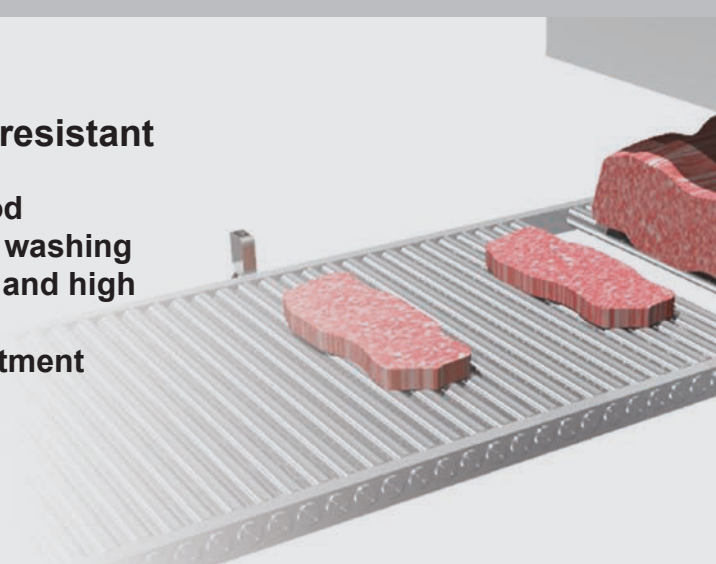


# BGS-ZM Series

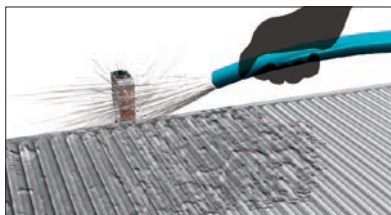


## IP69K: Highly water resistant

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



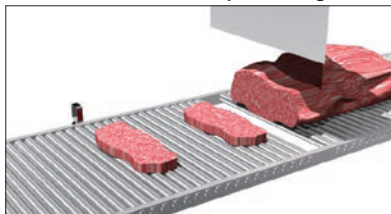
For production line needs washing



For production line with detergent splash



For meat and fresh food processing line



## Selection table

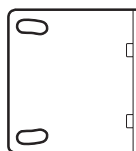
Type		Sensing distance (Adjustable distance)	
BGS		10~100mm (20~100mm )	BGS-ZM10N
		10~300mm (20~300mm )	BGS-ZM30N

● 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



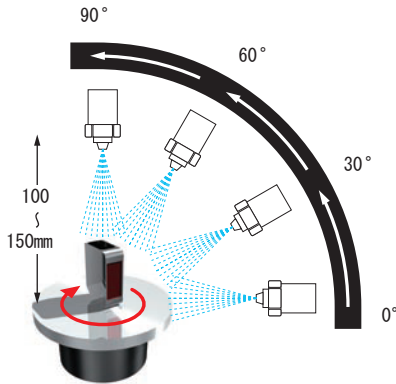
LK-S02

## 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.

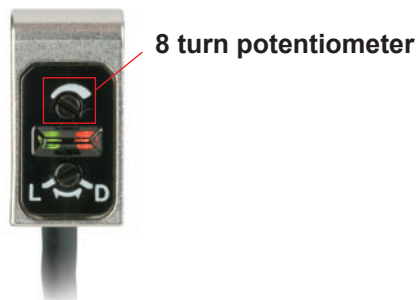
**Lens PPSU for thru-beam, diffuse type**  
 Chemical, heat resistant. Very stable material.  
**Lens PMMA with SiO coating for retro reflective type**  
 Oil, scratch resistant. Water repellent and anti-static.

**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.

**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.**



# Stainless steel housing BGS type BGS-Z-M

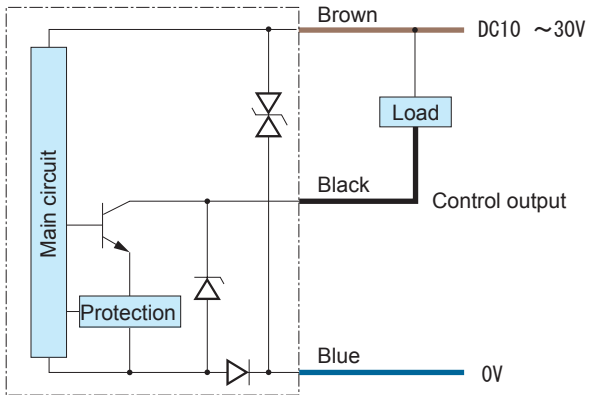
## Specifications

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 amplitude1.5mm X,Y,Z 2hours	
Shock resistance	100G (1000m/s <sup>2</sup> ) 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

