

# KEYENCE

**NEW** Self-contained Threaded Sensors  
PZ-G Series



Dual LED



## MEGA POWER

Long-range detection twice as far as conventional models

## EASY ADJUSTMENT

The front light-receiving indicator allows easy optical axis alignment

## EASY INSTALLATION

A one-touch mounting bracket makes screws unnecessary



# Dramatically improved performance and ease-of-use

## MEGA POWER

### High-Power Dual LED-type

High-power threbeam type PZ-G52

Detecting distance: 40 m

**4 times\***  
longer detecting distance  
**2 times\***  
faster response speed

\* Compared with our conventional models

### 4-element red LED-type

Threbeam type PZ-G51

Detecting distance: 20 m

**2 times\***  
longer detecting distance  
**2 times\***  
faster response speed

The high-intensity 4-element red LED has greatly improved the detecting distance. The bright beam spot makes it easy to align the optical axis.

A 4-element LED is used in upper-level fibre sensors because its wavelength can be visibly seen by the human eye and there is minimal change in intensity over time.

\* Compared with our conventional models

Reflective type PZ-G41

Detecting distance: 1 m

Retro-reflective type PZ-G61

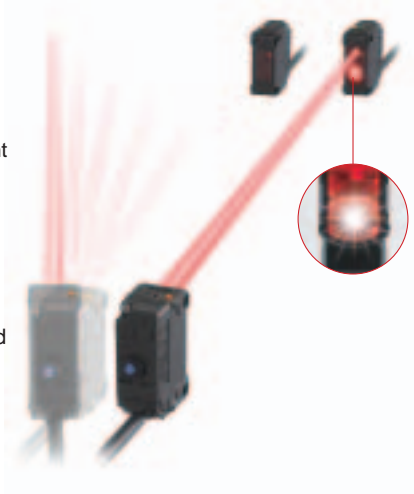
Detecting distance: 4.2 m

[ Self-contained Threaded Sensors PZ-G Series ]

# EASY ADJUSTMENT

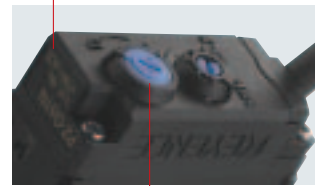
## Alignment indicator takes the guesswork out of long distance sensor setup

Has your receiver been knocked out of alignment? How can you tell? Thrubeam PZ-G models feature a bright red LED indicator that alerts you the instant proper alignment has been obtained. This simple yet crucial feature allows you to troubleshoot setup and run-time issues quickly, before they can escalate into major problems.



## Laser Marked tags eliminate possible contamination

All information (model#, serial#, etc.) is laser marked directly onto the sensor housing. There are no labels, inks or paints to peel or chip off into your products.



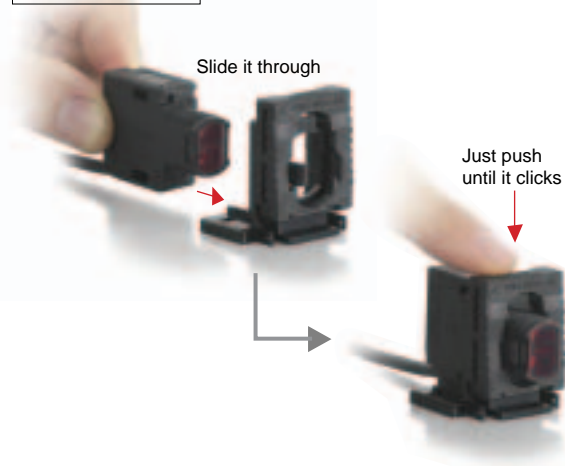
**Easy-to-see blue trimmer**  
Enhances operation efficiency

# EASY INSTALLATION

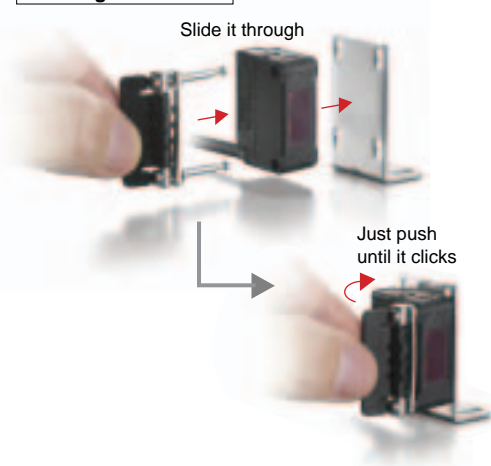
## One-Touch mounting brackets cut installation time

Our unique one-touch brackets can save you and your customers considerable time during installation or replacement.

### Threaded models

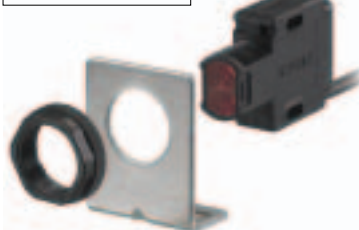


### Rectangular models



A variety of mounting styles are available to adapt to your application.

### Threaded models



Can be attached with an M18 nut

### Rectangular models



Can be attached with two M3 screws



# Enhanced user-friendliness

## Standard M8 and M12 quick-disconnects make replacement easier

The PZ-G features a standard pin-out, which allows it to be a drop-in replacement with existing wiring.



## Our oil-resistant cable ensures reliable operation in an oily environment

In addition to the standard PVC cable, an oil-resistant PUR cable is available for use in harsh environments.



PUR: Polyurethane

## 19 Mounting bracket types provide a variety of mounting methods

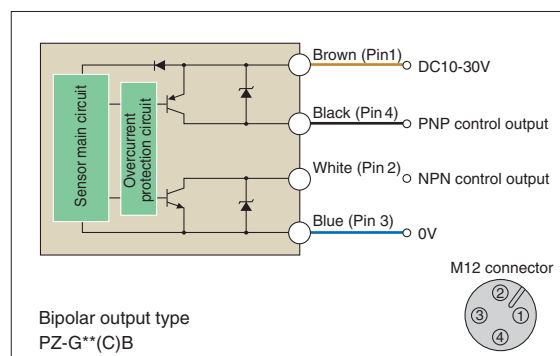
A bracket can be selected according to the installation conditions. 19 types, including a one-touch bracket, are available.



The mounting brackets shown above are only part of the lineup. See page 7 for further details.

