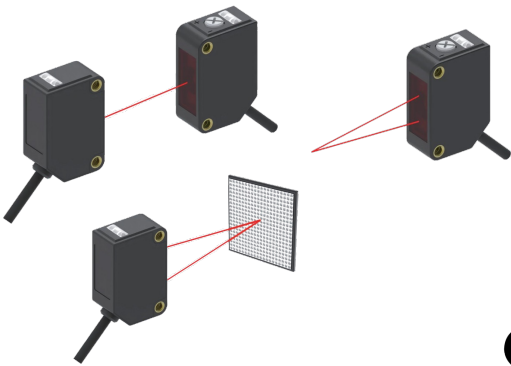


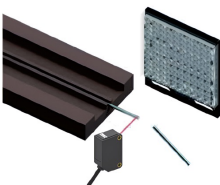
Rectangular Laser Photoelectric Sensor

[PR Series]

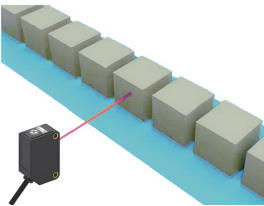
- Visible laser light source for easier setting
- Small spot size with 2 mm dia. spot diameter
- 1 ms response time for fast moving detection
- Up to 30 m long range detection



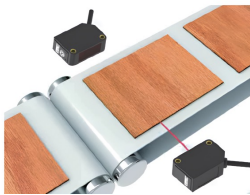
Applications



Metal part detection



Objects with high speed
moving detection



Thin sheet detection

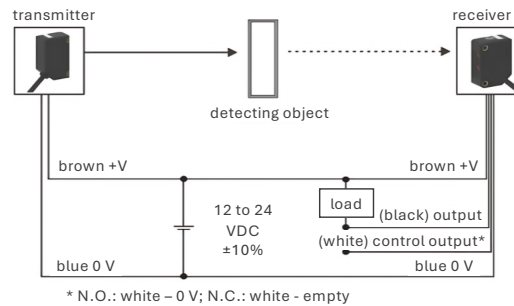
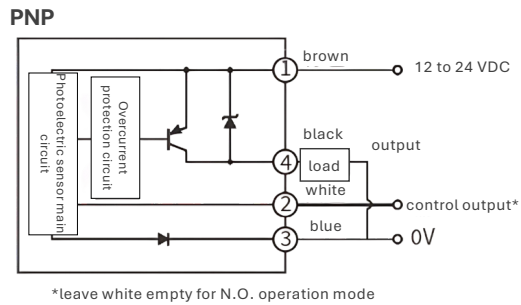
Sensor Variant

Detection method	Configuration	Detecting distance	Model		Connection method
			NPN	PNP	
Thrubeam		10 m	PR-T10N	PR-T10P	2 m cable
Retro-reflective		10 m	PR-R10N	PR-R10P	2 m cable
Reflective		30 to 400 mm	PR-D040N	PR-D040P	2 m cable
		30 to 200 mm	PR-D020N	PR-D020P	2 m cable

Specifications

Models		Thrubeam	Retro-reflective	Reflective	
Output	NPN	PR-T10N	PR-R10N	PR-D040N	PR-D020N
	PNP	PR-T10P	PR-R10P	PR-D040P	PR-D020P
Detecting distance		10 m		400 mm	200 mm
Beam type		Round			Line
Beam diameter		Approx. 2 mm			2 x 40 mm (at 50mm distance) 2 x 70 mm (at 100mm distance)
Hysteresis		20% max.			3% max.
Light source		Red laser (650 nm), class 2			Red laser (655 nm), class 1
Sensitivity adjustment		1-turn potentiometer			
Response time		1 ms max.		2 ms max.	0.5 ms max.
Operation mode		N.O. / N.C. (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 $\pm$ 10% (P-P)			
Current consumption		20 mA or less			30 mA or less
Enclosure rating		IP65			
Ambient light		Incandescent lamp: 4,000 lux max., Sunlight: 8,000 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		500 m/s ² 6 times in the X and Y direction			

PR-R10
NPN



Technical drawing of the PIR sensor assembly, showing three views and dimensions in millimeters (mm).

Top View (Transmitter):

- Indicator: 13.6 mm
- Distance adjustment: 9.9 mm
- Operation mode adjustment: 5.5 mm
- Power indicator

Side View (Receiver):

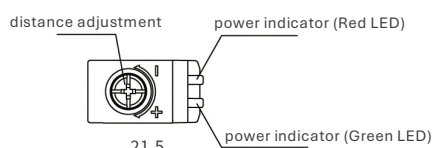
- Receiver: 11 mm
- Sensing centre: 3.6 mm
- Emitter: 3.6 mm
- Overall height: 31 mm
- Internal height: 25.4 mm
- Internal width: 15.5 mm

Bottom View (Receiver):

- Overall width: 20 mm
- Mounting hole diameter: 3 mm
- Mounting hole spacing: 1.2 mm
- Cable: ø 3.8 cable
- Mounting: 2-M3 x 0.5 nut

Technical drawing of the sensor assembly showing front and side views with dimensions:

- Front View (Left):**
 - Overall width: 12
 - Receiver lens diameter: 8
 - Emitter lens diameter: 11.5
 - Labels: "receiver" and "emitter" with leader lines.
- Side View (Right):**
 - Overall height: 32
 - Distance from top edge to receiver lens center: 3.3
 - Distance from bottom edge to emitter lens center: 3.3
 - Distance between lens centers: 25.5
 - Overall width: 21.5
 - Mounting hole diameter: 2-M3 x 0.5 nut
- Inset Image (Top Left):** A small photograph of the physical sensor unit with red laser lines indicating the field of view.



Overview
Code Reader
Handheld Reader
Vision Sensor
Vision System
Fiberoptic Sensor
Photoelectric Sensor
RGB Colour Sensor
Proximity Sensor
Ultrasonic Sensor
Safety Curtain
Ionizer