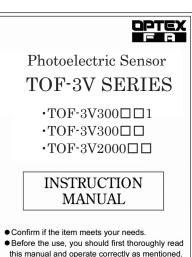
For technical/application support Contact Ramco Innovations today!



● You should keep this manual at hand for proper

- dangerous to wire or attach/remover the sure to turn off the power befulling in the following places may a dusty or steamy place. A place generating corrosive gas

- A duety or eteamy place

 A place generating corrosive gas
 A place directly receiving scattering water or oil.
 A place suffered from heavy wibration or impact.
 product is not designed for outdoor use.

 The product is not designed for outdoor use.
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 The product is not will cause mailtunction by induction or damage, sensor performance or digital display values may depend on the vidual units or the condition of detected product.

 The product is water, and the product is water, and within the rated range.

- ate within the rated range.

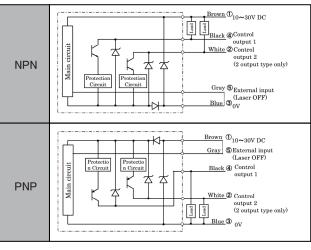
 e off dirt on the emitting/receiving parts to maintain correct ction. Also, avoid direct impact on the product.

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

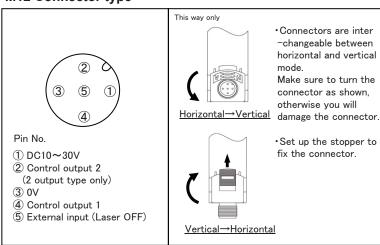
SPECIFICATIONS

Туре	Diffused Reflection type		Retro Reflection type	
Connection	2m Cable	M12 Connector	2m Cable	M12 Connector
, 1 output	TOF-3V300(P/N)1	TOF-3V300C(P/N)1	_	-
Item Output 2 output	TOF-3V300(P/N)	TOF-3V300C(P/N)	TOF-3V2000(P/N)	TOF-3V2000C(P/N)
Supply Voltage	DC10∼30V Including ripple (P-P)10%			
Current Consumption	70mA max.			
Ditecting Distance	3,000mm (White 90%)		20m (Reflector V−61)	
Light Source	Red Laser Diode (650nm Class1)			
Spot Diameter	~ <i>ф</i> 12mm ∕ 3m		~ <i>ϕ</i> 50mm / 20m	
Beam Divergence	$\pm 0.5^{\circ}~(\pm 9$ mrad $)$ max.			
Hysteresis	15% max.:300~1500mm, 6% max.:1500~3000mm		10% max.:1∼4m, 3% max.:4∼20m	
Resolution	2mm		10mm	
Response Time	0.5ms		2ms	
Operating Mode	Light ON/Dark ON selectable by Volume			
Indicator	Output indicator (orange LED) / Stable indicator (green LED)			
Sensitivity Adjustment	4 turns volume		12 turns volume	
Control Output	NPN/PNP open collector DC30V, 100mA max. (Residual voltage 1.8V max.)			
External Input	Laser OFF			
Number of cross talk prevention	2 units max.			
Sircuit Protection	Reverse polarity, Over current			
Ambient Temp./Humidity	−10~50°C / 35~85%RH			
Storage Temp./Humidity	-40∼70°C / 35∼95%RH			
Environmental Sun Light	4,000lx max. (at 1m)			
Illuminance Incandescent Light	3,000lx max. (at 1m)			
Vibration Resistance	10∼55Hz amplitude1.5mm X, Y, Z each 2h			
Shock Resistance	500m/s ² X, Y, Z each 3times			
Protection Category	IEC144 IP67			

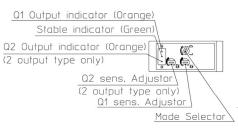
INPUT AND OUTPUT CIRCUIT DIAGRAMS



M12 Connector type



Adjuster and Selector



- Adjusting the sensitivity adjustor (sens. Adjustor)
- 1.Set the detectable object at the detection position. Turn the sens.adjustor to the left until the output indicator (orange) is extinguished.
- Diffused Reflection type ··· 4 turns volume Retro Reflection type ··· 12 turns volume
- 2. Turn the sens. adjustor to the right until the output
- indicator (orange) and stable indicator (green) light
- * 2 output type have two sens.adjustors and individual setting is passible.
- · Selecting the mode selector

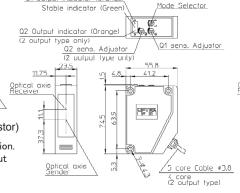
Selecting of Light ON / Dark ON is possible by mode selector

Light ON (L) · · · ON by sensing light

Dark ON (D) · · · ON by blocking light

*Mode selector is set "Light ON" in default state.

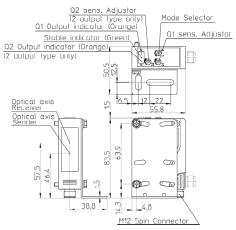
DIMENSIONS (Unit:mm) Q1 Output indicator (Oran



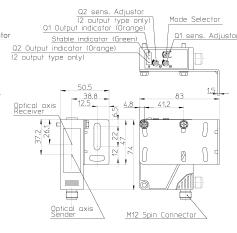
Q1 Output indicator (Orange) Stable indicator (Green Q2 Output indicator (Orange)
(2 output type only) OPTEX \vdash Optical Sender M12 Spin Connector

Floor Installation Q2 sens. Adjustor (2 output type only) Q1 Output indicator (Orange) Mode Selector Q1 sens. Adjustor 0 0 core Cable ø3.8 4 core (2 output type)

Wall Installation



Mode Selector Q1 sens. Adjustor Stable indicator (Green Q2 Output indicator (Orange) (2 output type only) 0 0 core Cable #3.8 4 core (2 output type)



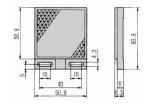
Precautions for using laser

This product is classified as Class 1(I) Laser Product by JIS C6802 / IEC Laser Safety Standard.

CLASS LASER PRODUCT

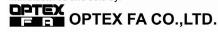
Accessories

Standard reflection mirror Type V-61 (for Retro Reflection type)



- •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 the right note.

Manufactured and sold by:



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