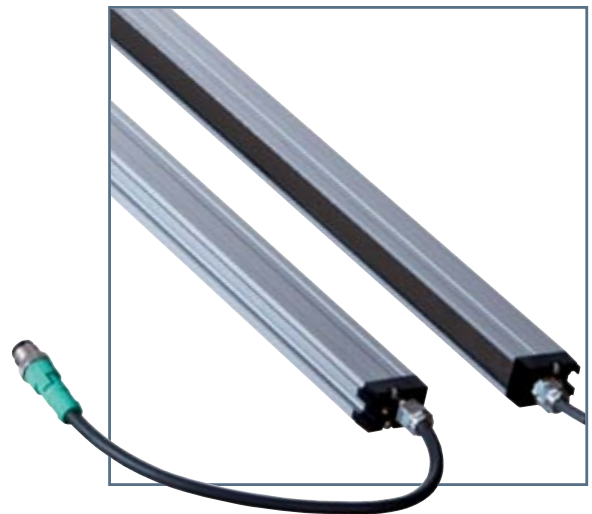




**LGS SERIES**

**INTELLIGENT LIGHT GRID**



A hand is shown touching a light grid sensor. The sensor is a long, thin, silver-colored metal strip with a black touch field on its surface. The touch field has several yellow and green indicator lights. The sensor is mounted on a black surface. The background is a blurred industrial setting.

## A LIGHT GRID WITH THE RIGHT TOUCH

Lightning fast, adaptable, and cost-effective, the new LGS series light grids open the door to a wider range of detection solutions.

Easily monitor height, web sag, material overhang, and more. Setup is quick and convenient with a capacitive touch field—no software, no PC! A rugged IP67 design lets you work under the harshest conditions, even in low temperatures. The competition can't touch these features, but you can—with the LGS series light grids from Pepperl+Fuchs.













### CHECK OUT THESE OTHER FEATURES:

- Easy setup right out of the box
- Super-fast object detection even with beam crossover activated
- Beam blanking functionality
- Extremely slim housing design
- Integrated IO-Link interface included at no extra cost

**TOUCH IT. SAVE IT.**

## HIGHLIGHTS

- Modern, capacitive touch field for simple, step-by-step programming
- Advanced configuration and parameterization without software
- Innovative housing for fast and easy installation
- Wide variety of field heights and resolutions

TOUCH CONTROLS	
	<b>Menu Button</b> Function selection
	<b>OK Button</b> Function confirmation
STATUS LEDs	
	<b>Green LED</b> Power, communication status
	<b>Yellow LED</b> Detection field status
LEVEL 1 ICONS	
	<b>Object/Gap Identification</b> Disabled, enabled
	<b>Height Monitoring 1</b> Disabled, enabled
	<b>Height Monitoring 2</b> Disabled, enabled
	<b>Height Monitoring 3</b> Disabled, enabled
	<b>Object Position</b> Floating, Fixed
	<b>Beam Crossover</b> Enabled, disabled
	<b>Object Tolerance</b> Enabled, disabled
	Activate Level 2

### HOT OR COLD

The tough, aluminum, IP67 housing is designed to withstand harsh environmental conditions at temperatures from -30 °C to +60 °C (-22 °F to 140 °F).

### TOUCH IT. SAVE IT.

The touch field and illuminated icons easily allow the user to navigate and select the many functions including object identification, height monitoring, and beam blanking—all with the simple touch of a finger!

### INNOVATIVE INSTALLATION

Installing, removing, or replacing an LGS light grid is fast and easy using the quick-release bracket—no tools or mounting hardware to drop or misplace. Mounting brackets can be attached to any of the three sides of the light grid using the integral dovetail guides.

### SMART AND SLIM

The ultra-low profile is designed to fit in space-restricted areas. Field heights range from 100 mm to 3200 mm.

