

**SPECIFICATIONS**

**OPTEX FA**

Photoelectric Sensor  
AC/DC:Relay output  
DC:Transistor output

**V2 SERIES**

- V2T-7000□□□□
- V2R-1200□□□□
- BGS-2V□□□□

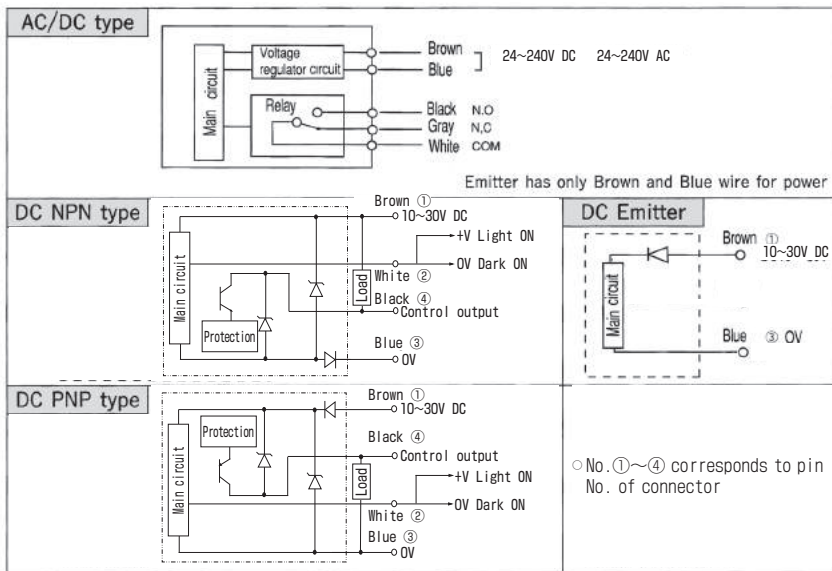
**INSTRUCTION MANUAL**

- 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.

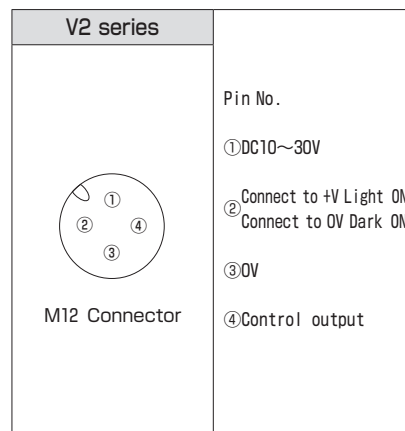
	V2 series AC/DC type					V2 series DC type				
	Through beam	Retro-reflection (polarized filter)	BGS			Through beam	Retro-reflection (polarized filter)	BGS		
			Long range	Middle range	Short range			Long range	Middle range	Short range
Cable type	V2T-7000	V2R-1200	BGS-2V100	BGS-2V50	BGS-2V30	V2T-7000D(N,P)	V2R-1200D(N,P)	BGS-2V100(N,P)	BGS-2V50(N,P)	BGS-2V30(N,P)
Connector type	—	—	—	—	—	V2T-7000CD(N,P)	V2R-1200CD(N,P)	BGS-2V100C(N,P)	BGS-2V50C(N,P)	BGS-2V30C(N,P)
Detecting distance	70m	0.01~12m※1	25~100cm	15~50cm	10~30cm	70m	0.01~12m※1	25~100cm	15~50cm	10~30cm
Light source	Red LED									
Supply voltage	DC24~240V±10% AC24~240V±10% 50/60Hz					DC10~30V Including ripple (P-P) 10%				
Current consumption	3VA max. (class A) 4VA max. (class B)		2VA max. (class A) 2.5VA max. (class B)			35mA max.				
Response time	15ms max.					0.5ms max.		3ms max.		2ms max.
Hysteresis	—		20% max.	5% max.		—		15% max.	5% max.	
Control output	Relay 1C DC30V 2A / AC250V 3A max.					NPN/PNP open collector DC30V 100mA max. (Residual voltage 1.8V max)				
Operation mode	Light ON					Light ON / Dark ON selectable by wiring				
Sensitivity adjustment	2 rotation 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									
Environmental illuminance	Sun light: 10000lx max. Incandescent light: 3000lx max.									
Protection category/material	IP67 (IEC 144)/Case: ABS (Glass fiber include) Front cover: PC (PMMA for retro-ref. type)									

※1.Reflector V-61

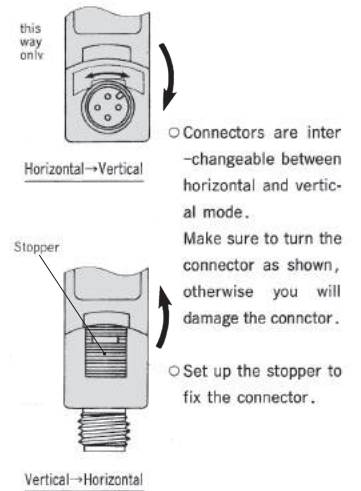
**INPUT AND OUTPUT CIRCUIT DIAGRAMS**



**HOW TO USE**



● Inter-change of M12 connector



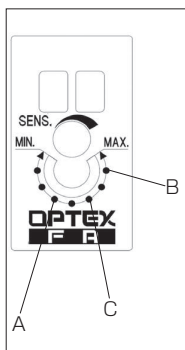
● Adjusting the optical axis.