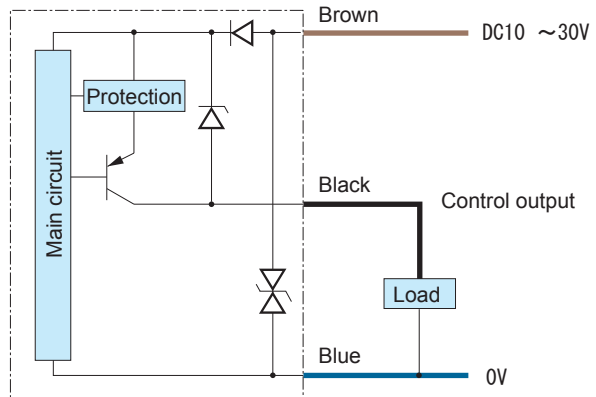
## Input/Output Diagrams

### ■ NPN type



### ■ Through beam emitter

### ■ PNP type



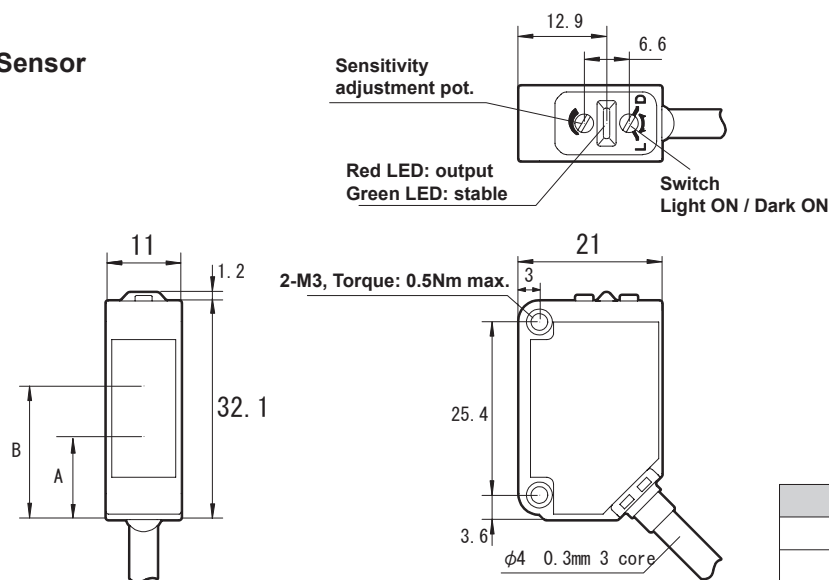
### Notes

- 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

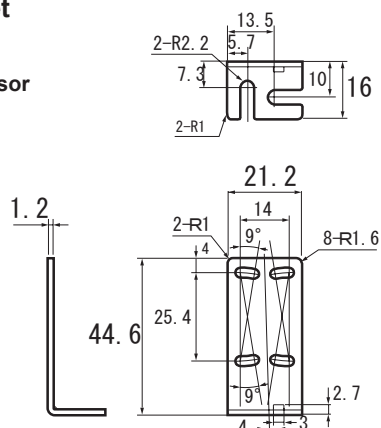
### Sensor



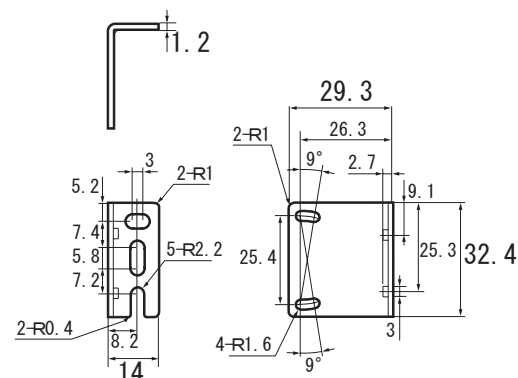
Type	A Light axis	B Light axis
BGS-ZM10	10.7	18.5~20.2
BGS-ZM30		18.5~20.5

