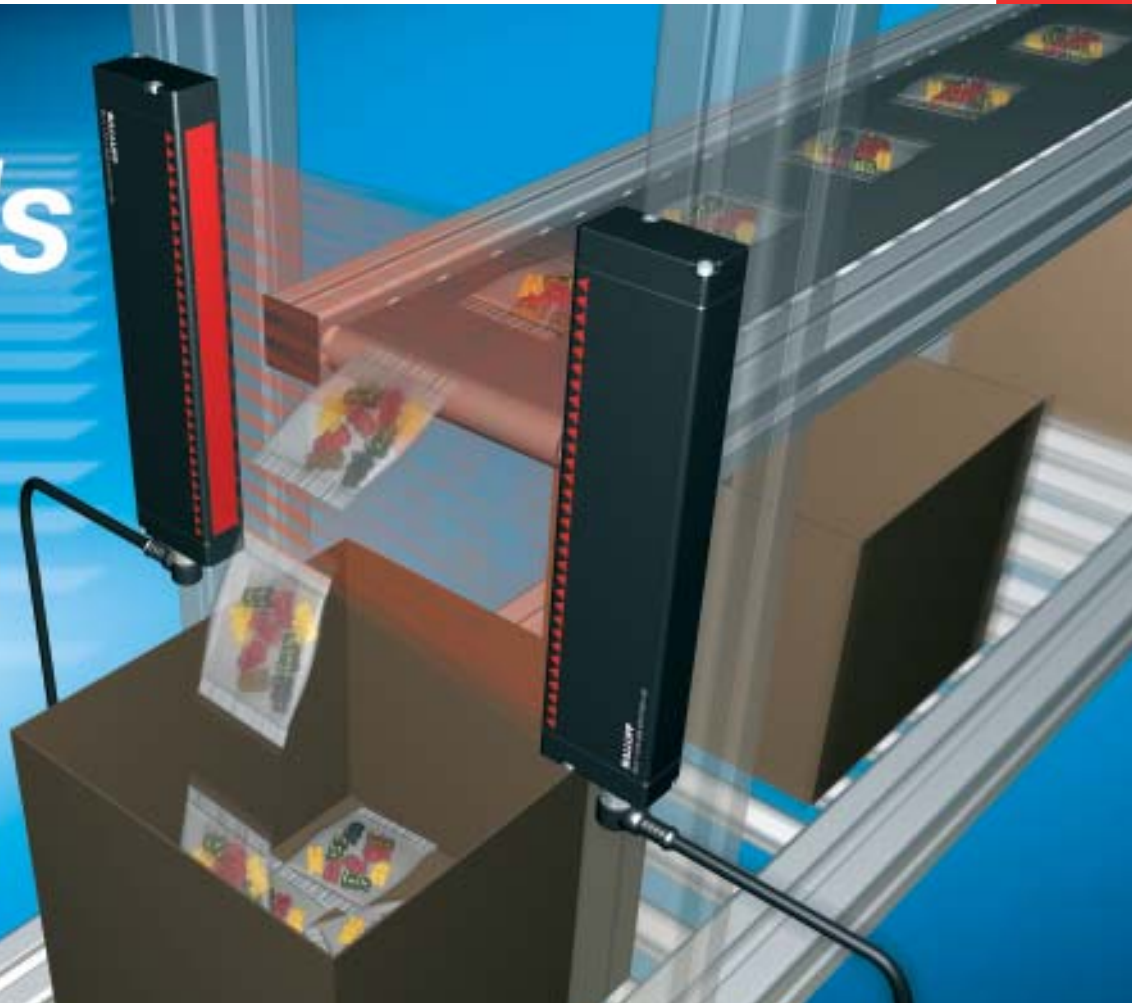


**BALLUFF**

**Light Grids BLG 1**  
Detect, count, measure

*Light  
Grids*



## Light Grids BLG 1

Detect, count, measure

The system is available in various field heights of 100, 150 and 300 mm. The different series offer either long or short ranges. This ensures reliable detection of both wide and very large objects. Models with a field height of 100 and 150 mm offer low or high resolution.

The light grid can be easily and quickly mounted using the mounting bracket supplied. Alignment and installation is and trouble-f

To directly or width of a system inclu voltage outp switching ou whether an c the monitore

current switching state is visualized by means of an integrated LED on the device.