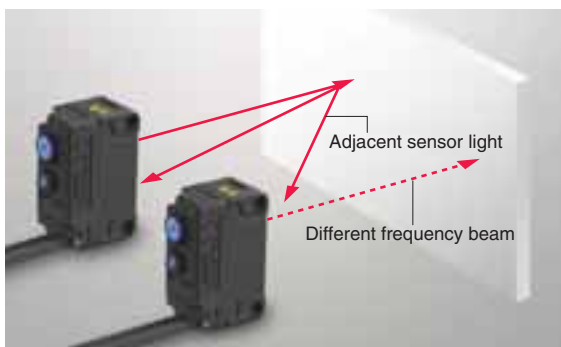
## Bipolar output (NPN+PNP) compatible with any input device

Threaded models feature bipolar output (NPN and PNP), eliminating the need to stock sensors for both outputs.



## The interference suppression function prevents interference from nearby units

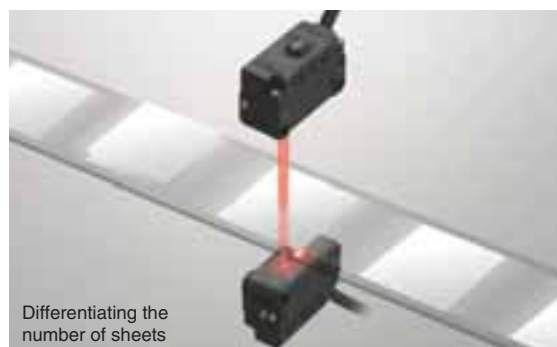
With thru-beam models, up to two sensors can be mounted in close proximity. Four sensors can be used by alternating the transmitter/receiver position.



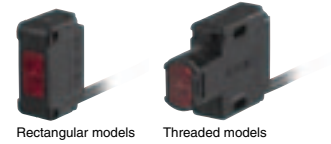
The different frequency function automatically shifts the emission cycle if adjacent sensor light is received by the receiver.

## High-speed targets can be detected at a response speed of up to 500 μs

A high-speed response of up to 500 μs, twice as fast as our conventional models, ensures detection on a high-speed line. The high power ensures stable detection.

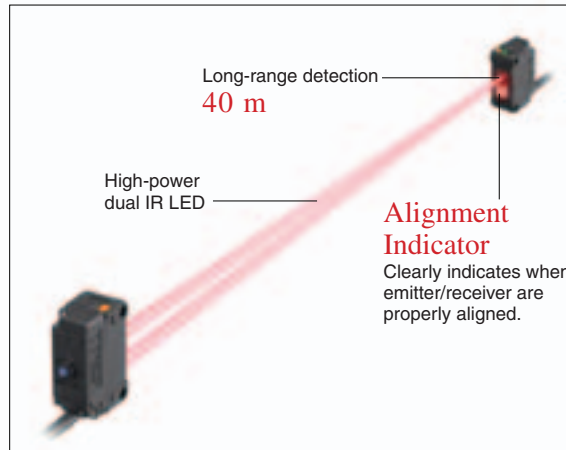


# Model features

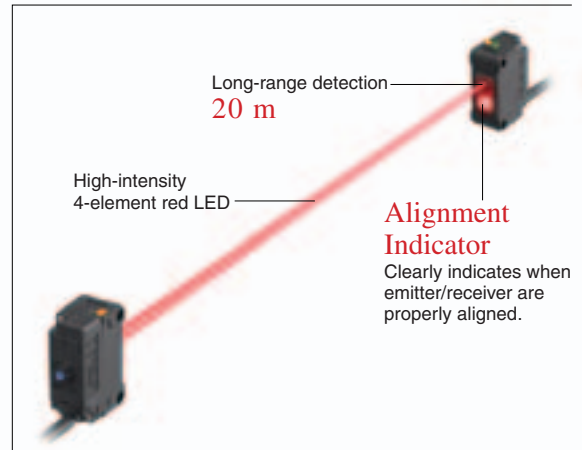


## Thrubeam — The long-range high-power beam makes it easy to align the optical axis

### High-power PZ-G52

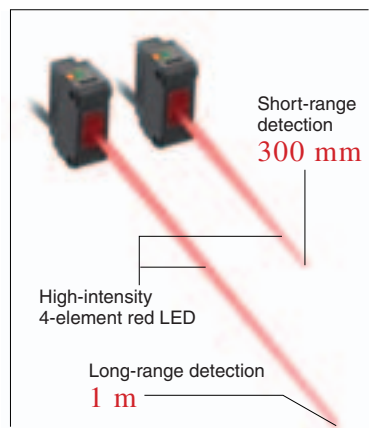


### Standard PZ-G51

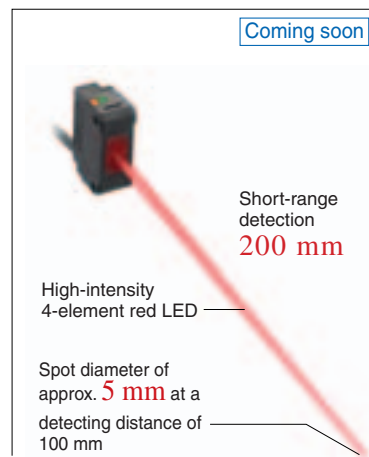


## Reflective — The visible spot makes it easy to align the optical axis

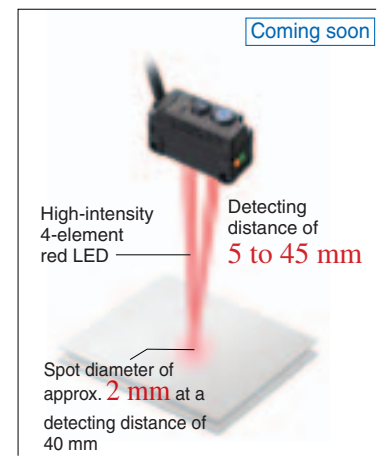
### Diffuse reflective PZ-G41 (long-range) PZ-G42 (short-range)



