

**SPECIFICATION**

Photoelectric Sensor



**Z SERIES**

- ZR- X250
- ZR-QX200
- BGS-Z

**INSTRUCTION MANUAL**

- Confirm if the item meets your needs.
- Before the use, you should first thoroughly read this manual and operate correctly as mentioned.
- You should keep this manual at hand for proper use.

Carefully read and understand the safety precautions before operation. The important information is provided to protect your health and property. Do not apply any other installing or operating procedure other than that described in this manual.

**Safety Precautions**



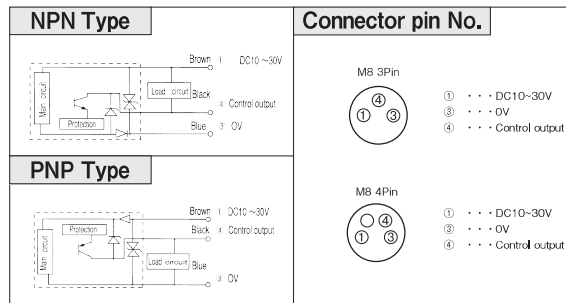
- It is dangerous to wire or attach/remove the connector with the power on. Make sure to turn off the power before operation.
- Make sure to use the product with the protective cover attached and closed.
- Installing in the following places may result in malfunction:
  1. A dusty or steamy place
  2. A place generating corrosive gas
  3. A place directly receiving scattering water or oil.
  4. A place suffered from heavy vibration or impact.
- The product is not designed for outdoor use.
- Do not use the sensor in transient state after power on (approx. 100 ms).
- Do not wire with the high voltage cable or the power line.
- Failure to do this will cause malfunction by induction or damage.
- The sensor performance or digital display values may depend on the individual units or the condition of detected product.
- This product is not an explosion-proof construction. Do not use the product under flammable, explosive gas or liquid environment.
- Do not use the product in water.
- Do not disassemble, repair, or convert the product. Failure to do this may cause failure, fire, or electric shock.
- Operate within the rated range.
- Do not bend the cable when below the freezing point

This product cannot be used as a safety device to protect human body.

Cable type	Retro Coax.	Retro Coax. Transparent	BGS		
	ZR-X250(N,P)	ZR-QX200(N,P)	BGS-Z10(N,P)	BGS-Z15(N,P)	BGS-Z30(N,P)
Connector type	ZR-X250C(N4,N3,P4,P3)	ZR-QX200(N4,N3,P4,P3)	BGS-Z10C(N,P)	BGS-Z15C(N,P)	BGS-Z30C(N,P)
Detecting distance	0~2.5m(V-61)	0~2m(P250F)	5~100mm #1	5~150mm #1	10~300mm #1
Light Source	Red LED				
Spot size	φ60 mm / at 2m		φ10 mm / at 100 mm	φ10 mm / at 100 mm	φ30 mm / at 300 mm
Supply voltage	DC10 ~ 30V Including ripple (P-P) 10%				
Current consumption	20m A max.		30m A max.		
Response time	250μs max.		500μs max.		
Control output	NPN / PNP Open collector 100m A max. / DC 30 V				
Operation mode	Light ON, Dark ON Selectable by switch				
Sensitivity adjustment	1 turn volume		4 turn volume (endless)		
Indicators	Output indicator (orange LED) / Stable indicator (green LED)		Output indicator (orange LED) / Stable indicator (green LED)		
Ambient temp./ humidity	-25 ~ 55 °C / 35 ~ 85 %RH				
Protection category / material	IP67 / Case : ABS (glass fiber included) Front cover, Lens : PMMA				

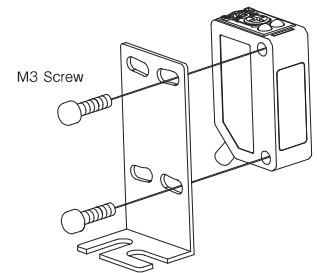
※1 White 90% 100x100 mm

**INPUT AND OUTPUT CIRCUIT DIAGRAMS**



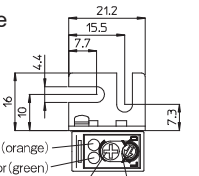
**Attachment**

Tightening torque need to be under 0.5N · m

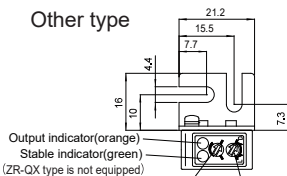


**DIMENSIONS**

BGS type

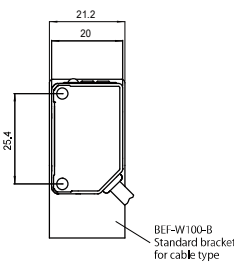
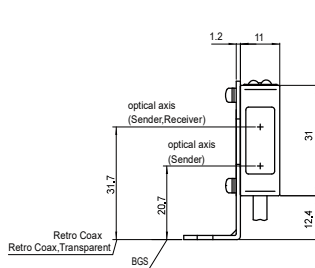


Other type

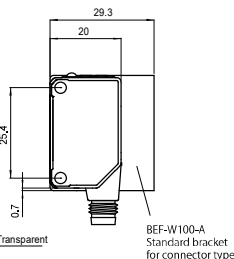
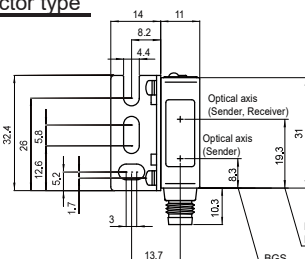


(Unit mm)

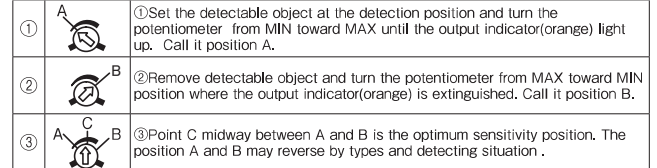
**Cable type**



**Connector type**



**Adjusting the potentiometer**



**Reflectors**

- Type : V-61 (Included ZR-X type.) 2.5m : ZR-X types
- Type : V-42 (Optional) 1.5m : ZR-X type
- Type : P250F (Included ZR-QX type.) 2.0m : ZR-QX200 only
- Type : P45 (Optional) 0.8m : ZR-X types

UL Satisfaction Ratings **UL** **US**  
 Input : 10 ~ 24 Vdc, Class 2, max. 30 mA  
 Output : 10 ~ 24 Vdc, Class 2, max. 50 mA  
 Maximum Ambient temperature: 55 °C

→ [http://www.optex-fa.com/rohs\\_cn/](http://www.optex-fa.com/rohs_cn/)

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