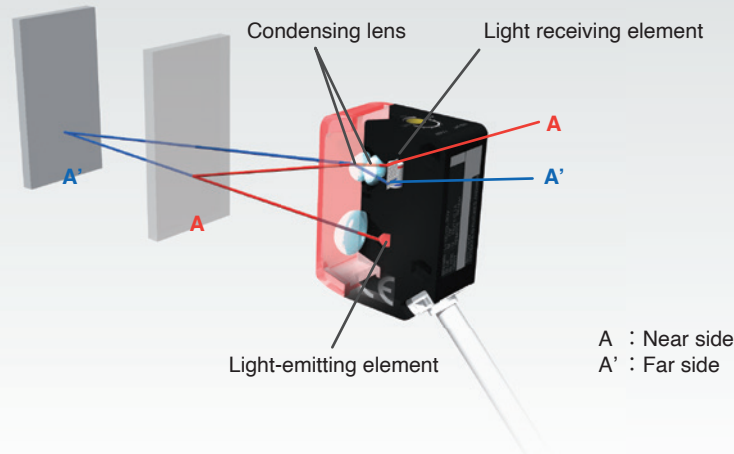


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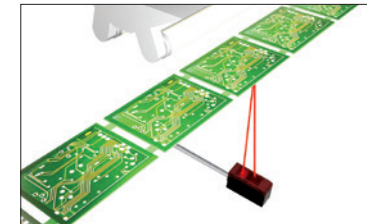
BGS sensors with the principle of triangulation realize stable detection by avoiding influence from background conditions and color of object.

- 3 models in the line-up to meet application requirements
- Excellent resistance against ambient light on BGS-Z15
- Fast response of 500µs suitable for material handling applications
- Highly accurate height difference detection by low hysteresis
- Cable and M8 4-pin connection models with industry standard dimensions

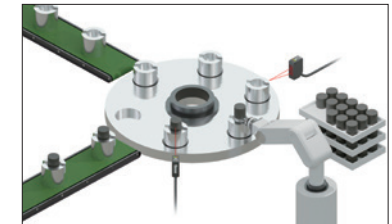
■ Lineup

Optical system	Sensing distance (Adjustable detection range)	Model	
		NPN	PNP
	5 to 100 mm (20 to 100 mm)	BGS-Z10N	BGS-Z10P
		BGS-Z10CN	BGS-Z10CP
	5 to 150 mm (20 to 150 mm)	BGS-Z15N	BGS-Z15P
		BGS-Z15CN	BGS-Z15CP
	10 to 300 mm (50 to 300 mm)	BGS-Z30N	BGS-Z30P
		BGS-Z30CN	BGS-Z30CP

