

Photoelectric Sensor  
**Z2 SERIES**



- Z2T-2000 □□□□ - □
- Z2R- 400 □□□□ - □
- Z2D- 80 □□□□ - □

**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**

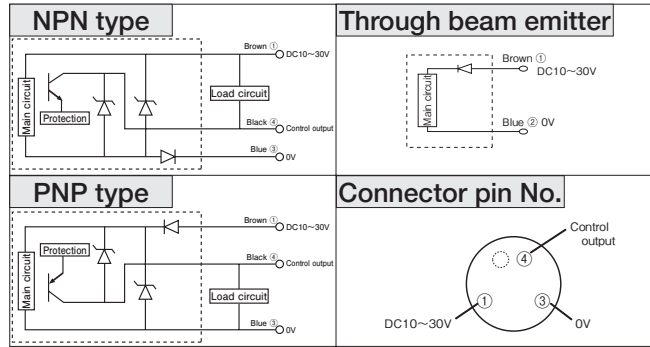
- CAUTION**
- It is dangerous to wire or attach/remove the connector with the power on. Make sure to turn off the power before operation.
  - Make sure to use the product with the protective cover attached and closed.
  - Installing in the following places may result in malfunction.
    1. A dusty or 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.
- This product cannot be used as a safety device to protect human body.

**SPECIFICATION**

	Through	Retro ref.	Diffused ref.
Cable type	Z2T-2000(N,P)	Z2R-400(N,P)	Z2D-80(N,P)
Connector type	Z2T-2000C(N4,P4)	Z2R-400C(N4,P4)	Z2D-80C(N4,P4)
Nominal distance	20m	0.01~4m ※1	0~80cm ※2
Actual distance	25m	0.01~4.4m ※1	0~1m ※2
Light Source	Red LED		
Spot size	Φ1,000mm / at 25m	Φ220mm / at 4.4m	Φ140mm / at 1m
Supply voltage	DC10~30V Including ripple (P-P) 10%		
Current consumption	Sender : 8mA max. Receiver : 11mA max.	13mA以下	15mA以下
Response time	500 μs max.		
Control output	NPN(PNP) Open collector 100mA max. / DC30V max. (Residual voltage 1.8V max.)		
Operation mode	Light ON, Dark ON Selectable by switch		
Sensitivity adjustment	1 turn volume		
Indicator	Output indicator (orange LED) / Stable indicator (green LED)		
Ambient temp. / humidity	-25~55°C / 35~85% RH (No condensation or freezing)		
Storage temp. / humidity	-40~+70°C / 35~95% RH (No condensation or freezing)		
protection category / material	IP67 / Case : ABS (glass included) Front Cover , Lens : PMMA		

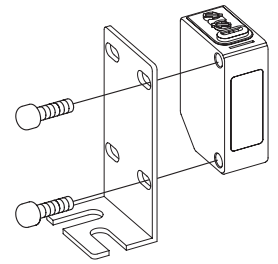
※1. Reflector V-61 ※2. White 90% 100mm×100mm

**INPUT AND OUTPUT CIRCUIT DIAGRAMS**

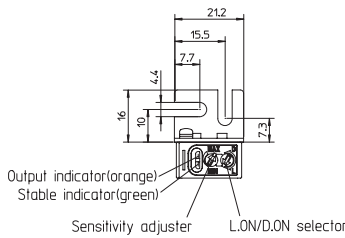


**Attachment**

Tightening torque need to be under 0.5N·m.

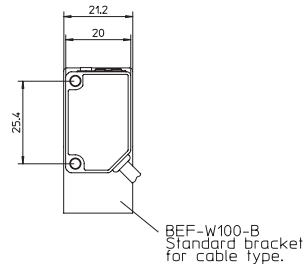
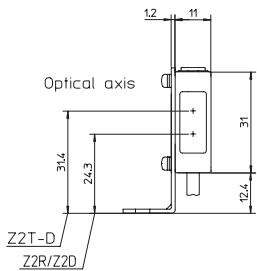


**DIMENSIONS**

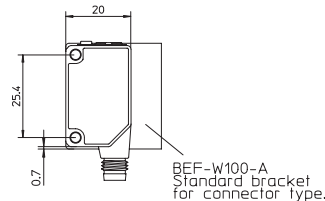
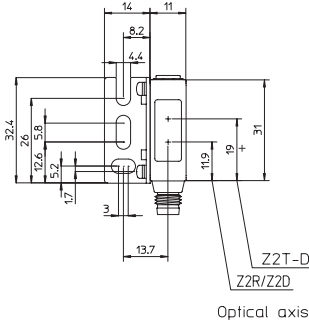


(Unit mm)

**Cable type**



**Connector type**

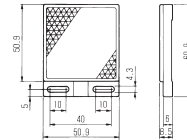


**Adjusting the potentiometer**

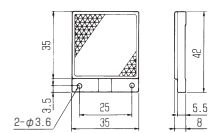
- |   |  |                                                                                                                                                                        |
|---|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① |  | ① Set the detectable object at the detection position and turn the potentiometer from MIN toward MAX until the output indicator (orange) light up. Call it position A. |
| ② |  | ② Remove detectable object and turn the potentiometer from MAX toward MIN position where the output indicator (orange) is extinguished. Call it position B.            |
| ③ |  | ③ Point C midway between A and B is the optimum sensitivity position. The position A and B may reverse by types and detecting situation.                               |

**Reflectors**

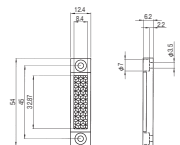
● Type : V-61  
Standard for Retro Types.  
0.01~4.4m : Z2R types



● Type : V-42  
Optional reflector  
0.01~2.7m : Z2R types



● Type : P-45A  
Optional reflector  
0.01~1.5m : Z2R types



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! Must not use this item as safety equipment for the purpose of human body protection.

- Specifications and equipment are subject to change without any obligations on the part of manufacture.
- For more information, questions and comments regarding products, please contact us below.

Website: <http://www.optex-fa.com>