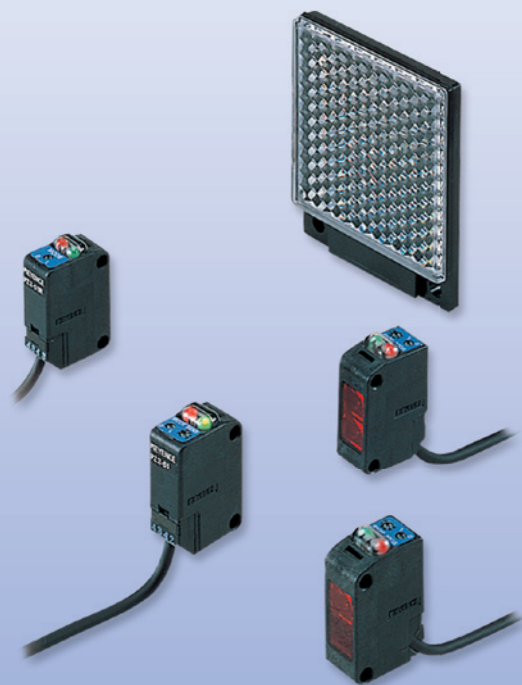


Self-contained Photoelectric Sensors PZ2 Series



Features

- Excellent mirror surface detection
- IP67 rated waterproof
- Sensors can operate side-by-side

Expert Engineering Sites

www.sensorcentral.com



An on-line guide of automation knowledge and techniques

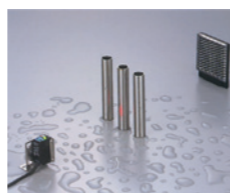
Greatly improved serviceability

Mounting the sensor body and routing the cable can be performed independently, reducing time and labour. If replacing the sensor body with a new one because of damage, or if replacing the sensor body with a different model due to changes in specifications, you need only to replace the sensor body.



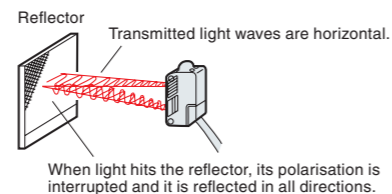
IP67 rated, waterproof construction

PZ2 sensors use a detachable cable and IP67 rated construction for peace-of-mind in sites where equipment may get wet.

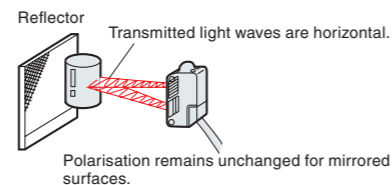


P.R.O.* function provides stable detection of mirrored surfaces (PZ2-61)

* Polarised Reflection Optics



The polarisation of the horizontal light emitted by the transmitter is interrupted by the reflector, and it returns to the receiver as scattered light.



In the case of mirrored surfaces, the horizontal light is not received because it is reflected in the same state when it hits the detected object.

Lineup				
Type	Appearance	Detecting distance	Model	Output
Thru-beam			PZ2-51	NPN
			PZ2-51P	PNP
Retro-reflective			PZ2-61	NPN
			PZ2-61P	PNP
Diffuse-reflective	Long-range		PZ2-41	NPN
			PZ2-41P	PNP
	Short-range		PZ2-42	NPN
			PZ2-42P	PNP

Options

Support Tools

S-P01 Free adjuster
Freely-adjustable height and angle. Both vertical and horizontal mountings are available.

S-P12 Protective cover
Protective cover with mounting bracket. Thickness: 3.0 mm (Stainless steel).

Reflector

<p>Reflector R-2 (accessory for PZ2-61) OP-95388</p> <p>PZ2-61(P) Detecting distance when using PZ2-61 (P): 2.5 m</p>	<p>Reflector R-3 (optional) OP-96436</p> <p>PZ2-61(P) Detecting distance when using PZ2-61 (P): 1.7 m</p>	<p>Reflector R-5* (optional)</p> <p>PZ2-61(P) Detecting distance when using PZ2-61 (P): 0.7 m</p>	<p>PRO reflection tape (optional) OP-96629</p> <p>PZ2-61(P) Detecting distance when using PZ2-61 (P): 0.2 to 0.8 m</p>
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* The order code for R-5 is R-5. The order code for other reflectors is the OP number.

