

BGS-ZM Series

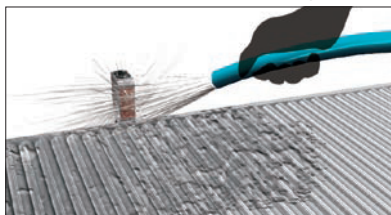


IP69K: Highly water resistant

- Tough structure for food processing line needs washing with high temperature and high pressure water.
- 8 turn sensitivity adjustment potentiometer



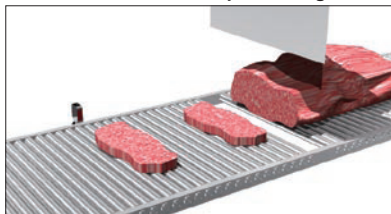
For production line needs washing



For production line with detergent splash



For meat and fresh food processing line



Selection table

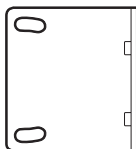
Type		Sensing distance (Adjustable distance)	
BGS		10~100mm (20~100mm)	BGS-ZM10N
		10~300mm (20~300mm)	BGS-ZM30N

- Part number of PNP type has suffix "P" : BGS-ZM10N→BGS-ZM10P

Accessories

Wall mounting bracket

BEF-W100-A



Protective mounting bracket

2mm thick SUS bracket



LK-S01



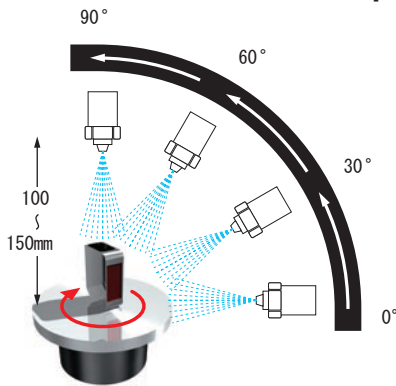
LK-S02

IP69K protection

IP69K is an rating of German standard DIN 40050-9 extends the IEC 60529 rating system for high-pressure, high-temperature wash-down applications.

Test condition:

A sensor on the turn table that rotates 5 times per minutes.



Pressure: 80~100bar
 Flow rate: 14~16 litre/minute
 Temperature: +80°C / -5°C
 Distance from nozzle: 100~150mm
 Nozzle angle: 0°, 30°, 60°, 90°
 Testing period: 30sec per every angle

* IP69K doesn't mean to guarantee that the sensor works under the test condition above. The sensor won't work correctly when the lens gets wet and the light is refracted.

High-pressure, high-temperature, detergent wash-down resistant Tough structure

Top cover: Poly Ether Sulphone (PES)

Oil, detergent, high-temperature resistant.
 Top level protection in transparent plastic.

Housing: SUS316L

Highly corrosion-resistant. Detergent,
 bactericide resistant.

SW, Pot: Poly Ether Etherketone (PEEK)

Shock, scratch, stress, heat resistant. Highly
 resistant to chemical except concentrated sulfuric
 acid.

Printing by laser marking

There is no label attached so
 you don't have to care about
 interfusion into foods of the
 label unsticked.

Lens PPSU for thru-beam, diffuse type

Chemical, heat resistant. Very stable material.

Lens PMMA with SiO coating for retro reflective type

Oil, scratch resistant. Water repellent and anti-static.

Gasket (FKM), cable (PVC)

Chemical, oil resistant and flexible.

**8 turn sensitivity adjustment
 potentiometer helps easy mounting
 and easy position adjustment.**

**High brightness LED by 4 element
 enables stable detection.**



8 turn potentiometer



4 element LED
 (A InGaP-LED)