### Narrow-view reflective type PZ-G101

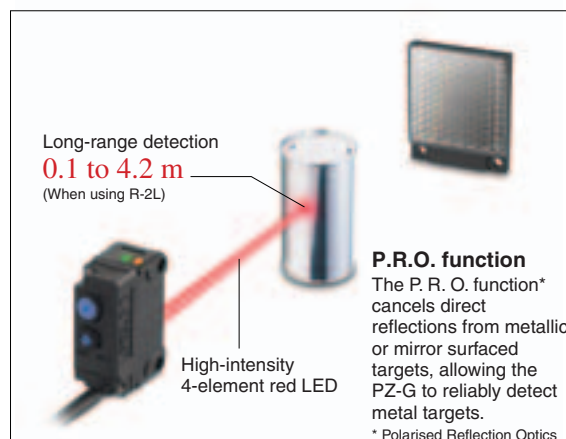


### Definite reflective type PZ-G102

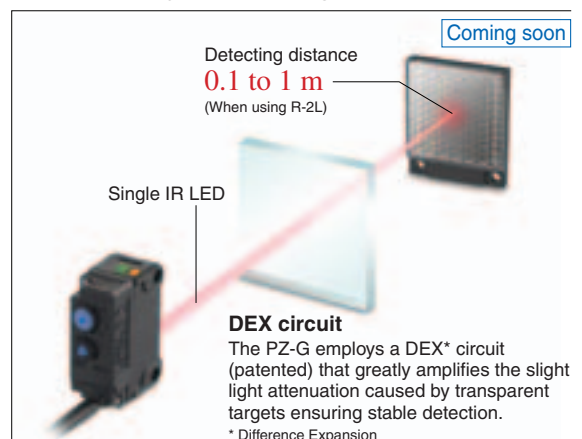


## Retro-reflective — High-power long-range detection

### Standard PZ-G61 (with P. R. O. function)

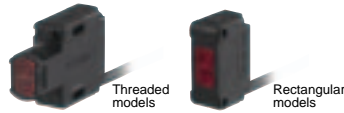


### Transparent object detection type PZ-G62



# Sensor head lineup / Model variations

## Sensor head lineup

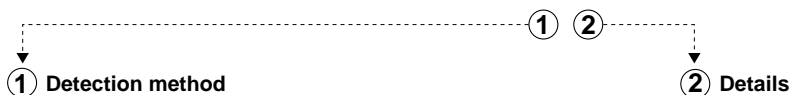


Type	Design	Detecting distance	Model variations			Light source (LED)	Cable*					
			NPN	PNP	Bipolar (NPN+PNP)							
 Thru-beam	Standard	Rectangular	 20 m	PZ-G51N	PZ-G51P	—	Red	Cable (2 m)				
		Threaded		PZ-G51CN	PZ-G51CP	—		M8 connector				
	High-power	Rectangular	 40 m	—	—	PZ-G51B		Infrared x 2	Cable (2 m)			
		Threaded		—	—	PZ-G51CB			M12 connector			
	 Reflective	Diffuse reflective long-range	Rectangular	 1 m	PZ-G41N	PZ-G41P	—	Red	Cable (2 m)			
			Threaded		PZ-G41CN	PZ-G41CP	—		M8 connector			
Diffuse reflective short-range			Rectangular		 300 mm	—	—		PZ-G41B	Cable (2 m)		
			Threaded			—	—		PZ-G41CB	M12 connector		
Narrow-view reflective <small>Coming soon</small>		Rectangular	 200 mm	PZ-G42N	PZ-G42P	—	Cable (2 m)					
		Threaded		PZ-G42CN	PZ-G42CP	—	M8 connector					
		Definite reflective <small>Coming soon</small>		Rectangular	 5 to 45 mm	—	—		PZ-G42B	Cable (2 m)		
				Threaded		—	—		PZ-G42CB	M12 connector		
 Retro-reflective**		Long-range (with P. R. O. function)	Rectangular	 0.1 to 4.2 m (when using R-2L)	PZ-G101N	PZ-G101P	—		Red	Cable (2 m)		
			Threaded		PZ-G101CN	PZ-G101CP	—			M8 connector		
			Transparent object detection <small>Coming soon</small>		Rectangular	 0.1 to 1 m (when using R-2L)	—			—	PZ-G101B	Cable (2 m)
					Threaded		—			—	PZ-G101CB	M12 connector
	Long-range (with P. R. O. function)	Rectangular	 0.1 to 4.2 m (when using R-2L)	PZ-G102N	PZ-G102P	—	Red	Cable (2 m)				
		Threaded		PZ-G102CN	PZ-G102CP	—		M8 connector				
		Transparent object detection <small>Coming soon</small>		Rectangular	 0.1 to 1 m (when using R-2L)	—		—	PZ-G102B	Cable (2 m)		
				Threaded		—		—	PZ-G102CB	M12 connector		
 Retro-reflective**	Long-range (with P. R. O. function)	Rectangular	 0.1 to 4.2 m (when using R-2L)	PZ-G61N	PZ-G61P	—	Red	Cable (2 m)				
		Threaded		PZ-G61CN	PZ-G61CP	—		M8 connector				
		Transparent object detection <small>Coming soon</small>		Rectangular	 0.1 to 1 m (when using R-2L)	—		—	PZ-G61B	Cable (2 m)		
				Threaded		—		—	PZ-G61CB	M12 connector		
	Long-range (with P. R. O. function)	Rectangular	 0.1 to 4.2 m (when using R-2L)	PZ-G62N	PZ-G62P	—	Infrared	Cable (2 m)				
		Threaded		PZ-G62CN	PZ-G62CP	—		M8 connector				
		Transparent object detection <small>Coming soon</small>		Rectangular	 0.1 to 1 m (when using R-2L)	—		—	PZ-G62B	Cable (2 m)		
				Threaded		—		—	PZ-G62CB	M12 connector		

\*Cable sold separately for connector models \*\*Reflector sold separately

## Model variations

PZ-G



Reference No.	Reference No. description	
	Detection method	Details
51	Thru-beam type	Standard
52		High-power
41	Reflective type	Diffuse reflective long range
42		Diffuse reflective short range
101		Narrow-view
102		Definite reflective
61	Retro-reflective type	Long range (with P. R. O. function)
62		Transparent object detection (without P. R. O. function)

Reference letter	Reference letter description		
	Details	Cable	Output
N	Rectangular models	2 m cable with a loose wire end	NPN
P			PNP
CN		M8 connector	NPN
CP			PNP
B	Threaded models	2 m cable with a loose wire end	Bipolar (NPN+PNP)
CB			

# Options

## Brackets



### Rectangular models

Model	For use with	Details*	Accessories	Material	Weight		
PZ-B41A	Cable models	L-shaped mounting bracket (standard)	M3 screw, P=0.5xL12 (2 pieces)	Mounting bracket: SUS304 Screw: Stainless	Approx. 15 g		
PZ-B01A		L-shaped mounting bracket (small)			Approx. 10 g		
PZ-B61		L-shaped mounting bracket (protective)			Approx. 90 g		
PZ-B21A		Side-mounting bracket (vertical L)			Approx. 15 g		
PZ-B22A		Side-mounting bracket (vertical R)			Approx. 15 g		
PZ-B31		Side-mounting bracket (landscape L)			Approx. 20 g		
PZ-B32		Side-mounting bracket (landscape R)			Approx. 20 g		
PZ-B11		Landscape mounting bracket			Approx. 20 g		
PZ-B81		One-touch mounting bracket			Stopper	Mounting bracket: SUS304 Stopper: SUS303, Polyacetal	Approx. 20 g
PZ-B02		Connector models (M8 L-shaped cable only)			L-shaped mounting bracket	M3 screw, P=0.5xL12 (2 pieces)	Mounting bracket: SUS304 Screw: Stainless
PZ-B23	Side-mounting bracket (vertical L)		Approx. 25 g				
PZ-B24	Side-mounting bracket (vertical R)		Approx. 25 g				
PZ-B83	One-touch mounting bracket		Stopper	Mounting bracket: SUS304 Stopper: SUS303, Polyacetal	Approx. 30 g		
OP-84220	Cable models Connector models	Stopper for one-touch mounting brackets (PZ-B81/B83) (without an L-shaped bracket)	—	SUS303, Polyacetal	Approx. 10 g		

\*One piece is included.