- Through-beam type
  1. Install the emitter and the receiver opposite to each other so that the optical axis lines up.
  2. Swing the emitter and the receiver vertically and from side to side, and fix each at the mid-point in the range where the indicating lamp at the receiver lights up.
- Reflection type
 

Swing the sensor vertically and from side to side, and fix it at the mid-point in the range where the indicating lamp lights up.

● Adjusting the sensitivity control

1. Set the detectable object at the detection position and turn the sensitivity control slowly from MIN toward MAX until the output indicator (orange) lights up. Call it position A.
2. Remove detectable object and turn the sensitivity control 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.

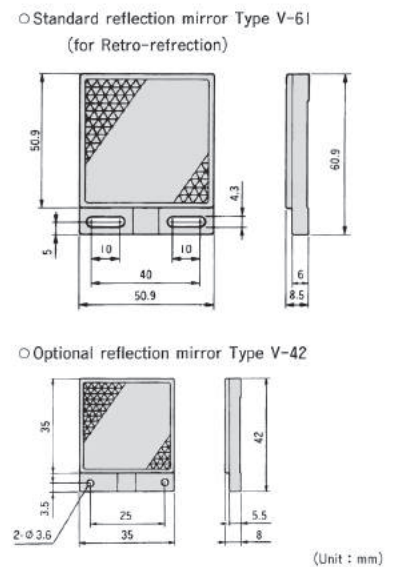


● Other precautions

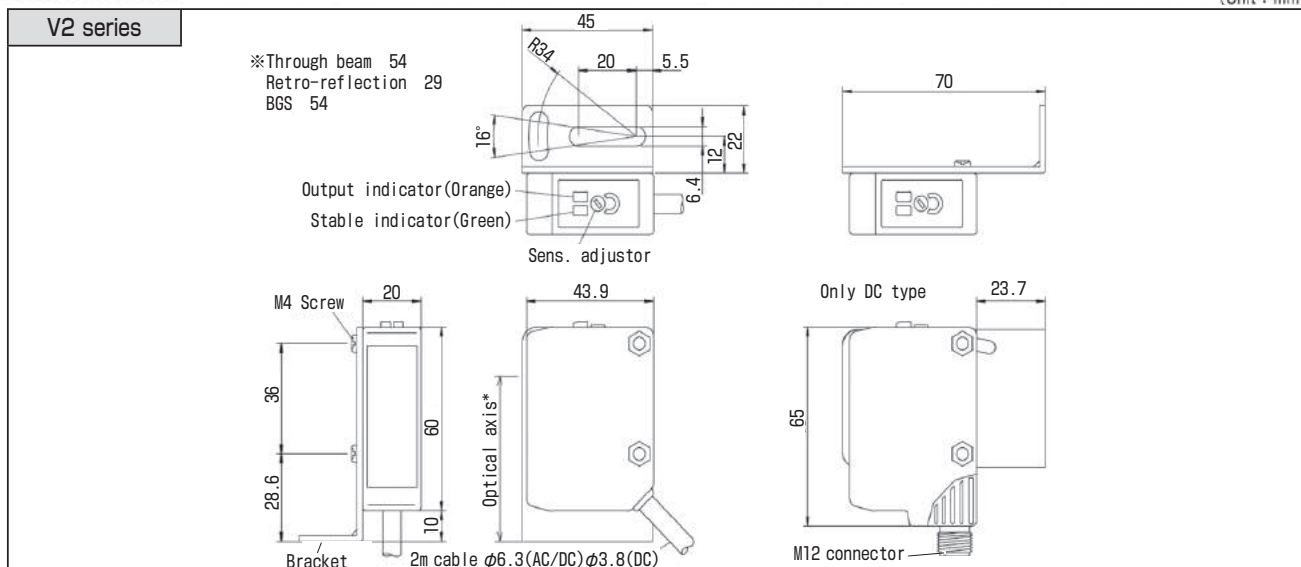
- It is dangerous to wire or attach/remove the connector with the power on. Make sure to turn off the power before operation.
- Be careful not to install the sensor at the following locations, for it may otherwise malfunction:
  - Where a lot of dust, vapor, or the like is present
  - Where corrosive gases are produced
  - Where water, oil or the like flies directly onto the sensor.
  - Where strong vibration or shock is caused to the sensor.
- The product is not designed for outdoor use.
- Do not use the sensor in a transient state at power on. (about 150 ms)
- Avoid wiring together with high voltage or motor line in order to prevent the sensor from noise.
- The performance 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 detected product.
- 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.

● Accessories



**DIMENSIONS**



● 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.

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