Stainless steel housing BGS type BGS-Z-M

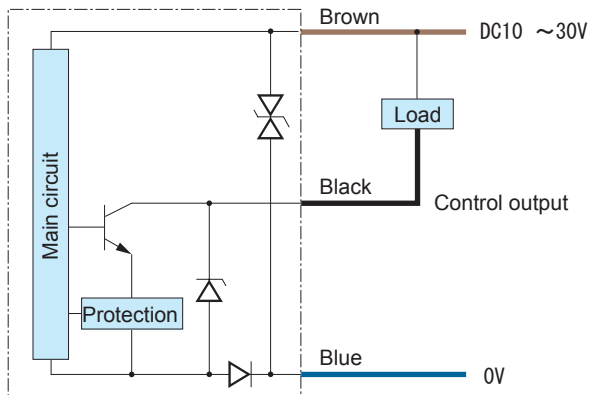
Specifications

Type	BGS	
Part number	BGS-ZM10N	BGS-ZM30N
Sensing distance	10 ~ 100mm ※	10 ~ 300mm ※
Adjustable distance	20 ~ 100mm ※	20 ~ 300mm ※
Light source	4 element red LED	
Spot size	□6mm at 80mm	□19mm at 250mm
Response time	500 μs max.	
Hysteresis	3%以下	5%以下
Sensitivity adjustment	8 turn potentiometer	
Indicator	Orange LED: output, Green LED: stable	
Control output	NPN (PNP) Open collector, Max. 100mA/DC30V	
Operating mode	Light ON/Dark ON selectable by switch	
Cable	Cable length: 2m, φ4	
Power supply	DC10~30V including 10% ripple	
Power consumption	28mA max.	
Conformity	CE	
	Feilen Level 3	
Operating temp./humid.	-25~+55°C no condensation / 35~85%RH	
Environmental illuminance	Sunlight: 10,000 lux max. Incandescent lamp: 3,000 lux max.	
Vibration resistance	10~55Hz double amplitude 1.5mm X, Y, Z 2hours	
Shock resistance	100G (1000m/s ²) X, Y, Z 3times	
Protection category	IEC :IP67 DIN :IP69K	
Material	Housing: SUS316L Top cover: PES Lens: PPSU Switch, Pot: PEEK Cable: PVC Gasket: FKM	
Weight	Approx. 20g excluding cable	
Accessory	Mounting bracket: BEF-W100B	

※ With 100mm x 100mm white paper

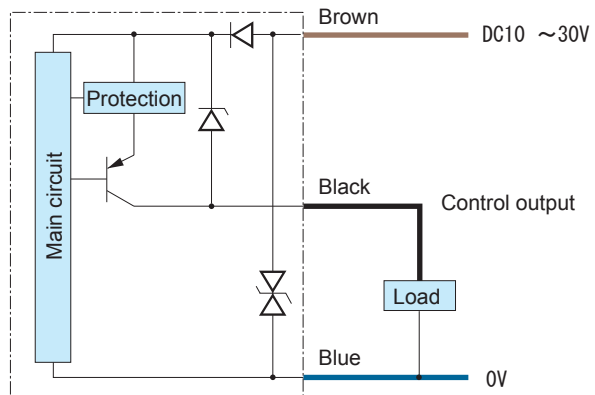
Input/Output Diagrams

■ NPN type



■ Through beam emitter

■ PNP type



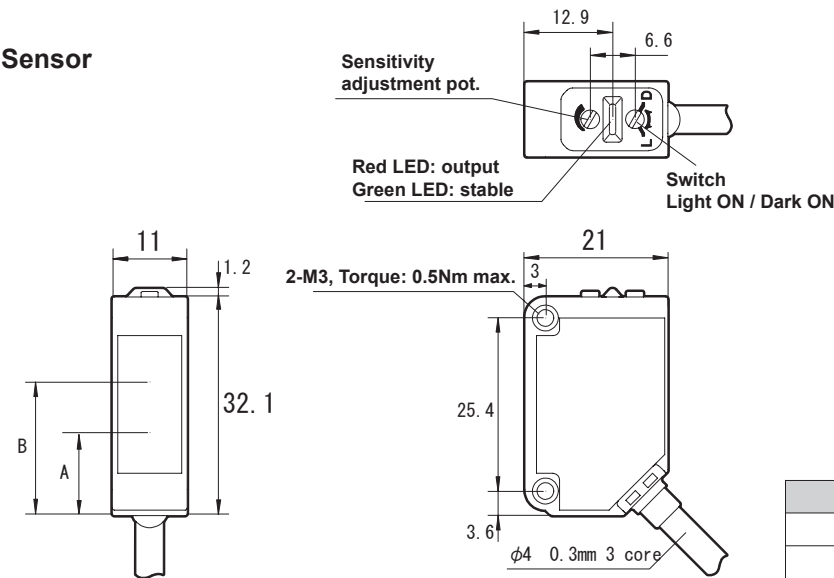
Notes

- When using switching regulator for power supply, please connect frame ground to earth ground.
- Wiring close to high voltage or power line to motors may cause malfunction because of inductive noise. Please wire separated from those lines.
- Please wait around 100msec before use sensor output after power up.

Stainless steel housing BGS type BGS-Z-M

Dimensions

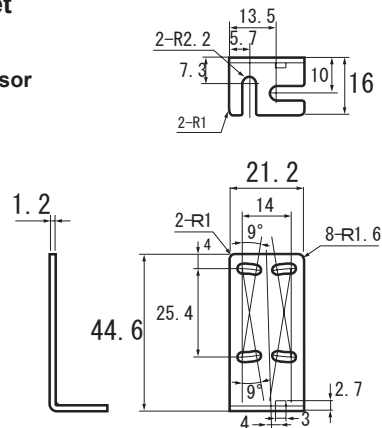
Sensor



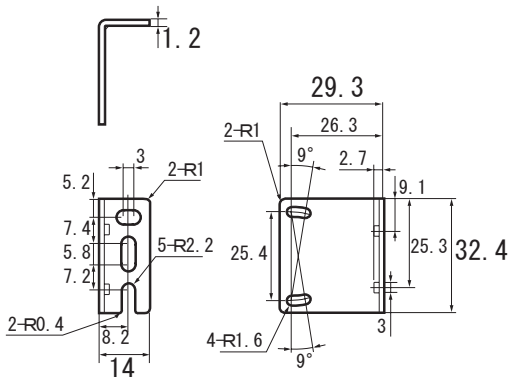
Type	A Light axis	B Light axis
BGS-ZM10	10.7	18.5~20.2
BGS-ZM30		18.5~20.5