20 mm

30.5 mm

### COMMON CONNECTION

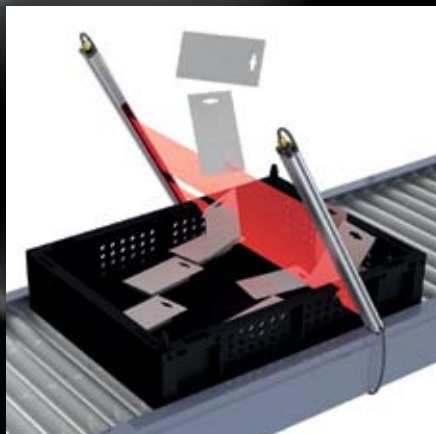
Industry-standard, pigtail M12 connectors with metal cable glands provide added flexibility and strength.



# LGS SERIES APPLICATION EXAMPLES

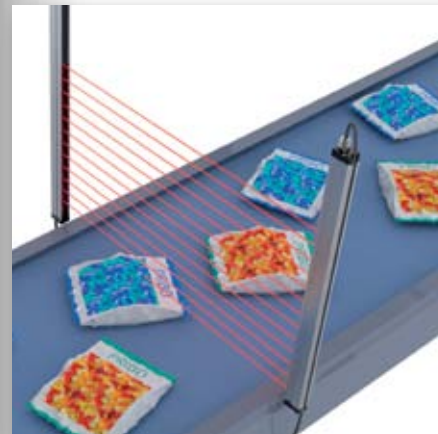
## STANDARD DETECTION

Reliable detection regardless of shape, position, or texture



### MONITOR FOR FALLING OBJECTS

- Superior detection coverage compared to single-beam sensors
- Consistent detection of objects as small as 4 mm



## HEIGHT MONITORING

Teach up to three independent points with the push of a button



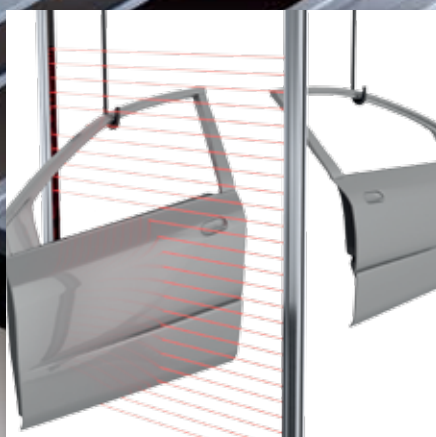
### VERIFY SPECIFIC HEIGHTS

- One or many beams can be used to teach a specific height
- Easily set heights without software



## OBJECT IDENTIFICATION

Recognize an object or gap in a fixed position or anywhere in the beam field



### ENSURE CORRECT GEOMETRY

- Object profile can be simple or complex
- Detection tolerance can be adjusted to compensate for inconsistencies



#### ACCURATE LEADING EDGE DETECTION

- Super-fast detection even if object has irregular or undefined edges
- Height monitoring can be enabled to indicate the direction of product travel

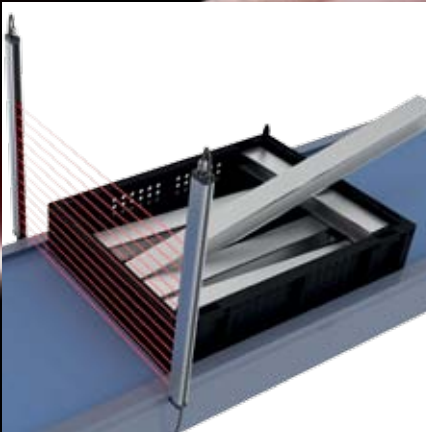


#### DETECTION IN COLD STORAGE AREAS

- Models available for temperatures down to -30 °C
- Emitter and receiver are independently temperature compensated

#### MONITOR WEB SAG

- Evaluate up to three reference points
- Ultraslim housing for the most space-restrictive installations

