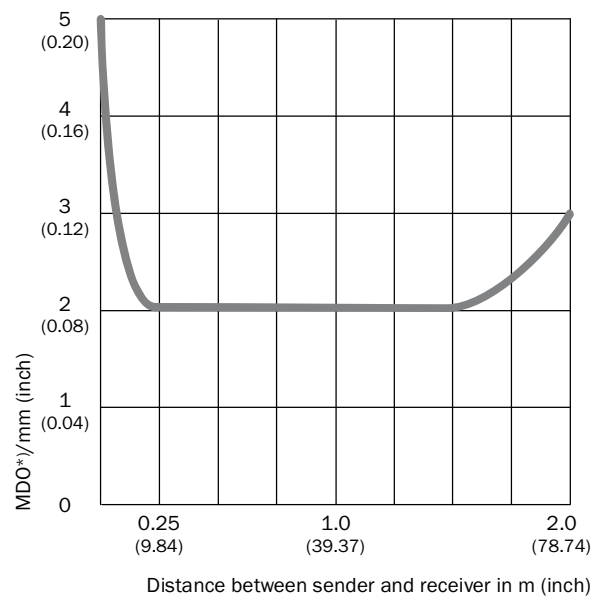
Sender

Receiver



① Not connected

Characteristic curve: MDO




*) MDO: Minimum detectable object size measured in a direction parallel to the HLG

Recommended accessories


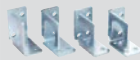
Complete accessories for the HLG include: 1 female connector, 1 bracket, 1 t-junction and 1 connection cable.

Please take note of the number of pins on the connector when choosing connection cables.





Adapters/distributors (without cable)

	Brief description	Model name	Part no.
	T-junction, 1 x connector M12, 8-pin, and 2 x socket M12, 8-pin	SBO-02F12-SM	6029306

Mounting brackets/plates

	Brief description	Model name	Part no.
	Mounting kit 1, adjustable, swivel mount, for all detection heights in small housings, plastic, without mounting material, 4 pcs	BEF-2SMKEAKU4	2019649
	Mounting bracket, steel, zinc coated, without mounting material, 4 pcs	BEF-WK-XLG	2029100

Plug connectors and cables

	Brief 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, 10 m, PVC, shielded	DOL-1208-G10MA	6022152
 Illustration may differ	Female connector, M12, 8-pin, angled, 5 m, PVC, shielded	DOL-1208-W05MA	6021033
	Female connector, M12, 8-pin, straight, shielded	DOS-1208-GA	6028369
	Connection cable, M12, 8-pin, connector straight/socket straight, 1 m, PUR halogen free, shielded	DSL-1208-G01MAC	6026625
	Connection cable, M12, 8-pin, connector straight/socket straight, 2 m, PUR halogen free, shielded	DSL-1208-G02MAC	6030121
	Connection cable, M12, 8-pin, connector straight/socket straight, 5 m, PUR halogen free, shielded	DSL-1208-G05MAC	6032325

For additional accessories including dimensional drawings, please see page 50.