### Threaded models

Model	For use with:	Details*	Accessories	Material	Weight
PZ-B03	Cable models Connector models	L-shaped mounting bracket A (standard)	—	SUS304	Approx. 25 g
PZ-B04		L-shaped mounting bracket (angle-adjustable)		SUS304	Approx. 35 g
PZ-B25		Side-mounting bracket (vertical)		SUS304	Approx. 30 g
PZ-B82**		One-touch mounting bracket		Base: Polyacetal Slide: Glass-reinforced polyamide	Approx. 10 g
OP-84225		M18 nut (2 pieces)		Glass-reinforced PBT	Approx. 5 g

\*One piece is included (except OP-84225). \*\*One M18 nut is supplied with threaded models. \*\*When using PZ-B82, OP-85135 attachment cannot be used.

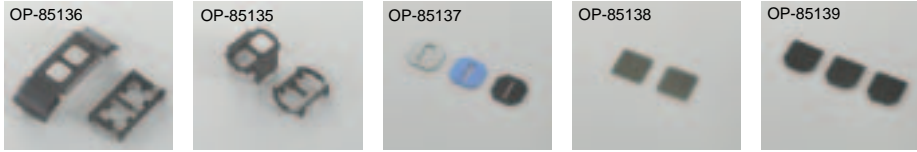
### Rectangular/Threaded models

Model	For use with:	Details*	Accessories	Material	Weight
PZ-S10A	Cable models Connector models	Free adjuster tool (L=55 to 100 mm) Applicable mounting bracket: Side-mounting bracket (PZ-B21A,B22A,B31,B32,B23,B24,B25)	Binding band (2 pieces) Plate washer (1 piece)	Shaft: SUS303 Plastic part: Polyamide	Approx. 105 g
PZ-S20A		Free adjuster tool (L=55 to 200 mm) Applicable mounting bracket: Side-mounting bracket (PZ-B21A,B22A,B31,B32,B23,B24,B25)			Approx. 165 g

\* One piece is included.

## Options

### Attachments



Model	For use with:	Description	Number included	Material	Weight
OP-85136	Thrubeam (Rectangular models)	Attachment A (for attaching a slit or a polarisation filter)	2 sets	Polyacetal (POM)	Approx. 2 g
OP-85135*	Thrubeam (threaded models)	Attachment B (for attaching a slit or a polarisation filter)	2 sets	Polyacetal (POM)	Approx. 1 g
OP-85137	Thrubeam (Rectangular/threaded models)	Slit (0.5 mm, 1 mm, 2 mm)	3 sets	Polyvinyl chloride (PVC)	Approx. 1 g
OP-85138	Thrubeam (red LED models)	Polarisation filter A (for the red LED type)	2 pieces	Triacetate (TAC) Polyvinyl alcohol (PVA)	Approx. 1 g
OP-85139	Thrubeam (IR LED models)	Polarisation filter B (for the IR LED type)	3 pieces	Acetate plastic	Approx. 1 g

\* OP-85135 cannot be attached when using PZ-B82 one-touch mounting bracket.

### Specifications when an attachment is used

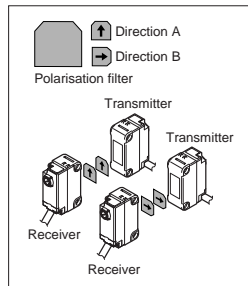
Sensor model	Slit (mm)	Polarisation filter	Detecting distance (m)
PZ-G51	0.5 x 5	—	1
	1 x 5	—	2.5
	2 x 5	—	5
	—	Attached*	9
	0.5 x 5	Attached*	0.5
	1 x 5	Attached*	1.5
PZ-G52	2 x 5	Attached*	3
	0.5 x 5	—	2.5
	1 x 5	—	5.5
	2 x 5	—	10
	—	Attached*	15
	0.5 x 5	Attached*	1
	1 x 5	Attached*	2
	2 x 5	Attached*	5

\* When attaching to make the polarisation direction of the transmitter and the receiver same.

#### [ Usage example 1 ]

##### Suppressing interference between two thrubeam sensors

Interference between thrubeam sensors can be suppressed with polarisation filters. A polarisation filter's characteristic depends on the direction and notch in which it is set. If the polarisation direction of the filters attached to the transmitter and the receiver is the same, the beam can be received. If the direction of the filter is changed by 90 degrees, however, the beam cannot be received. Using this restriction, interference can be suppressed with polarisation filters as shown.

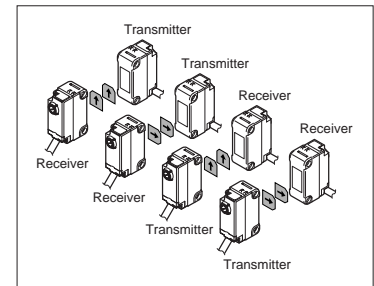


\* Remove the protective sheets on both sides of the polarisation filter before use.  
\* Adjust the sensitivity if interference occurs even with polarisation filters.

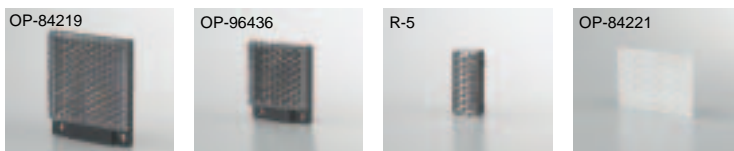
#### [ Usage example 2 ]

##### Suppressing interference between four thrubeam-type sensors

With another set of sensors set as in Usage Example 1, interference between four sensors can be suppressed by alternating the positions of the transmitters and the receivers. Be sure to pay attention to the direction of the notches on the filters.