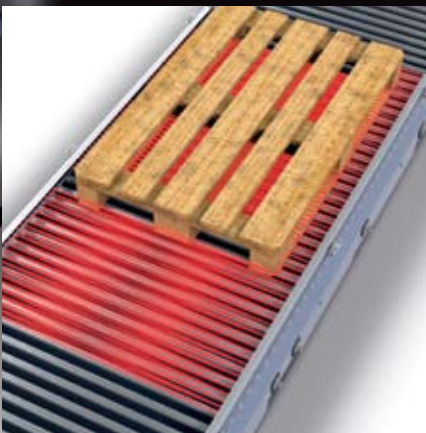


#### OVERHANG DETECTION

- Detect protruding objects of varying size and shape
- Obstructed beams can be disabled with integrated beam blanking

#### VERIFY HOLE SIZE REQUIREMENTS

- Recognizes a specific gap or pattern
- The taught pattern can contain one or many gaps or holes










#### ENSURE PROPER POSITIONING

- Beam crossover can be enabled for even greater precision
- Object position is taught automatically

## TOUCH FIELD MENU

### TOUCH IT. SAVE IT.

It's easy to configure the light grids to your specifications with the unique capacitive touch field—**no software or PC required!** And with illuminated icons, function status is clearly visible. For extra security, there's a multipurpose input for tamperproof operation.

TOUCH CONTROLS	
	<b>Menu Button</b> Function selection
	<b>OK Button</b> Function confirmation
STATUS LEDs	
	<b>Green LED</b> Power, communication status
	<b>Yellow LED</b> Detection field status
LEVEL 1 ICONS	
<b>Q</b>	<b>Object/Gap Identification</b> Disabled, enabled
<b>H1</b>	<b>Height Monitoring 1</b> Disabled, enabled
<b>H2</b>	<b>Height Monitoring 2</b> Disabled, enabled
<b>H3</b>	<b>Height Monitoring 3</b> Disabled, enabled
	<b>Object Position</b> Floating, fixed
	<b>Beam Crossover</b> Enabled, disabled
	<b>Object Tolerance</b> Enabled, disabled
<b>F<sub>2</sub></b>	<b>Activate Level 2</b>
LEVEL 2 ICONS	
<b>F<sub>2</sub> + Q</b>	<b>Beam Blanking</b> Disabled, enabled
<b>F<sub>2</sub> + H1</b>	<b>Gap Identification</b> Disabled, enabled
<b>F<sub>2</sub> + H2</b>	<b>Operating Mode</b> Dark ON/light ON
<b>F<sub>2</sub> + H3</b>	<b>Restore Factory Settings</b>

## TECHNICAL DATA

<b>Operating Range</b>	0.2 m to 6 m (standard model) 0.2 m to 8 m (extended model)
<b>Field Height</b>	100 to 2100 mm in 100 mm steps (8 mm beam spacing) 100 to 3200 mm in 100 mm steps (17 mm, 25 mm beam spacing) 300 to 3000 mm in 300 mm steps (50 mm, 100 mm beam spacing)
<b>Beam Spacing</b>	8/17/25/50/100 mm
<b>Optical Resolution</b>	Beam crossover disabled: 8/17/25/50/100 mm Beam crossover enabled: 4/8.5/12.5/25/50 mm
<b>Touch Controls</b>	2 on the receiver for configuration
<b>Status LEDs</b>	Green: power/ short circuit/ undervoltage/ power save/ IO-Link Yellow: switching state/ excess gain/ test/ error
<b>Supply Voltage</b>	18 to 30 VDC
<b>Response Time</b>	2 ms to 20 ms typical
<b>Operating Mode</b>	Light ON/dark ON, adjustable
<b>Signal Output</b>	Stability Control: 1 PNP Detection Field: (1) 4-in-1 Height Monitoring: (3) 4-in-1
<b>Function Input</b>	Receiver: external configuration Emitter: test/range input
<b>Interface Type</b>	IO-Link, COM2 (38.4 kBaud)
<b>Ambient Light Limit</b>	50,000 lux
<b>Protection Degree</b>	IP67
<b>Operating Temperature</b>	-10 °C to +60 °C (standard model) -30 °C to +60 °C (extended model)
<b>Connection</b>	Receiver: 200 mm pigtail with 8-pin M12 connector Emitter: 200 mm pigtail with 4-pin M12 connector

