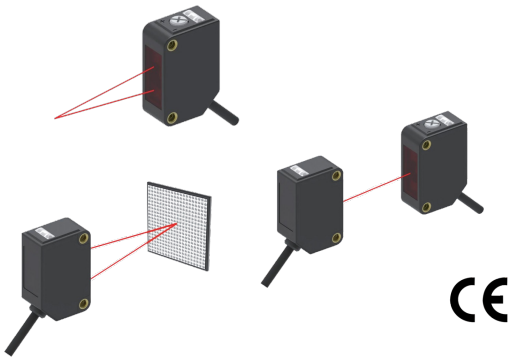


Rectangular Photoelectric Sensor

[PL Series]

- High stability and unique light interference avoidance algorithm
- Visible / Non-visible red LED light source selections available
- Less than 3 ms response time



PL Series Variant

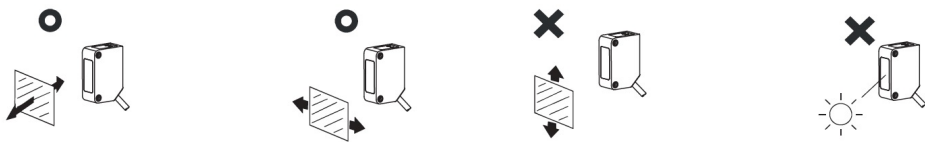
Detection method	Configuration	Detecting distance	Model		Connection method
			NPN	PNP	
Thru-beam		10 m	PL-T10N	PL-T10P	2 m cable
Retro-reflective		3 m	PL-R30N	PL-R30P	2 m cable
Reflective		100 mm	PL-D010N	PL-D010P	2 m cable
		300 mm	PL-D030N	PL-D030P	2 m cable

Specifications

Detection method		Thru-beam	Retro-reflective	Reflective	
Output	NPN	PL-T10N	PL-R30N	PL-D010N	PL-D030N
	PNP	PLT10P	PL-R30P	PL-D010P	PL-D030P
Detecting distance		10 m	3 m	100 mm (when detecting 200 x 200 white paper)	300 mm (when detecting 200 x 200 white paper)
Detecting object		200 x 200 mm white paper	> 5 mm dia. non-transparent object	> 10 mm dia. non-transparent object	
Light source		Red LED			
Sensitivity adjustment		1-turn trimmer (230°)			
Response time		3 ms			
Operation mode		LIGHT-ON / DARK-ON (switch-selectable)			
Control output		NPN / PNP open collector output, 24 V max., 50 mA max., Residual voltage 1 V (below 10 mA); 2 V max. (10 to 100 mA)			
Protection circuit		Reversed polarity, overcurrent protection, surge absorber			
Power supply		12 to 24 VDC including Ripple ±10% (P-P)			
Current consumption		20 mA or less			
Enclosure rating		IP65			
Ambient light		Incandescent lamp: 5,000 lux max., Sunlight: 20,000 lux max.			
Ambient temperature		-25 to +55°C (No freezing)			
Relative humidity		35 to 85% RH (No condensation)			
Vibration resistance		10 to 55 Hz, 1.5 mm double amplitude in the X, Y and Z directions, for 2 hours respectively			
Shock resistance		1,000 m/s ² 6 times in the X and Y direction			

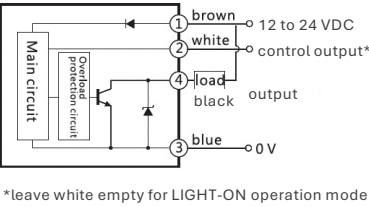
Product Usage

Avoid use in direct sunlight / environment with high humidity / exposed to corrosive gas