A-3 attachment kit (optional) specially designed for PZ2-51 and -51P thru-beam models

Slit plate only

Slit width	Detecting distance	Target size
0.5 mm	500 mm	0.5 x 5 mm
1 mm	800 mm	1 x 5 mm
2 mm	1500 mm	2 x 5 mm

Slit plate and polarising filter

Slit width	Detecting distance	Target size
0.5 mm	200 mm	0.5 x 5 mm
1 mm	400 mm	1 x 5 mm
2 mm	700 mm	2 x 5 mm

- Fibreoptic
- Photoelectric**
- Proximity
- Area Sensor
- Pressure
- Multi Function
- High Precision
- PLC/Touch Panel
- Static Elimination
- Vision System
- Laser Marker
- Barcode
- Microscope

PHOTOELECTRIC SELECTION GUIDE

CMOS LASER GV

COMPACT LASER LV-S/H

RGB COLOUR CZ-V20 CZ

FLUORESCENCE DETECTION UV CZ-H52

LUSTRE DETECTION CZ-H72

HEAVY-DUTY PX

SEPARATE AMP. PS

SELF-CONTAINED PZ-G PZ-V/M PZ2 PZ2-62 PZ-101

AMP-IN-CABLE PQ

MULTI-VOLTAGE PW

PASSAGE PG

Specifications

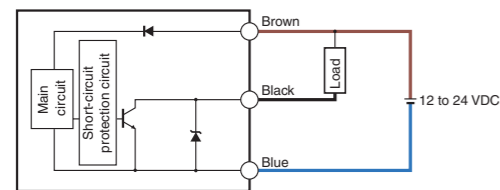
Type	Thrubeam	Retro-reflective		Diffuse-reflective	
		Polarised	Long-range	Long-range	Short-range
Model	NPN	PZ2-51	PZ2-61	PZ2-41	PZ2-42
	PNP	PZ2-51P	PZ2-61P	PZ2-41P	PZ2-42P
Appearance					
Detecting distance	7,000 mm	2,500 mm (with R-2)	600 mm (200 x 200 mm white mat paper)	100 mm (100 x 100 mm white mat paper)	
Detectable object	Opaque materials (8 x 8 mm min.)		Transparent and opaque materials		
Hysteresis	20% max. of detecting distance				
Response time	1.5 ms max.	1 ms max. (2 ms in alternate frequency mode ¹)			
Light source	Visible red LED				
Sensitivity adjustment	1-turn trimmer (240°)				
Operation mode	LIGHT-ON/DARK-ON (switch-selectable)				
Indicators	Output and power ² : Red LED, Stable operation: Green LED				
Control output	NPN or PNP: 100 mA (40 V) max., Residual voltage: 1 V max.				
Protection circuit	Reversed polarity, overcurrent protection, surge absorber				
Power supply	12 to 24 VDC ±10%				
Current consumption	T: 20 mA max. R: 25 mA max.	35 mA max.			
Enclosure rating	IP67				
Ambient light	Incandescent lamp: 5,000 lux max., Sunlight: 20,000 lux max.				
Ambient temperature	-20 to +55°C, No freezing				
Relative humidity	35 to 85%, No condensation				
Housing	Glass-fibre reinforced plastic				
Weight (including 2-m connector cable)	Transmitter/receiver: Approx. 50 g each		Approx. 50 g		

1. The different-frequency type has "D" at the end of the model No. **PZ-41D(P)/42D(P)/61D** only.
2. The power indicator is equipped with the **PZ2-51** only.

Input/Output Circuits

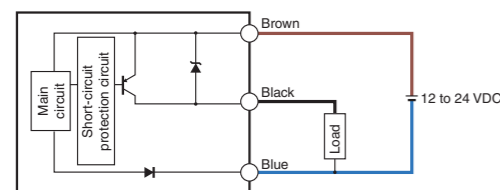
NPN

PZ2-61/41/42/51 (Receiver)

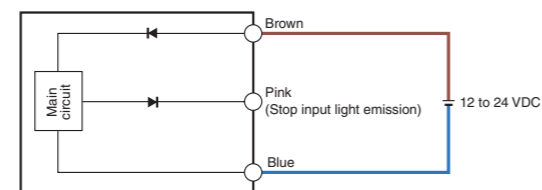


PNP

PZ2-61P/41P/42P/51P (Receiver)



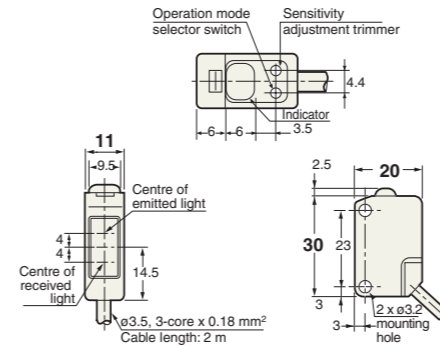
PZ2-51/51P (Transmitter)



