Automation light grids

PRODUCTS AT A GLANCE

Measuring automation light grids, switching automation light grids

SICK

Sensor Intelligence.

Product	Standard application — Task		Special application — Task			Function/special feature					Minimum detectable object (MDO)								
	Object presence	Application at toll station and on industrial doors	Position determination	Pick-to-light	Measuring tasks	Sender/receiver system	Retro-reflective system	Switching	Measuring	Fieldbus-interface	2 mm … 4 mm	5 mm … 10 mm	10 mm … 20 mm	20 mm … 30 mm	30 mm … 40 mm	40 mm … 50 mm	60 mm … 70 mm	70 mm … 80 mm	80 mm … 90 mm
Measuring automation light grids																			
MLG-2 Prime	■	■			■	■		■	■			■	■	■	■		■	■	■
MLG-2 Pro	■	■			■	■		■	■		■ 1)	■	■	■	■		■	■	■
MLG-2 ProNet	■	■			■	■		■	■	■	■ 1)	■	■	■	■		■	■	■
Switching automation light grids																			
ELG		■	■			■		■				■ 1)	■		■		■	■	
SLG		■	■	■		■		■						■ 1)		■			■
PLG							■	■							■				
WLG							■	■											
HLG							■	■											
VLC100		■	■				■	■				■							
FLG		■				■		■			■								

1) Cross beam.

Sensor properties					Page
Response time				Monitoring height	Sensing range	

Response time				Monitoring height	Sensing range	Page
3 ms … 10 ms	10 ms … 100 ms	100 ms … 200 ms	200 ms … 400 ms	400 / 800 / 1,200 / 1,600 / 2,000 / 2,400 / 2,800 / 3,200 mm	1–11 m	
■				140 mm … 3,200 mm (in 150-mm increments)	8.5 m	→ 4
■				140 mm … 3,200 mm (in 150-mm increments)	8.5 m	→ 4
■				140 mm … 3,200 mm (in 150-mm increments)	8.5 m	→ 4
			■	90 mm … 3,120 mm	12 m	→ 6
	■			120 mm … 1,400 mm	7 m	→ 6
■				60 mm … 420 mm	2 m	→ 6
■				87.5 mm	1.5 m	→ 6
■				50 mm	1.5 m	→ 6
	■				2.8 m	→ 6
■				■ 120 / 180 / 250 x 200 (detection area)		→ 6

MLG-2 Prime

Configure measurement tasks with ease via the display

Technical data overview

Beam separation	5 mm / 10 mm 20 mm / 25 mm / 30 mm / 50 mm
Detection height max.	2,545 mm / 3,140 mm / 3,125 mm / 3,100 mm
Working range	up to 8,5 m
Sync	Optical
Interfaces	PNP/NPN (Push-Pull) Analog, IO-Link
Operating mode "standard"	✔
Operating mode "transparent"	–
Operating mode "dust and sunlight resistant"	–
Function "cross beam"	✔
Function "beam blanking"	✔
Function "highspeed scan"	–
Function "high measurement accuracy"	–
Parameterization	on device
Applications "switching output"	Object detection (NBB) Object recognition (RLC (only static)) Height classification (LBB/FBB)
Applications "data interface"	Object detection (NBB) Objekthöhenmessung (LBB) Object height detection (FBB)

At a glance

- High-resolution light grid with 5 mm, 10 mm, 20 mm, 25 mm, 30 mm and 50 mm beam separation
- Available with three push-pull switching outputs or two analog outputs
- Display configuration with selected, pre-programmed measuring functions
- Monitoring height up to 3.2 m
- Operating range up to 8.5 m
- Optical synchronization of sender and receiver
- Cloning function via IO-Link
- Temperature range from –30 °C to +55 °C

Detailed information	➜ www.sick.com/MLG-2_Prime

	MLG-2 Pro	MLG-2 ProNet
	Maximum performance in terms of response time, resolution, and object detection	Less effort and greater flexibility via integrated interfaces
	2.5 mm / 5 mm / 10 mm 20 mm / 25 mm / 30 mm / 50 mm	2.5 mm / 5 mm / 10 mm 20 mm / 25 mm / 30 mm / 50 mm
	1,195 mm / 2,545 mm / 3,140 mm / 3,125 mm / 3,100 mm	1,195 mm / 2,545 mm / 3,140 mm / 3,125 mm / 3,100 mm
	up to 8.5 m	up to 8.5 m
	Cable	Cable
	PNP/NPN (Push-Pull)	PNP/NPN (Push-Pull)
	Analog, RS-485, IO-Link	ProfiNet, EtherCat, EtherNet IP
		ProfiBus (in preparation) / CanOpen (in preparation)
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	Sopas, Webserver	Sopas, Webserver, Device description file
	Object detection/object width (NBB/NCBB)	Object detection/object width (NBB/NCBB)
	Object recognition (RLC)	Object recognition (RLC)
	Height classification (LBB/FBB)	Height classification (LBB/FBB)
	Hole detection/hole size (NBM/NCBM)	Hole detection/hole size (NBM/NCBM)
	Outside/inside dimension (ODI/IDI)	Outside/inside dimension (ODI/IDI)
	Object position (CBB/BNB)	Object position (CBB/BNB)
	Hole position (CBM/BNM)	Hole position (CBM/BNM)
	Zones	Zones
	Object detection (NBB/NCBB)	Object detection (NBB/NCBB)
	Hole detection (NBM/NCBM)	Hole detection (NBM/NCBM)
	Object height detection (LBB/FBB)	Object height detection (LBB/FBB)
	Measuring of outside dimension (ODI)	Measuring of outside dimension (ODI)
	Measuring of inside dimension (IDI)	Measuring of inside dimension (IDI)
	Measuring of object position (CBB)	Measuring of object position (CBB)
	Measuring of hole position (CBM)	Measuring of hole position (CBM)