### Reflectors

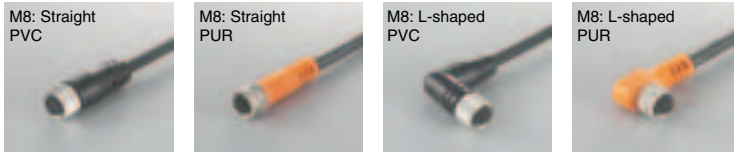


Model	For use with:	Detecting distance (m)		Description	Number included	Material	Weight
		PZ-G61 Long-range	PZ-G62 Transparent object detection				
OP-84219	Retro-reflective models	0.1 to 4.2	0.1 to 2	Reflector (R-2L)	1 piece	Reflective area: Acrylic, Base: ABS	Approx. 20 g
OP-96436		0.1 to 2.9	0.1 to 0.4	Reflector (R-3)		Reflective area: Acrylic, Base: ABS	Approx. 10 g
R-5		0.1 to 2.5	0.1 to 0.5	Reflector (R-5)		Reflective area: Acrylic, Base: ABS	Approx. 5 g
OP-84221		0.1 to 0.7	—	Reflective tape		Surface: Acrylic, Cube: Polycarbonate	Approx. 1 g



## Cables / Input/output circuits

### Connector cables



#### M8 connector

Model	Cable material	Description	Sensor connection		Opposite connection		Cable length (m)	Weight	
			Connector size	Design	Connector size	Design			
OP-73864	PVC	Connector – loose wires	M8	Straight	—	Loose wires	2	Approx. 55 g	
OP-73865			M8	Straight	—	Loose wires	10	Approx. 220 g	
OP-85497			M8	L-shaped	—	Loose wires	2	Approx. 55 g	
OP-85498	PUR	Connector – connector	M8	Straight	M8	Straight	2	Approx. 55 g	
OP-85499			M8	Straight	—	Loose wires	2	Approx. 65 g	
OP-85500			M8	Straight	—	Loose wires	10	Approx. 310 g	
OP-85584		Connector – loose wires	M8	L-shaped	—	Loose wires	2	Approx. 65 g	
OP-85585			M8	L-shaped	—	Loose wires	10	Approx. 310 g	
OP-85501			Connector – connector	M8	Straight	M8	Straight	2	Approx. 75 g
OP-85586				M8	L-shaped	M8	Straight	2	Approx. 75 g
OP-85509				M8	Straight	M12	Straight	2	Approx. 80 g
OP-85510				M8	Straight	M12	Straight	5	Approx. 165 g
OP-85587		M8		L-shaped	M12	Straight	2	Approx. 80 g	
OP-85588		M8	L-shaped	M12	Straight	5	Approx. 170 g		

\* One piece is included.



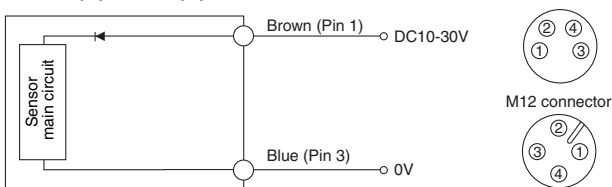
#### M12 connector

Model	Cable material	Description	Sensor connection		Opposite connection		Cable length (m)	Weight	
			Connector size	Design	Connector size	Design			
OP-75721	PVC	Connector – loose wires	M12	Straight	—	Loose wires	2	Approx. 65 g	
OP-85502			M12	Straight	—	Loose wires	10	Approx. 230 g	
OP-75722			M12	L-shaped	—	Loose wires	2	Approx. 65 g	
OP-85503	PUR	Connector – connector	M12	Straight	M12	Straight	2	Approx. 70 g	
OP-85504			M12	Straight	M12	Straight	5	Approx. 130 g	
OP-85505		Connector – loose wires	M12	Straight	—	Loose wires	2	Approx. 75 g	
OP-85506			M12	Straight	—	Loose wires	10	Approx. 320 g	
OP-85507			Connector – connector	M12	Straight	M12	Straight	2	Approx. 90 g
OP-85508				M12	Straight	M12	Straight	5	Approx. 175 g

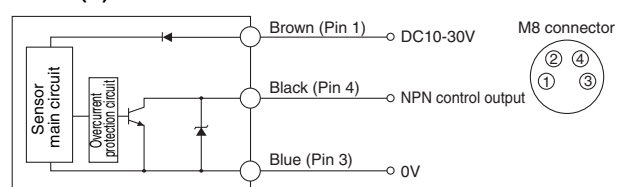
\* One piece is included.

### Input/output circuits

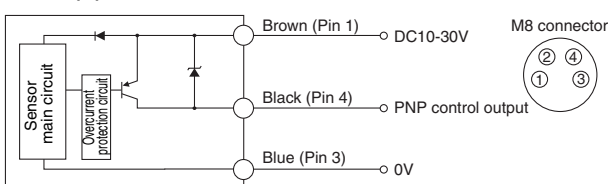
#### Thrubeam transmitter PZ-G5\*(C)PZ-G5\*(C)B



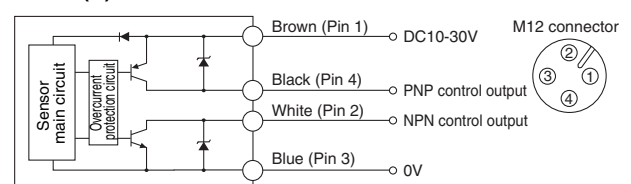
#### NPN output (thrubeam receiver, reflective, retro-reflective) PZ-G\*\*(C)N



#### PNP output (thrubeam receiver, reflective, retro-reflective) PZ-G\*\*(C)P



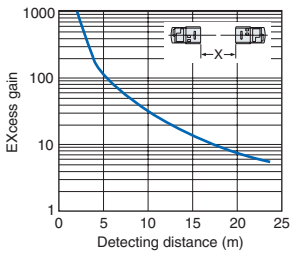
#### Bipolar output (thrubeam receiver, reflective, retro-reflective) PZ-G\*\*(C)B