### Mounting bracket

- BEF-W100-B  
Bundled with sensor

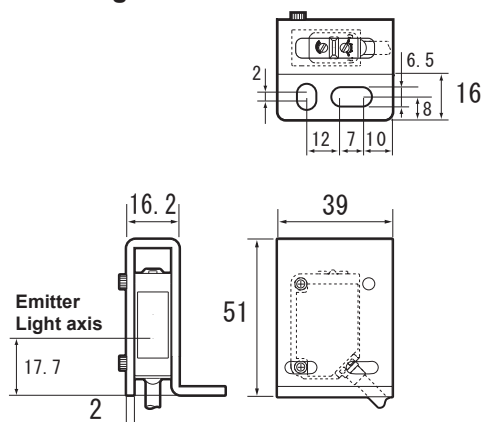


- BEF-W100-A

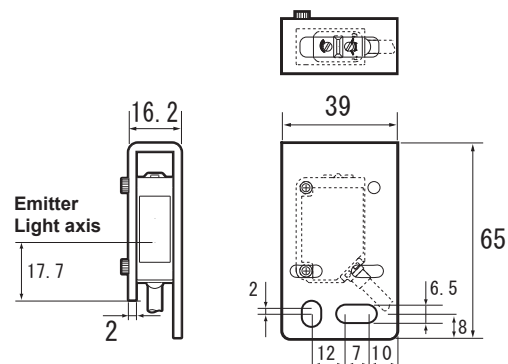


### Protective mounting bracket

- LK-S01

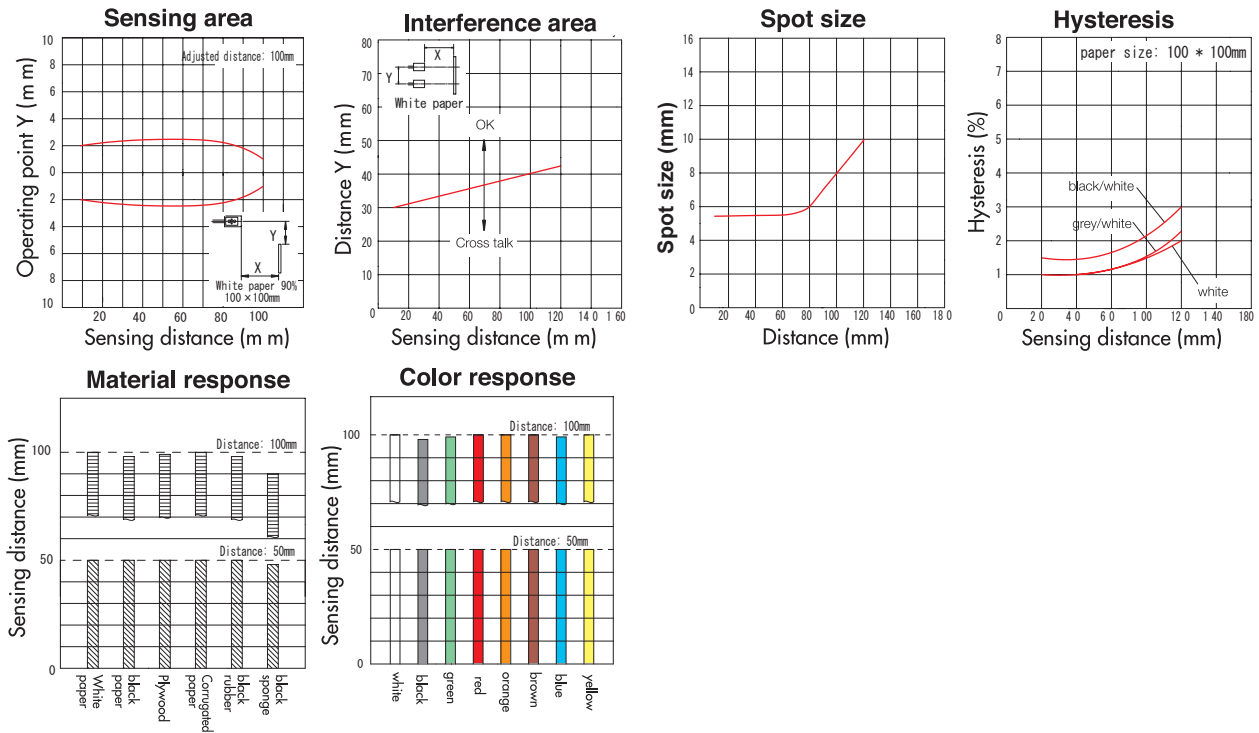


- LK-S02



## Typical characteristic data

BGS-ZM10N



BGS-ZM30N

