

Z3 SERIES

- Z3T-2500 □□
- Z3R- 400 □□
- Z3D- 100 □□
- Z3R- Q200 □□
- Z3D- L09 □□

INSTRUCTION MANUAL

- Please confirm if specifications fulfill your needs.
- Please read this manual carefully before the use and keep this for future reference.

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.

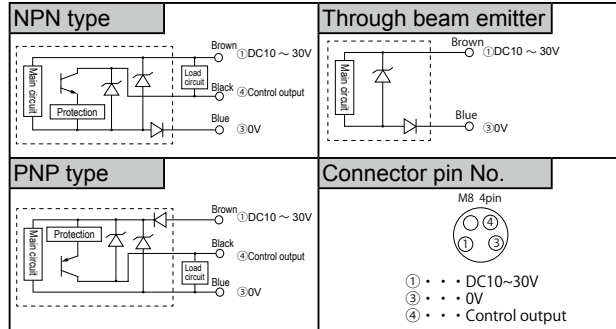
This product cannot be used as a safety device to protect human body.

SPECIFICATION

	Through	Retro ref.	Diffused ref.	Transparent objects	Limited range
Cable type	Z3T-2500(N/P)	Z3R-400(N/P)	Z3D-100(N/P)	Z3R-Q200(N/P)	Z3D-L09(N/P)
Connector type	Z3T-2500C(N4/P4)	Z3R-400C(N4/P4)	Z3D-100C(N4/P4)	Z3R-Q200C(N4/P4)	Z3D-L09C(N4/P4)
Nominal distance ^{*1}	25m	0.01~4m	0~1m	0.01~2m	10~90mm
Light Source	Red LED				
Spot size	φ 1800mm /25 m	φ 280mm /4 m	φ 75mm /1200mm	φ 140mm /2 m	φ 8mm /90mm
Supply voltage	DC10 ~ 30V Including ripple (P-P) 10%				
Current consumption	Sender : 20mA max Receiver : 15mA max.	20mA max	25mA max	20mA max	
Response time	500μs 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 , Front Cover : PMMA				

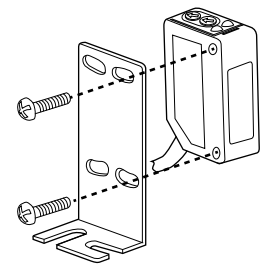
- *1 Sensing distance showed in above table is typical value in each type.
- Retro ref./Transparent objects types : Reflector V-61(option)
 - Diffused ref. type : White plate 200x200mm
 - Limited range type : White plate 100x100mm

INPUT AND OUTPUT CIRCUIT DIAGRAM



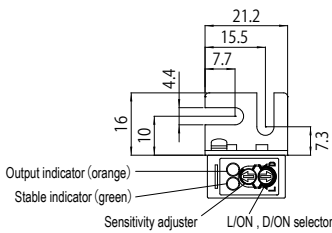
Attachment

- Tightening torque need to be under 0.5N·m.
- Use M3 screw to mount.



DIMENSIONS

Brackets for installation are optional and not included in this kit. (Not standard accessory and please purchase if needed.)



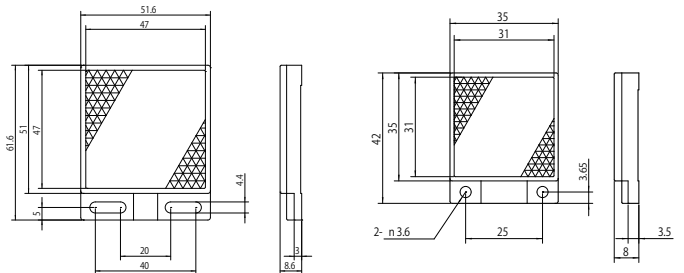
Adjusting the potentiometer

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		Remove detectable object and turn the potentiometer from MAX toward MIN position where the output indicator(orange) is extinguished. Call it position B.
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.

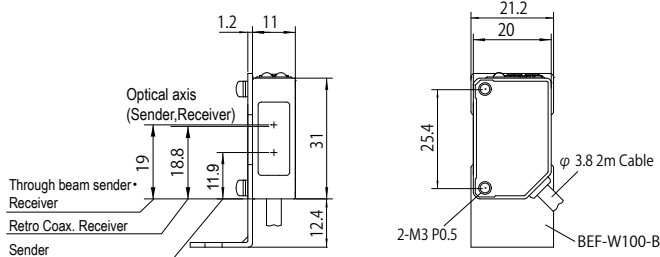
Reflectors (option)

For Retro Reflective use only
Please confirm appropriate type considering sensing distance and conditions to use. Reflectors are optional and not included in this kit. (Not standard accessory and please purchase if needed.)

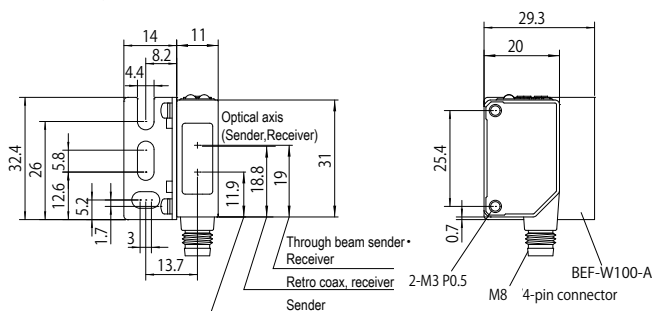
- Standard Type Type : V-61 Sensing distance : 0.01~4m(Retro Reflective Type)
- Small reflector Type : V-42 Sensing distance : 0.01~2.4m(Retro Reflective Type)



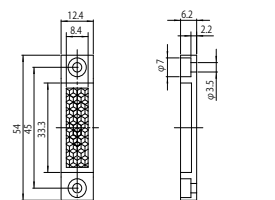
Cable type : When using brackets of BEF-W100-B (option)



Connector type : When using brackets of BEF-W100-A (option)



- Small reflector Type : P-45A Sensing distance : 0.01~1.4m(Retro Reflective Type)



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