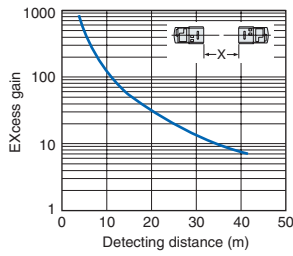
# Characteristics

## Receiver excess gain vs. detecting distance (Typical)

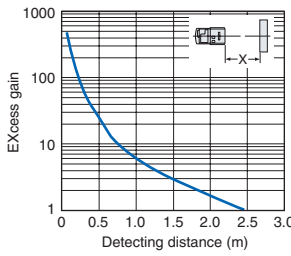
**PZ-G51**



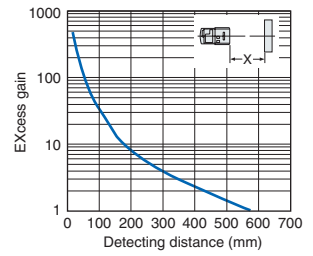
**PZ-G52**



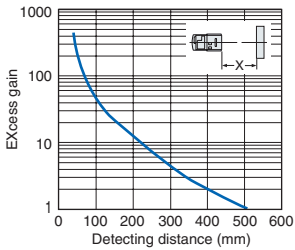
**PZ-G41**



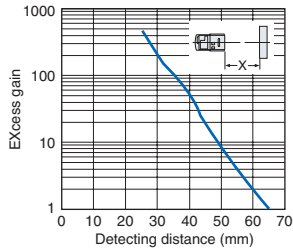
**PZ-G42**



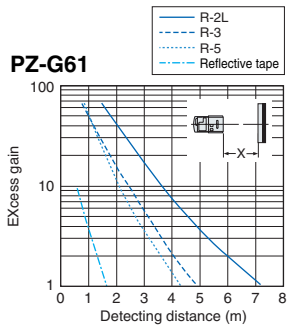
**PZ-G101**



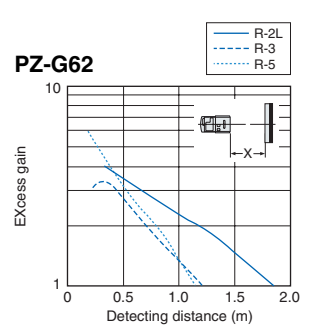
**PZ-G102**



**PZ-G61**

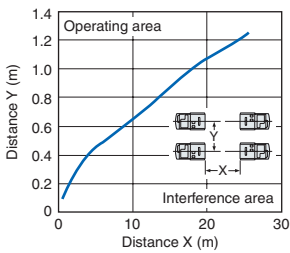


**PZ-G62**

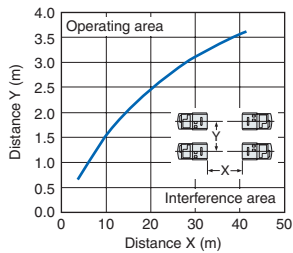


## Interference area (Typical)

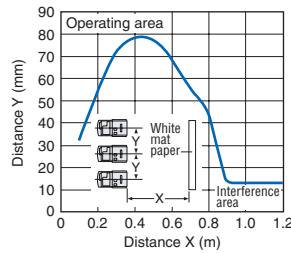
**PZ-G51**



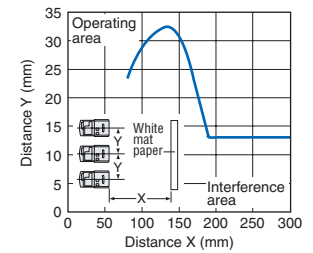
**PZ-G52**



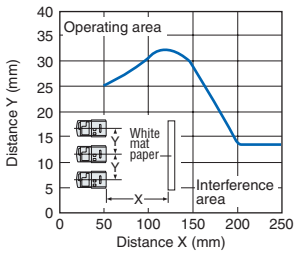
**PZ-G41**



**PZ-G42**



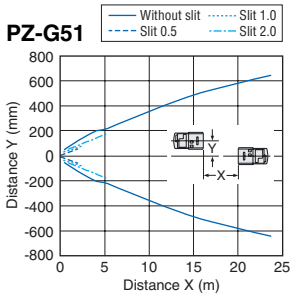
**PZ-G101**



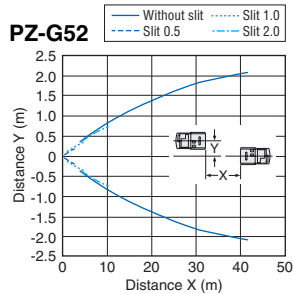
Note: PZ-G102/G61/G62 can be used while 3 units are mounted in close proximity to each other without mutual interference.