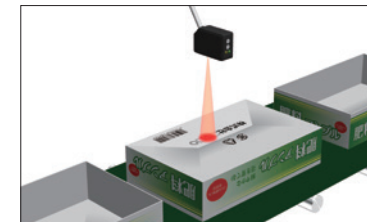
Position of PCBs



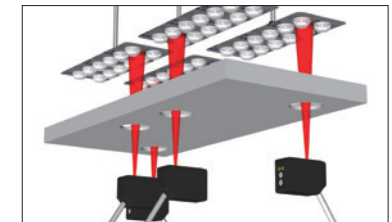
Presence of parts in index table



Direction of box



Position of blister packages

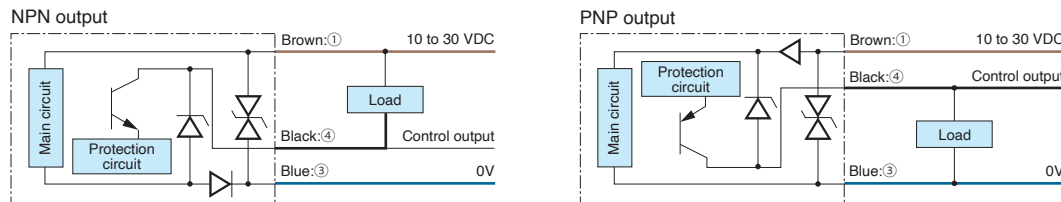


Specifications

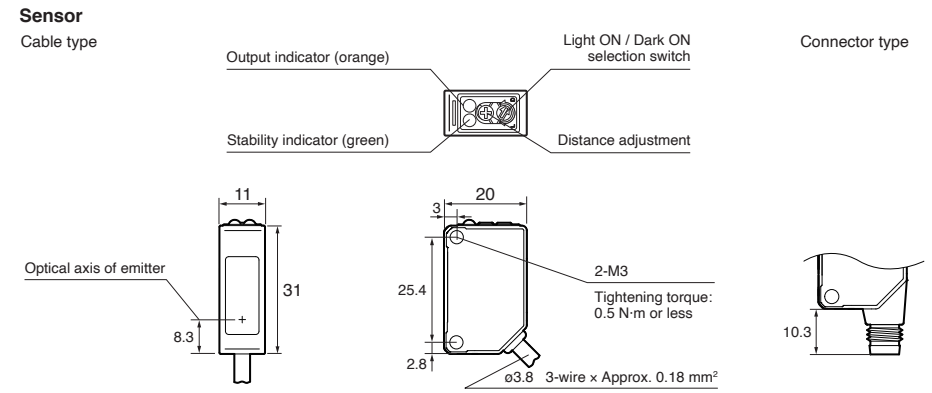
Type		Short range	Middle range	
NPN	Cable type	BGS-Z10N	BGS-Z15N	BGS-Z30N
	Connector type	BGS-Z10CN	BGS-Z15CN	BGS-Z30CN
PNP	Cable type	BGS-Z10P	BGS-Z15P	BGS-Z30P
	Connector type	BGS-Z10CP	BGS-Z15CP	BGS-Z30CP
Sensing distance*		5 to 100 mm	5 to 150 mm	10 to 300 mm
Adjustable distance range*		20 to 100 mm	20 to 150 mm	50 to 300 mm
Light source		Red LED		
Spot size		Approx. $\phi 10$ mm / 100mm	Approx. $\phi 15$ mm / 150 mm	Approx. $\phi 30$ mm / 300 mm
Response time		500 μ s or less		
Hysteresis*		3%	5%	5%
Distance adjustment		4-turn endless potentiometer		
Indicators		Output indicator (orange) / Stability indicator (green)		
Control output		NPN/PNP type open collector Max. 100 mA/30 VDC		
Output mode		Light ON / Dark ON selectable		
Connection		2m cable / M8 4-pin connector		
Rating	Supply voltage	10 to 30 VDC, including 10% ripple (p-p)		
	Current consumption	30 mA or less		
Applicable regulations	EMC	EMC directive (2004/108/EC)		
	Environment	RoHS directive (2011/ 65/EU), China RoHS (MIIT Order No.32)		
Applicable standards		EN 60947-5-2		
NRTL Certification		UL Recognized Component		
Environmental resistance	Ambient temperature / humidity	-25 to +55°C (no freezing) / 35 to 85% RH (no condensation)		
	Ambient illuminance	Sunlight: 10,000 lx, Incandescent lamp: 3,000 lx		
	Vibration resistance	10 to 55 Hz; double amplitude 1.5 mm; 2 hours in each of the X, Y, and Z directions		
	Shock resistance	Approx. 100 G (1000 m/s ²); 3 times in each of the X, Y, and Z directions		
	Degree of protection	IP67		
Material		Case : ABS (glass fiber filled), Front cover : PMMA		
Weight without cable		Approx. 10 g		
Included accessories		Mounting bracket : BEF-W100-B with cable type, BEF-W100A with connector type		

*Using a 100 x 100 mm white sheet of paper.
• Specifications are subject to change without prior notice for product improvement purposes.

I/O circuit diagram

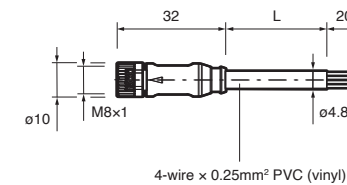


Dimensions (mm)

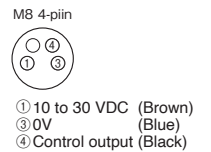
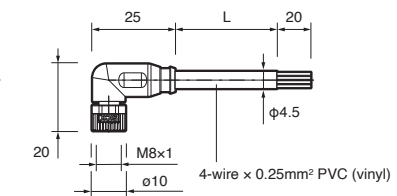


Connector cables

M84CN-2S, M84CN-5S, M84CN-10S



M84CN-2L, M84CN-5L, M84CN-10L



Accessories

Type	Model	Description
Connector cables	M84CN-2S	Straight, 2 m
	M84CN-5S	Straight, 5 m
	M84CN-10S	Straight, 10 m
	M84CN-2L	L-shaped, 2 m
	M84CN-5L	L-shaped, 5 m
Mounting bracket	BEF-W100-B	Floor mount (Included with the cable type)
	BEF-W100-A	Back-mount (Included with the connector type)
Protective mounting bracket	LK-S01	Floor mount
	LK-S02	Wall mount

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