

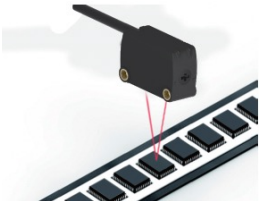
Square Type with Background Suppression

[PZ Series]

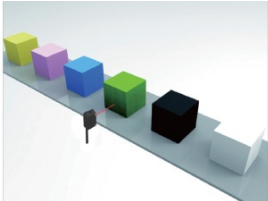
- Background suppression function for stable detection
- Line / round spot selectable beam
- 2 to 400 mm adjustable detection distance



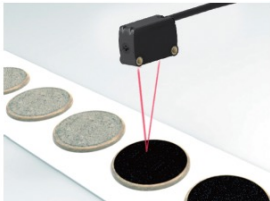
Applications



Metal part detection



Part detection with multi colour



High speed part detection

Sensor variant

Beam type	Detecting distance	Light source	Output	
			NPN	PNP
Round	30 to 400 mm	Red LED (650 nm)	PZ-40N	PZ-40P
	30 to 100 mm		PZ-10N	PZ-10P
Line	30 to 200 mm	Red LED (860 nm)	PZ-L20N	PZ-L20P

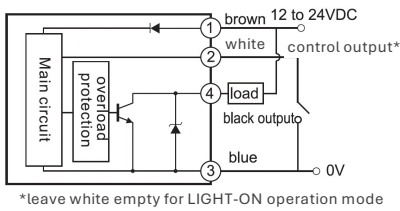
Specifications

Model	NPN PNP	PZ-40N PZ-40P	PZ-10N PZ-10P	PZ-L20N PZ-L20P
Detecting distance		30 to 400 mm	30 to 100 mm	30 to 200 mm
Stable detecting distance		10 to 100 mm	10 to 300 mm	10 to 200 mm
Beam type		Round spot		Line spot
Smallest beam diameter		Approx. Ø 20 mm (at 300 mm distance)		-
Light source		Red LED (650 nm)		Red LED (860 nm)
Hysteresis		1% of less within 200 mm distance	10% or less of operating distance	1% of less within 200 mm distance
Blind spot		White paper: no blind spot, Black paper (100 mm or less): 2 mm		
Repeatability		Along sensing axis: 1 mm or less, Perpendicular to sensing axis: 0.2 mm or less (with white non-glossy paper)		
Power supply		12 to 24 VDC including Ripple ±10% (P-P)		
Current consumption		25 mA or less		
Control output		<NPN output type> NPN open-collector transistor • Maximum sink current: 100 mA • Applied voltage: 30 V DC or less (between output and 0 V) • Residual voltage: 2 V or less (at 100 mA sink current) 1 V or less (at 16 mA sink current)		<PNP output type> PNP open-collector transistor • Maximum source current: 100 mA • Applied voltage: 30 V DC or less (between output and +V) • Residual voltage: 2 V or less (at 100 mA source current) 1 V or less (at 16 mA source current)
Operation mode		Detection-ON / Detection OFF switch selectable		
Circuit protection		Incorporated		
Response time		1 ms or less		
Working indicator		Red LED (lights up when output is ON)		
Power indicator		Green LED (lights up when power supply is connected)		
Distance adjustment		Multi rotation mechanical adjuster		
Sensing mode		BGS / FGS functions switchable		
Automatic interference prevention		Incorporated		
Enclosure rating		IP65		
Ambient light		Incandescent lamp: 3,000 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 3 times in the X and Y direction		

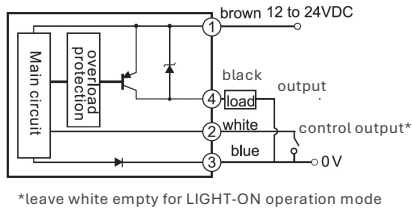
Input / Output Circuits

PZ-10 / PZ-40 / PZ-L20

NPN

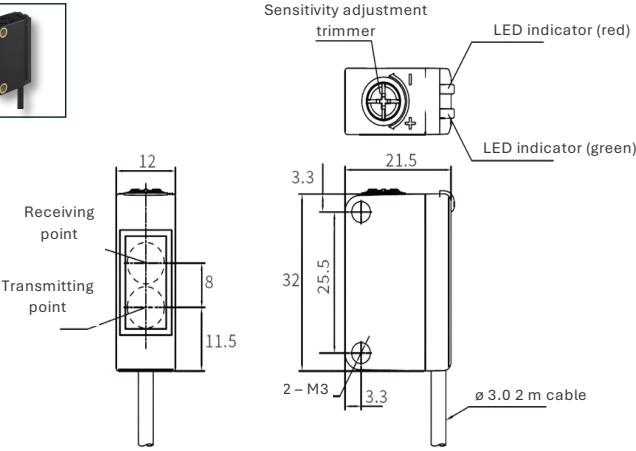


PNP



Dimensions

PZ-10 / PZ-40 / PZ-L20



Overview

Code Reader

Handheld Reader

Vision Sensor

Vision System

Fiberoptic Sensor

Photoelectric Sensor

RGB Colour Sensor

Proximity Sensor

Ultrasonic Sensor

Safety Curtain

Ionizer