A light grid from Balluff brings the solution to your applications within range.

### Features

- Easy to connect
- Trouble-free installation
- Easy to align
- Ready to use
- No complicated parameter setting
- Ranges 150 mm...2.1 m (depending on model)
- Resolution 4, 5, 7 mm (depending on model)
- Field heights 100, 150, 300 mm (depending on model)

### Applications

- Counting parts
- Height measurement and monitoring
- Presence verification
- Pass-through and position monitoring
- Pallet monitoring
- Conveyor belt monitoring
- Position and product monitoring

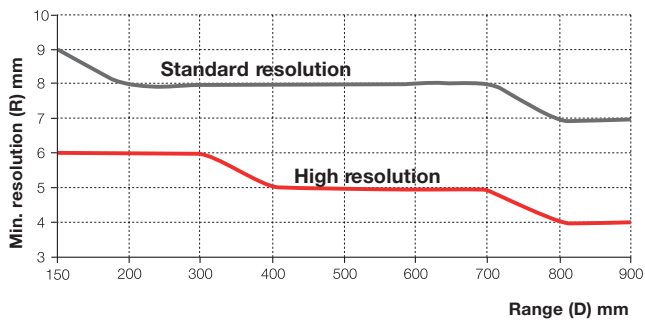


### Selection table BLG 1

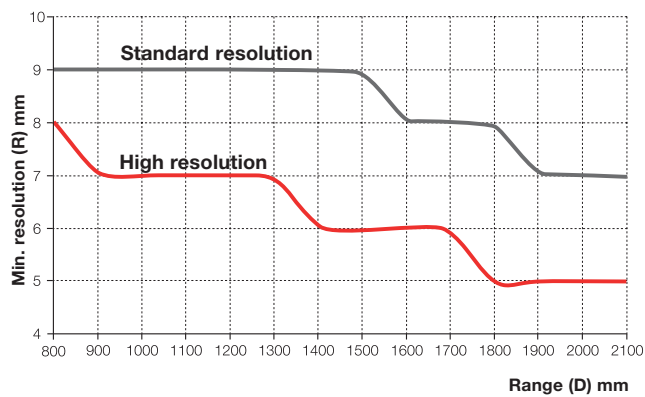
Type	Field height	Range	Resolution	No. of beams	Switching frequency	Response time
BLG 1-010-085-070-PV01-SX	100 mm	150...850 mm	7 mm	16	500 Hz	1 ms
BLG 1-010-085-040-PV01-SX	100 mm	150...850 mm	4 mm	32	250 Hz	2 ms
BLG 1-010-210-070-PV01-SX	100 mm	0.8...2.1 m	7 mm	16	500 Hz	1 ms
BLG 1-010-210-050-PV01-SX	100 mm	0.8...2.1 m	5 mm	32	250 Hz	2 ms
BLG 1-015-085-070-PV01-SX	150 mm	150...850 mm	7 mm	24	333 Hz	1.5 ms
BLG 1-015-085-040-PV01-SX	150 mm	150...850 mm	4 mm	48	182 Hz	2.75 ms
BLG 1-015-210-070-PV01-SX	150 mm	0.8...2.1 m	7 mm	24	333 Hz	1.5 ms
BLG 1-015-210-050-PV01-SX	150 mm	0.8...2.1 m	5 mm	48	182 Hz	2.75 ms
BLG 1-030-085-070-PV01-SX	300 mm	150...850 mm	7 mm	48	182 Hz	2.75 ms
BLG 1-030-210-070-PV01-SX	300 mm	0.8...2.1 m	7 mm	48	182 Hz	2.75 ms