## Parallel displacement of optical axis (Typical)

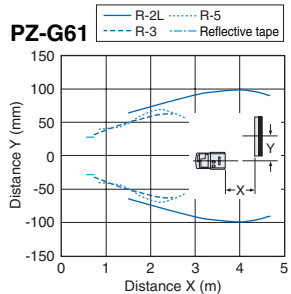
**PZ-G51**



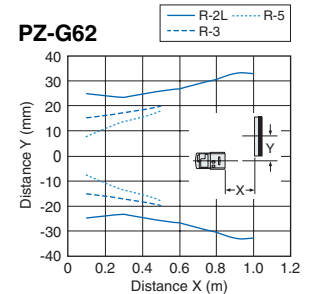
**PZ-G52**



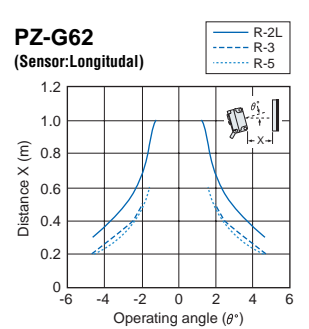
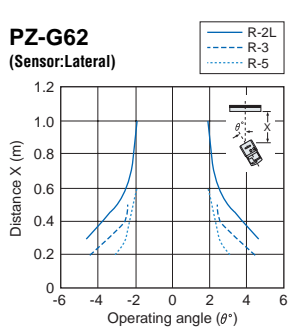
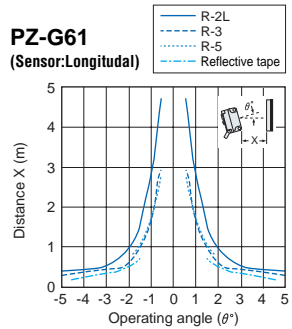
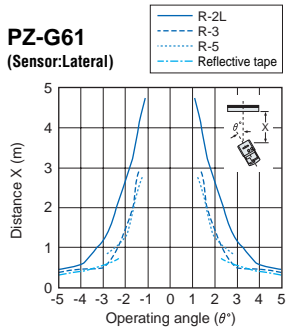
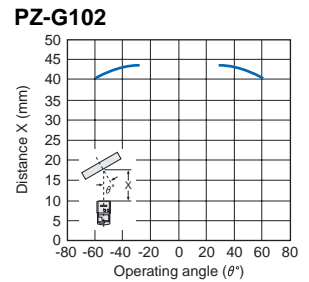
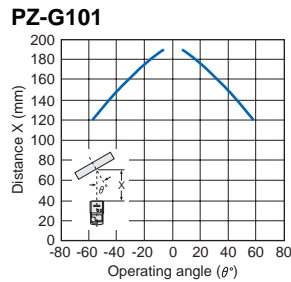
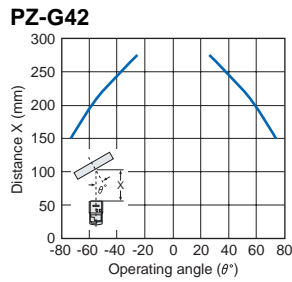
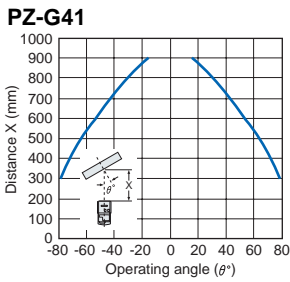
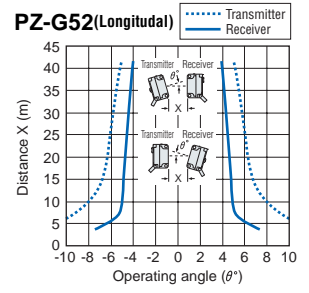
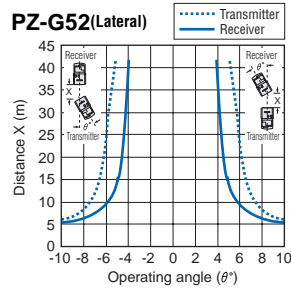
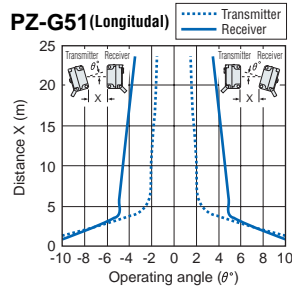
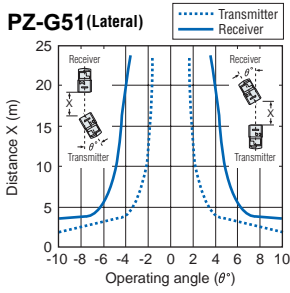
**PZ-G61**



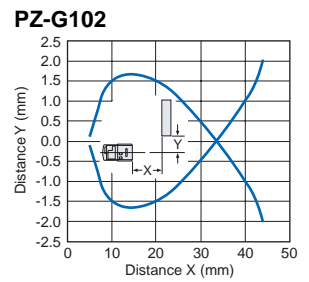
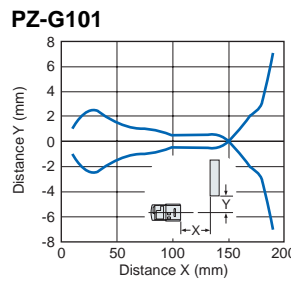
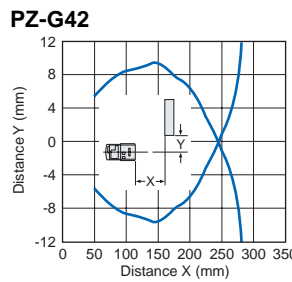
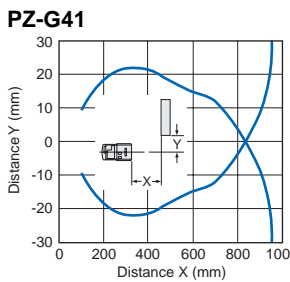
**PZ-G62**



## Optical axis angle (Typical)



## Operating distance vs. detecting distance (Typical)



# Specifications



Models			Thrubeam		Diffuse Reflective				Retro-reflective**		
			Standard	High-power	Long-range	Short-range	Narrow-view reflective <small>Coming soon</small>	Definite reflective <small>Coming soon</small>	Long-range (with P.R.O. function)	Transparent object detection <small>Coming soon</small>	
Design	Cable type*	Output									
Rectangular	Cable (2m)	NPN	PZ-G51N	PZ-G52N	PZ-G41N	PZ-G42N	PZ-G101N	PZ-G102N	PZ-G61N	PZ-G62N	
		PNP	PZ-G51P	PZ-G52P	PZ-G41P	PZ-G42P	PZ-G101P	PZ-G102P	PZ-G61P	PZ-G62P	
	M8 connector	NPN	PZ-G51CN	PZ-G52CN	PZ-G41CN	PZ-G42CN	PZ-G101CN	PZ-G102CN	PZ-G61CN	PZ-G62CN	
		PNP	PZ-G51CP	PZ-G52CP	PZ-G41CP	PZ-G42CP	PZ-G101CP	PZ-G102CP	PZ-G61CP	PZ-G62CP	
Threaded	Cable (2m)	Bipolar	PZ-G51B	PZ-G52B	PZ-G41B	PZ-G42B	PZ-G101B	PZ-G102B	PZ-G61B	PZ-G62B	
	M12 connector	(NPN+PNP)	PZ-G51CB	PZ-G52CB	PZ-G41CB	PZ-G42CB	PZ-G101CB	PZ-G102CB	PZ-G61CB	PZ-G62CB	
<b>Detecting distance</b>			20 m	40 m	1 m (When detecting 30 x 30 cm white paper)	300 mm (When detecting 10 x 10 cm white paper)	200 mm	5 to 45 mm	0.1 to 4.2 m (When R-2L reflector is used)	0.1 to 1 m (When R-2L reflector is used)	
<b>Spot diameter</b>			—	—	—	—	Approx. 5 mm dia. (At a detecting distance of 100 mm)	Approx. 2 mm dia. (At a detecting distance of 40 mm)	—	—	
<b>Light source</b>			Red LED	Infrared LED x 2	Red LED				Infrared LED		
<b>Sensitivity adjustment</b>			1-turn trimmer (230°)								
<b>Response time</b>			500 µs								
<b>Operation mode</b>			LIGHT-ON/DARK-ON (switch-selectable)								
<b>Indicators (LED)</b>			T: Power (orange LED) R: Output (orange LED) Stable operation (green LED) Light receiving (red LED)			Output: Orange LED, Stable operation: Green LED					
<b>Control output</b>			Open collector output, 30 V max., 100 mA max., Residual voltage: 1 V max.								
<b>Protection circuit</b>			Reversed polarity, overcurrent protection, surge absorber								
<b>Rating</b>	<b>Power supply</b>		10 to 30 VDC including Ripple ±10% (P-P)								
	<b>Current consumption</b>		T: 20 mA max. R: 28 mA max.	T: 25 mA max. R: 28 mA max.	34 mA max.						
<b>Environmental resistance</b>	<b>Enclosure rating</b>		IEC, IP67 / NEMA: 4x, 6, 12 / DIN: IP69K								
	<b>Ambient light</b>		Incandescent lamp: 5,000 lux max., Sunlight: 20,000 lux max.								
	<b>Ambient temperature</b>		-20 to 55°C, No freezing								
	<b>Relative humidity</b>		35 to 85%, No condensation								
	<b>Vibration</b>		10 to 55 Hz, 1.5 mm double amplitude in the X, Y, and Z directions, 2 hours respectively								
<b>Shock</b>			1000 m/s <sup>2</sup> 6 times in the X and Y directions								
<b>Interference suppression</b>			Up to 2 units (When polarisation filters are attached)			Up to 2 units (with the automatic different frequency function)					
<b>Material</b>	<b>Housing, M18 nut (threaded models only)</b>		Glass-fibre reinforced PBT								
	<b>Lens cover</b>		Polyarylate (PAR)					Acrylic (PMMA)		Polyarylate (PAR)	
	<b>Trimmer</b>		Glass-fibre reinforced polyamide (PA)								
	<b>Cable (cable models only)</b>		Polyvinyl chloride (PVC)								
<b>Tightening torque</b>			Threaded models (front M18 part): 1.0 N·m max., (side slotted hole part): 0.5 N·m max.								
<b>Accessories</b>			Instruction manual, M18 nut x 1 piece (threaded models only)								
<b>Weight</b>			Rectangular cable models: Approx. 60 g (Thrubeam-models transmitter: Approx. 50 g) Square connector models: Approx. 10 g Threaded cable models: Approx. 65 g (Thrubeam-models transmitter: Approx. 55 g) Threaded connector models: Approx. 15 g								