Mounting bracket

■ BEF-W100-B
Bundled with sensor

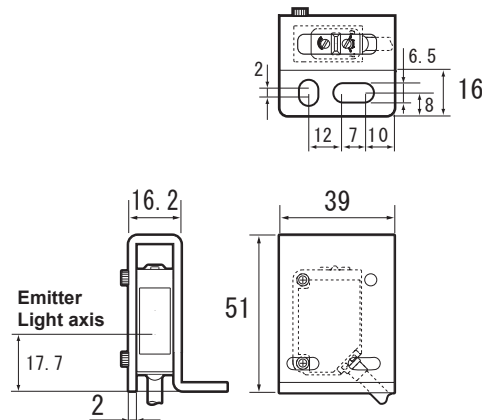


■ BEF-W100-A

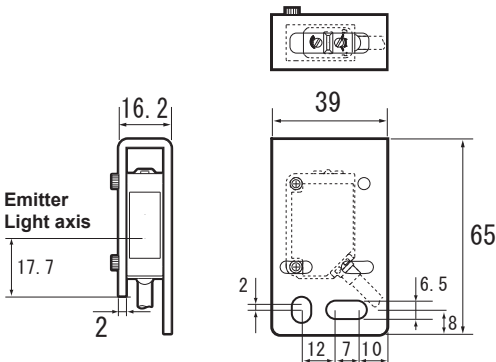


Protective mounting bracket

■ LK-S01

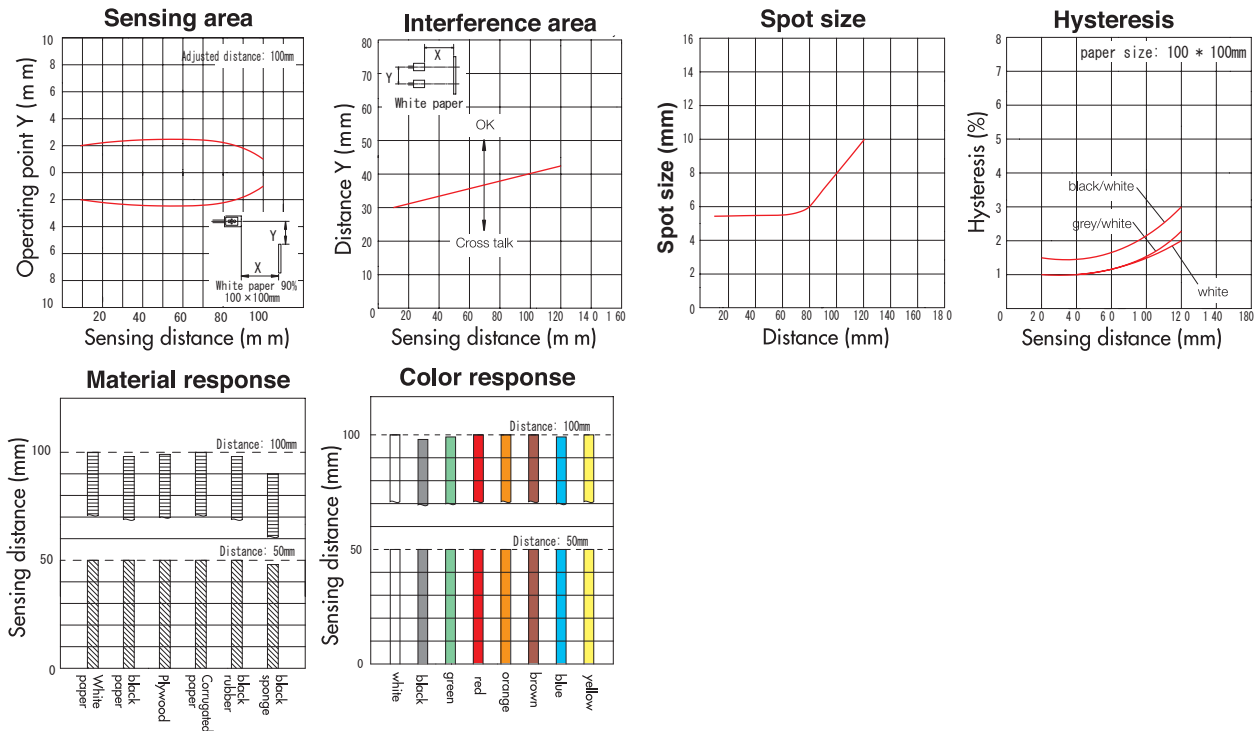


■ LK-S02



Typical characteristic data

BGS-ZM10N



BGS-ZM30N