### Processing diagrams

Range 150...850 mm



Range 0.8...2.1 m



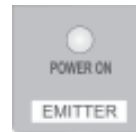
### Indicators

Output function indicator



Power-on indicator

Receiver



Power-on indicator

Emitter

### Applications

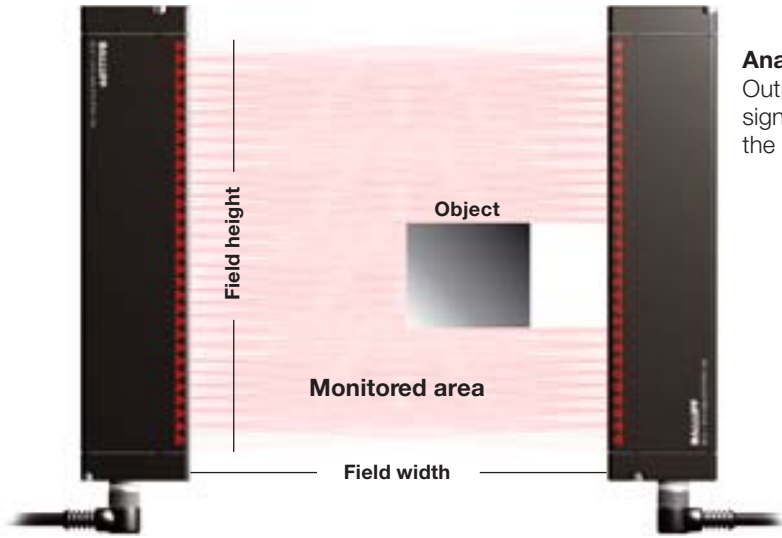


Pass-through and position monitoring



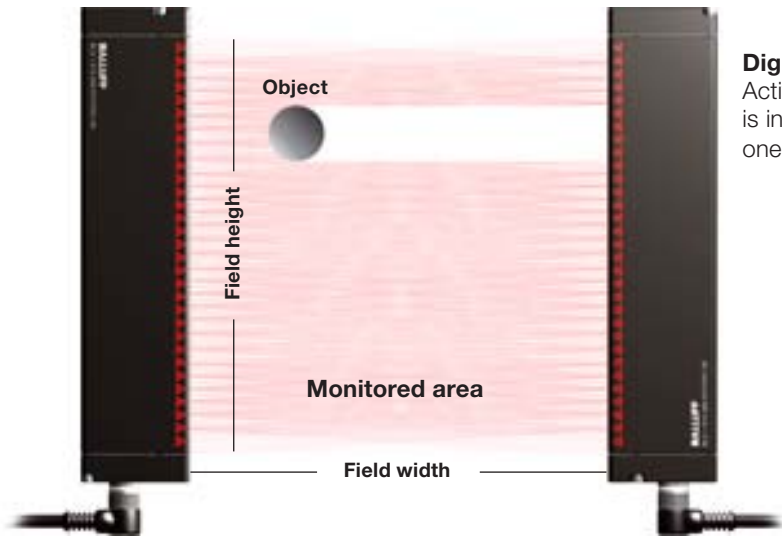
Height monitoring

### Object measurement



**Analog output**  
Outputs a voltage signal proportional to the object size.

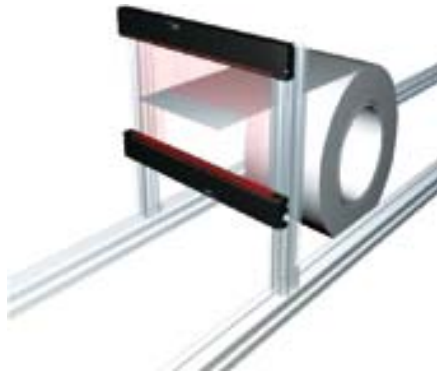
### Detecting objects



**Digital output**  
Active when an object is interrupting at least one light beam.



Pallet monitoring

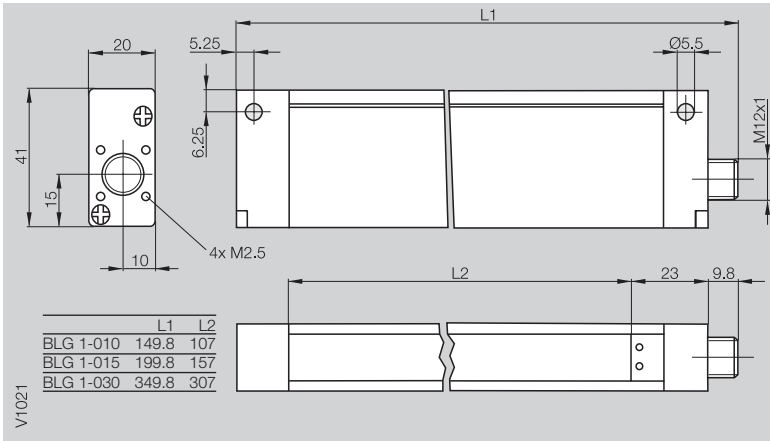


Conveyor belt monitoring



Counting parts

Series	BLG	BLG	BLG
Field height	<b>100 mm</b>	<b>150 mm</b>	<b>300 mm</b>



**Light grid 150...850 mm range**

PNP	Resolution 7 mm	BLG 1-010-085-070-PV01-SX	BLG 1-015-085-070-PV01-SX	BLG 1-030-085-070-PV01-SX
	Resolution 4 mm	BLG 1-010-085-040-PV01-SX	BLG 1-015-085-040-PV01-SX	

**Light grid 0.8...2.1 m range**

PNP	Resolution 7 mm	BLG 1-010-210-070-PV01-SX	BLG 1-015-210-070-PV01-SX	BLG 1-030-210-070-PV01-SX
	Resolution 5 mm	BLG 1-010-210-050-PV01-SX	BLG 1-015-210-050-PV01-SX	

**Electrical data**

Supply voltage $U_B$		24 V DC	24 V DC	24 V DC
Ripple		15 %	15 %	15 %
No-load supply current $I_0$	emitter	$\leq 150$ mA	$\leq 150$ mA	$\leq 150$ mA
	receiver	$\leq 50$ mA no-load	$\leq 50$ mA no-load	$\leq 50$ mA no-load
Output		PNP-Transistor	PNP-Transistor	PNP-Transistor
Output current		100 mA	100 mA	100 mA
Switching type		dark-on	dark-on	dark-on
