

Photoelectric Sensor
Cylindrical Type

OPTEX FA

C2 series

• C2DP-□□□□ • C2RP-□□□□
• C2TP-□□□□
• C2DM-□□□□ • C2RM-□□□□
• C2TM-□□□□

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.

Specifications

Type	Through-Beam	Retro Reflective			Diffuse Reflective		
		With polarizing filter	Without polarizing filter	110mm type	400mm type	800mm type	
Plastic housing	Cable type	C2TP-2000(N,P)	C2RP-F400(N,P)	C2RP-350(N,P)	C2DP-11(N,P)	C2DP-40(N,P)	C2DP-80(N,P)
	M12 Connector type	C2TP-2000C(N,P)	C2RP-F400C(N,P)	C2RP-350C(N,P)	C2DP-11C(N,P)	C2DP-40C(N,P)	C2DP-80C(N,P)
Metal housing	Cable type	C2TM-2000(N,P)	C2RM-F400(N,P)	C2RM-350(N,P)	C2DM-11(N,P)	C2DM-40(N,P)	C2DM-80(N,P)
	M12 Connector type	C2TM-2000C(N,P)	C2RM-F400C(N,P)	C2RM-350C(N,P)	C2DM-11C(N,P)	C2DM-40C(N,P)	C2DM-80C(N,P)
Sensing Distance		20m	0.01 ~ 4m (V-61)	0.01 ~ 3.5m (V-61)	11cm *1	40cm *1	80cm *1
Spot Size		φ1100mm / 20m	φ270mm / 4m	φ240mm / 3.5m	φ8mm / 11cm	φ20mm / 40cm	□30mm / 80cm
Light Source		Red LED		IR LED	Red LED		
Supply Voltage		DC10 ~ 30V including ripple (P-P) 10%					
Current Consumption		Emitter : 20mA max. Receiver : 15mA max.	20mA max				10% max.
Hysteresis							10% max.
Response Time		0.5ms max.					
Control Output		NPN/PNP Open Collector 100mA max. / DC30V max. (Residual voltage max. 1.8V / 100mA max.)					
Operation Mode		Light ON / Dark ON selectable by control wires					
Sensitivity Adjustment		1 turn pot.					
LED Indicator		Output indicator (Orange LED) / Stability indicator (Green LED)					
Environmental Illuminance		Sunlight : 10,000 lux, Incandescent lamp : 3,000 lux max.					
Vibration Resistance		10 ~ 55Hz amplitude 1.5mm X Y Z each 2 hours					
Shock Resistance		500m/s ² (50G) X Y Z each 3 times					
Operating / Storage Temperature		Operating temperature -25 ~ +55°C (no freezing) / Storage temperature : -30 ~ +70°C					
Operating / Storage humidity		Operating humidity 35 ~ 85%RH / Storage humidity : 35 ~ 95%RH					
Protection / Material		IEC IP67(common to any type) Plastic housing : PBT (glass included) / Metal housing : BSBM, Front Cover , Lens : PMMA					

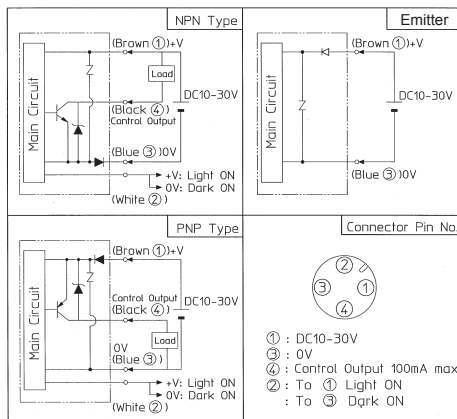
*1 White Paper 90%

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.

Input / Output Circuit Diagram

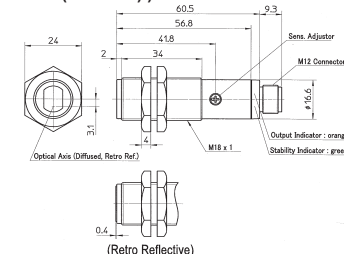
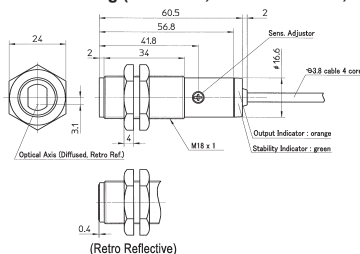


Operating Chart

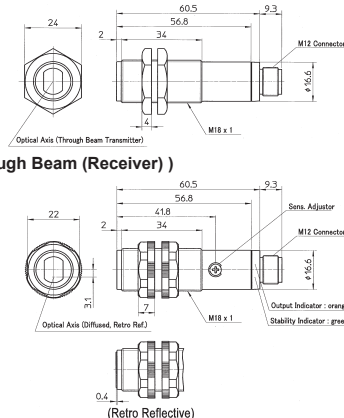
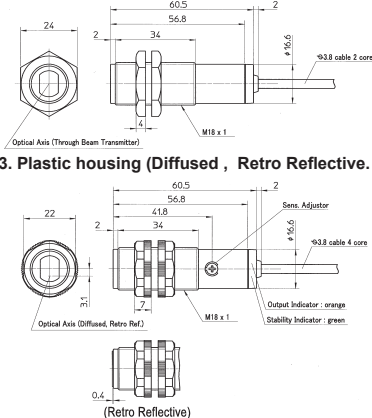
Mode	Light ON (ON at Incident)	Dark ON (ON at interruption)
Operation	incident	Dark ON
Status	Interrupted	Dark ON
Operation indicator (Orange LED)	ON	OFF
Stability indicator (Green LED)	ON	OFF
Output Transistor	ON	OFF

Dimensions

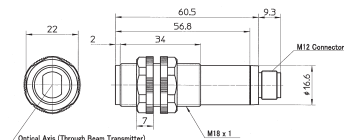
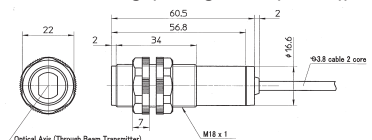
1. Metal housing (Diffused , Retro Reflective, Through Beam(Receiver))



2. Metal housing (Through Beam (Emitter))



4. Plastic housing (Through Beam(Emitter))



CAUTION

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

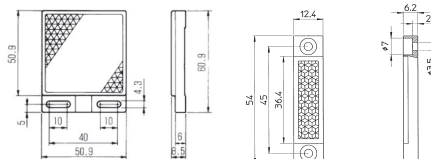
Set Up Torque

- Plastic housing models
Tightening torque needs to be under 1.5N·m(15kgf·cm).
- Metal housing models
Tightening torque needs to be under 20N·m(200kgf·cm).

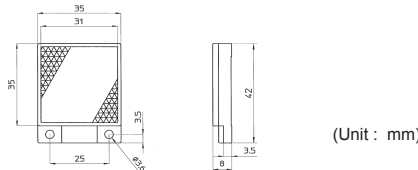


Reflectors

- Type V-61 Standard for Retro type
Sensing distance : 4m
- Type P45A Optional Reflector
Sensing distance : 1.4m



- Type V-42 Optional Reflector
Sensing distance : 2.5m



- Specifications and equipments are subject to change without any prior notice.
- For more information, questions and comments regarding products, contact authorized distributors of us.

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