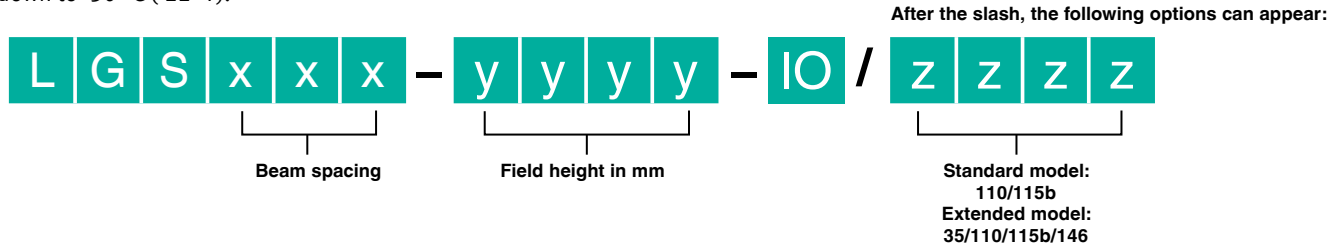


4 output options from 1 sensor:  
NPN normally open, NPN normally closed  
PNP normally open, or PNP normally closed

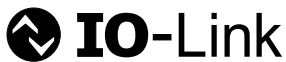


## KEY TO MODEL NUMBERS

The LGS light grids consist of an emitter and receiver that cover a detection area with infrared light beams. Beam spacings are available in 8, 17, 25, 50, and 100 mm with field heights between 100 and 3200 mm. Two versions are available: a standard model with a 6 meter sensing range and a temperature range down to -10 °C (14 °F) and an extended model with an 8 meter sensing range and a temperature range down to -30 °C (-22 °F).



## ACCESSORIES



IO-Link enabled sensors offer a unique advantage over conventional sensors. Because IO-Link does not require the sensor to be used exclusively on a network, you can choose to keep IO-Link totally transparent and the LGS light grid will be nothing more than a conventional sensor. This can be done without any thought or effort. Simply take the light grids out of the box and provide power. No special hardware, computer software, or programming skills required.

For even more features, parameterization options, and diagnostic data, IO-link enabled sensors can be configured online with an IO-Link master. Additional accessories are required. Please call for details.

### IO-LINK CONFIGURATION ACCESSORIES

IO-Link-Master01-USB	IO-Link master configuration tool including power supply and USB cable
V1-G-BK2M-PUR-U-V1-G	Extension cable for connection of LGS emitter to signal splitter
V19-G-BK2M-PUR-U-V1-G	Extension cable for connection of LGS receiver to signal splitter
V1S-T-V1	Signal splitter for connection of LGS emitter and receiver to IO-Link master
PACTware, IODD, IODD Interpreter	Required configuration software components. Available for free download at <a href="http://www.pepperl-fuchs.us">www.pepperl-fuchs.us</a>

## MOUNTING BRACKETS



**OMH-SLCT-01**  
Quick-release bracket



**OMH-LGS-01**  
For use with OMH-SLCT-01,  
prevents vertical movement



**OMH-SLCT-03**  
Longer version of OMH-SLCT-04,  
allows ± 7° horizontal pivoting



**OMH-SLCT-04**  
Shorter version,  
allows ± 7° horizontal pivoting

## CORDSETS



Model Number	Description
V1-G-BK2M-PUR-U (Emitter)	Female cordset, straight connector, 4-pin M12, black PUR cable, length: 2 m
V19-G-BK2M-PUR-U (Receiver)	Female cordset, straight connector, 8-pin M12, black PUR cable, length: 2 m

# FACTORY AUTOMATION – SENSING YOUR NEEDS



Pepperl+Fuchs sets the standard in quality and innovative technology for the world of automation. Our expertise, dedication, and heritage of innovation have driven us to develop the largest and most versatile line of industrial sensor technologies and interface components in the world. With our global presence, reliable service, and flexible production facilities, Pepperl+Fuchs delivers complete solutions for your automation requirements—wherever you need us.

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