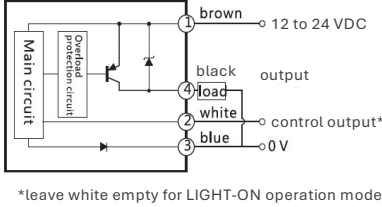


Input / Output Circuits

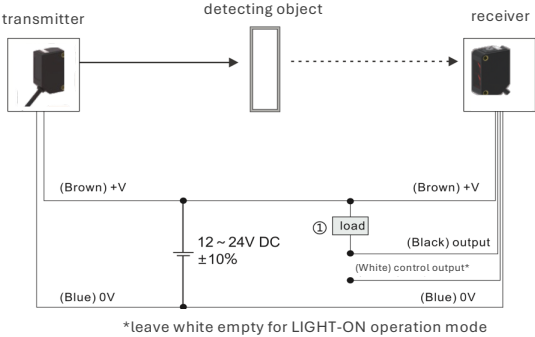
Reflective & Retro-reflective
NPN



PNP



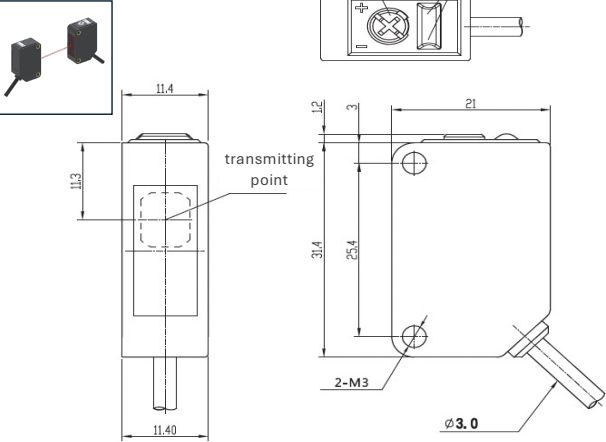
Thrubeam



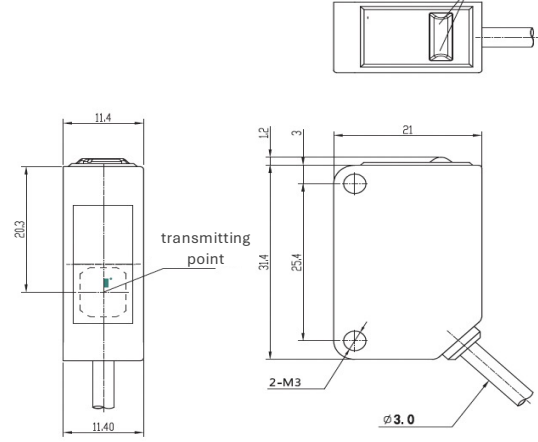
Dimensions

PL-T10

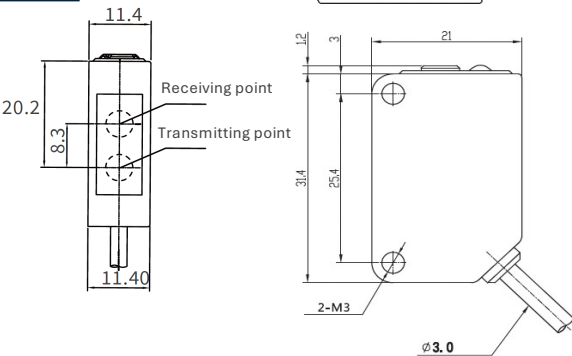
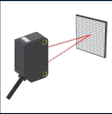
Transmitter



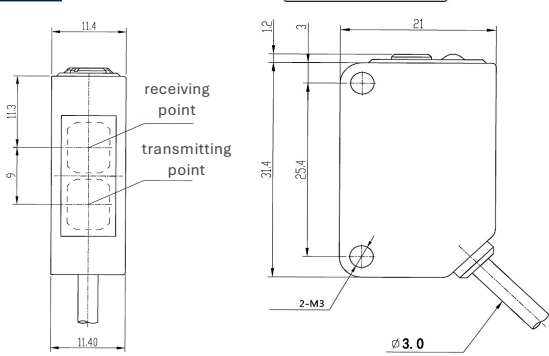
Receiver



PL-R030



PL-D010 / PL-D030



Photoelectric
Sensor

Overview

Code Reader

Handheld
Reader

Vision Sensor

Vision System

Fiberoptic
Sensor

Photoelectric
Sensor

RGB Colour
Sensor

Proximity
Sensor

Ultrasonic
Sensor

Safety Curtain

Ionizer