Voltage drop $U_d$ at $I_0$		$\leq 1.5$ V/10 mA	$\leq 1.5$ V/10 mA	$\leq 1.5$ V/10 mA
Analog output		0...10 V	0...10 V	0...10 V
Settings		none	none	none

**Optical data**

Emitter, light type		LED, infrared	LED, infrared	LED, infrared
Wavelength		880 nm	880 nm	880 nm

**Display**

Power-on indicator	emitter/receiver	LED green	LED green	LED green
Output function indicator	receiver	LED orange	LED orange	LED orange

**Mechanical data**

Dimensions		see drawing	see drawing	see drawing
Connection	emitter	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
	receiver	M12 connector, 5-pin	M12 connector, 5-pin	M12 connector, 5-pin
Housing material		black anodized aluminum	black anodized aluminum	black anodized aluminum
Lens material		PMMA	PMMA	PMMA
Weight		300 g	340 g	510 g

**Ambient data**

Degree of protection per IEC 60529		IP 65	IP 65	IP 65
Short circuit protected		yes	yes	yes
Ambient temperature range $T_a$		0...+55 °C	0...+55 °C	0...+55 °C

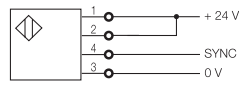
### Mounting bracket



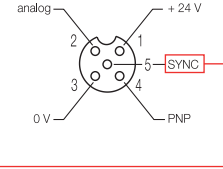
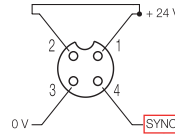
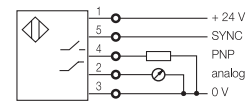
Mounting brackets included.

### Wiring diagrams

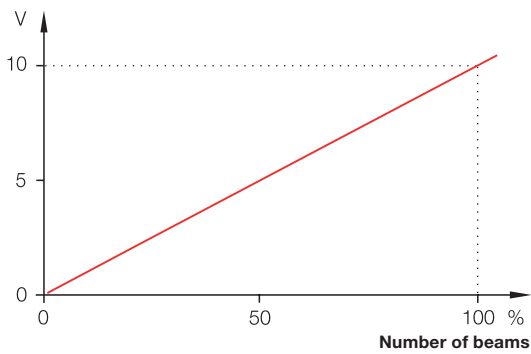
Emitter



Receiver



### Analog output



### Recommended accessories

please order separately

Emitter:

Connectors 4-pin  
BKS-\_ 19/BKS-\_ 20



Receiver:

Connectors 5-pin  
BKS-S134-17,  
BKS-S137-PH



For more sensors see main catalog "The Sensor Line" on CD-ROM or online!

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