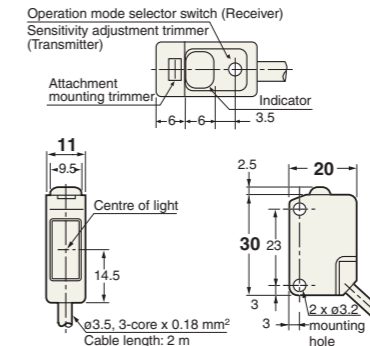
Dimensions

Unit: mm

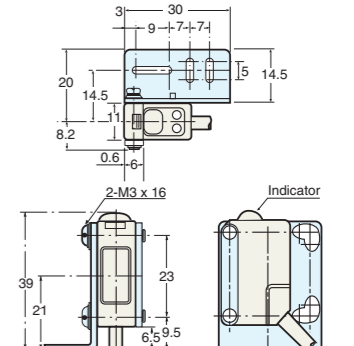
PZ2-41(P)/42(P)/61(P)



PZ2-51(P)

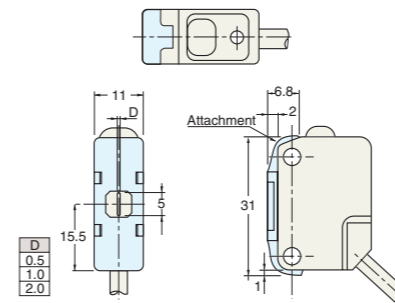


PZ2 (with mounting bracket)

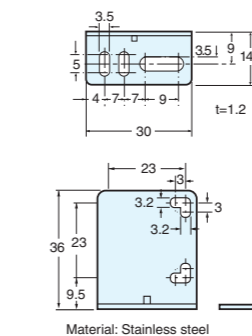


PZ2-51(P)

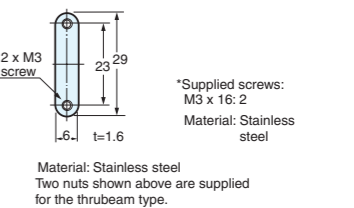
When attachment (**A-3**) is attached.



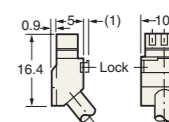
Mounting bracket (accessory)



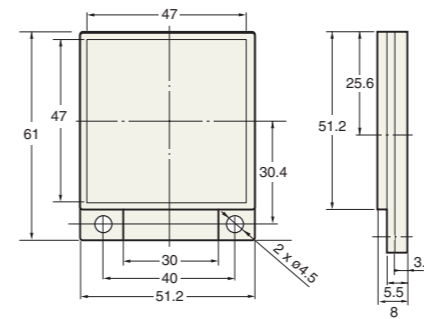
Flat nut (accessory)



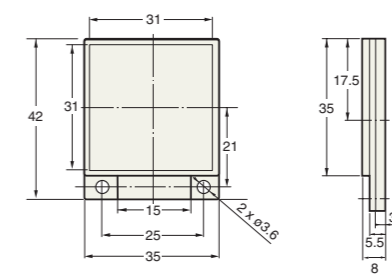
Connector



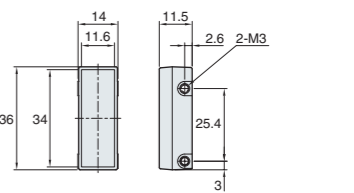
Reflector R-2 (accessory for PZ2-61)
(OP-95388)



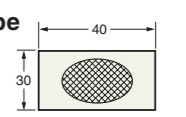
Reflector R-3 (optional)
(OP-96436)



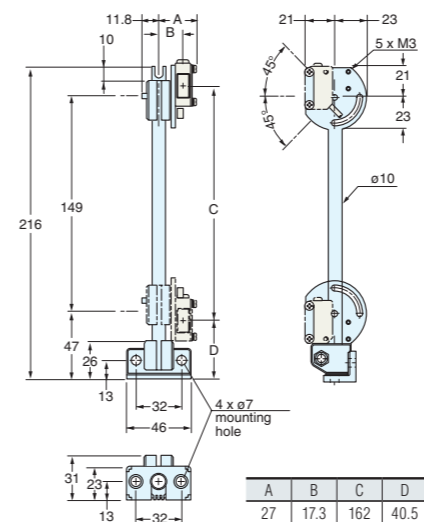
R-5



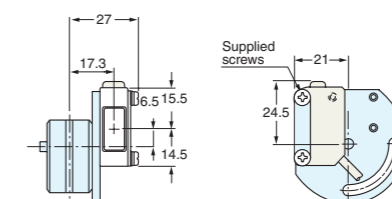
PRO reflection tape (optional)
OP-96629



S-P01



S-P01 Head



S-P12