- High-resolution light grid with 2.5 mm, 5 mm, 10 mm, 20 mm, 25 mm, 30 mm and 50 mm beam separation
- "High-speed scan" function with triple scanning speed
- "Transparent mode" function for detecting transparent materials
- Can be switched to high-resolution evaluation with accuracy levels of up to 2 mm
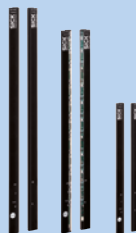- Data compression: Run length coding

- System self-diagnosis possible
- High-resolution light grid with 2.5 mm, 5 mm, 10 mm, 20 mm, 25 mm, 30 mm and 50 mm beam separation
- "High speed scan" function with three scan speeds
- "Transparent mode" function for detection of transparent objects
- Data compression: Run length coding

➜ www.sick.com/MLG-2_Pro

➜ www.sick.com/MLG-2_ProNet

	ELG	SLG	PLG	
	The sturdy light grid for many standard applications	Reliable detection with extremely thin design	Simply clever order picking verification	

Technical data overview

Beam separation	10 mm / 30 mm / 60 mm	40 mm	30 mm / 60 mm	
Minimum detectable object (MDO)	Parallel beam: ≥ 15 mm ... 65 mm Cross beam: ≥ 10 mm ... 35 mm	Parallel beam: ≥ 45 mm Cross beam: ≥ 25 mm	Parallel beam: ≥ 35 mm	
Working range	2 m / 3 m / 5 m / 9 m / 12 m	1.5 m / 3 m / 7 m	0.35 m	
Detection height	90 mm ... 3,330 mm	120 mm ... 1,400 mm	120 mm ... 420 mm / 60 mm	
Response time	Parallel beam: 14 ms ... 390 ms	Parallel beam: 19 ms Cross beam: 57 ms	Parallel beam: 5 ms ... 100 ms	
Switching output	2 x PNP (Q und /Q) 2 x NPN (Q und /Q) Relay (DC 60 V, AC 25 V)	1 x PNP / 1 x NPN 2 x PNP / 2 x NPN	1 x PNP (Q)	
Connection type	Cable 5 m / 15 m Connector M12, 4-pin Connector M12, 5-pin	Cable open end Connector M8, 4-pin	Cable with connector M12, 4-pin	

At a glance

	• Up to 128 beams • Different beam resolutions 10 mm, 30 mm and 60 mm • High operating reserve for scanning ranges up to 12 m • Potentiometer for sensitivity adjustment • Ambient light immunity up to 150,000 lux • Tough aluminum housing • PNP/NPN, relay output and a test input • Optical synchronization	• Variable monitoring lengths from 120 mm to 1,400 mm (in 160 mm increments) • Operating range 7 m • Response time 18 ms • Resolution 85 mm to 25 mm • Order-picking with bright job LEDS on the sender and receiver sides • IP 65 protection class • Ambient light immunity up to 150,000 lux	• 360° visible job LED • Scanning range up to 2 m • Flexible monitoring heights from 120 mm to 420 mm • Immune to reflected and ambient light • Switchable job LED: permanently lit or flashing • Optically confirms correct access	

Detailed information	➜ www.sick.com/ELG	➜ www.sick.com/SLG	➜ www.sick.com/PLG	

WLG	HLG	VLC100	FLG
Retro-reflective light grids for the detection of very fast and transparent objects	High-resolution and high-speed detection of the smallest objects	Only one device for a wide range of monitored areas	Installation and commissioning that couldn't be easier with very high levels of performance
12.5 mm	2 mm	–	4 mm / 2 mm
Parallel beam: ≥ 6 mm … 12 mm	Parallel beam: ≥ 2 mm	6 mm … 18 mm	Dynamic: 2 mm oder 4 mm Static: 6 mm
1,5 m	1.5 m	2 m x 2 m	–
87.5 mm	50 mm	–	120 mm … 250 mm x 200 mm
Parallel beam: 0.6 ms	Parallel beam: 3 ms	≥ 20 ms	< 0.1 ms
1 x PNP (/Q) 2 x PNP (Q und /Q) 8 x PNP Q and alarm	2 x PNP (Q und /Q) 2 x NPN (Q und /Q)	2 x PNP	PNP/NPN (Q und /Q)
Cable 12-wire Connector M12, 5-pin	Connector M12, 8-pin	Cable with connector M12, 8-pin	Connector M12, 4-pin

WLG	HLG	VLC100	FLG
• 0.6 ms response time • Eight visible transmitter LEDs • Up to eight PNP switching outputs and one alarm output • Sensitivity can be set via a potentiometer • Polarizing filter for reflective surfaces	• 2 mm resolution • Response time 3 ms • Detection height 50 mm • Cable synchronization • PNP or NPN with Q or Qnot outputs (NO/NC) • 1 x test, 1 x teach-in input • M12 male connector, 8-pin	• 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	• Dynamic or static operating mode, switchable • Forked- or frame-shaped housing, easy alignment • Adjustable sensitivity • Adjustable pushbutton lock • Rugged metal housing • Adjustable pulse lengthening • Can be switched between Q and Qnot outputs • Very fast response time
➜ www.sick.com/WLG	➜ www.sick.com/HLG	➜ www.sick.com/VLC100	➜ www.sick.com/FLG

SICK AT A GLANCE

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