\*Cable sold separately for connector models \*\*Reflector sold separately



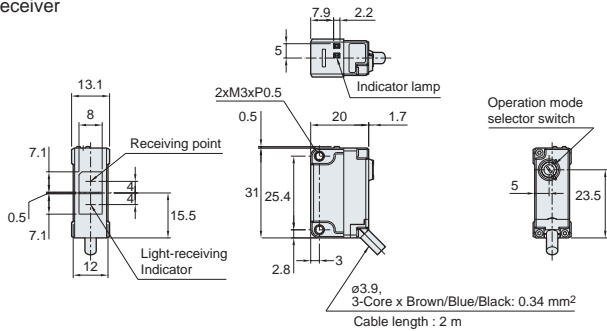
# Dimensions

Unit: mm

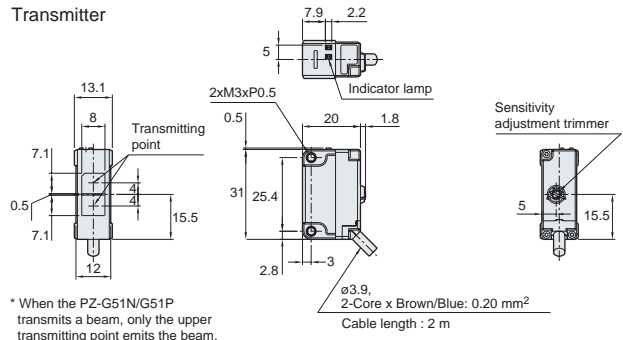
## Sensors (thru-beam type)

### PZ-G51N/G51P/G52N/G52P

Receiver

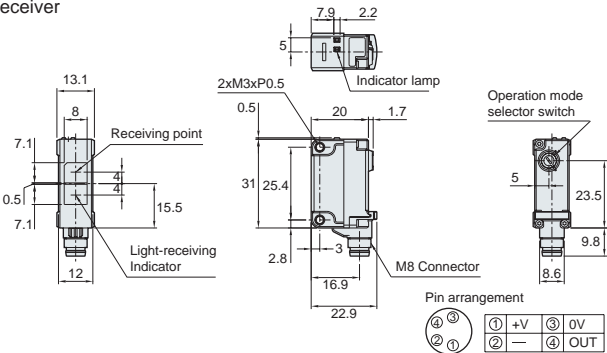


Transmitter

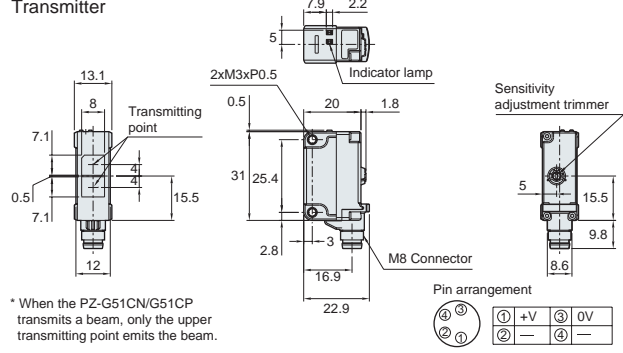


### PZ-G51CN/G51CP/G52CN/G52CP

Receiver

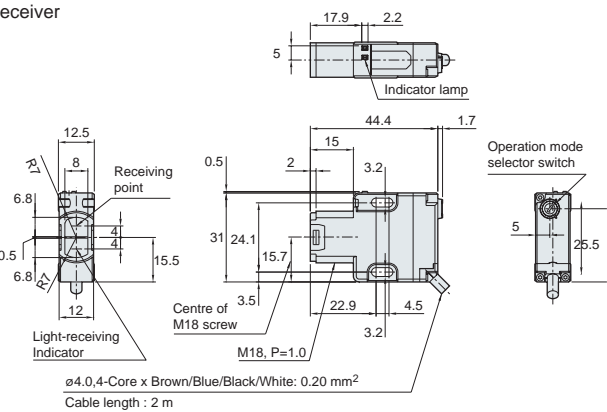


Transmitter

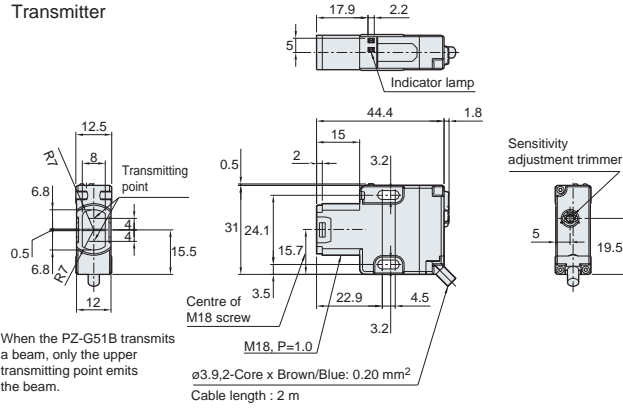


### PZ-G51B/G52B

Receiver

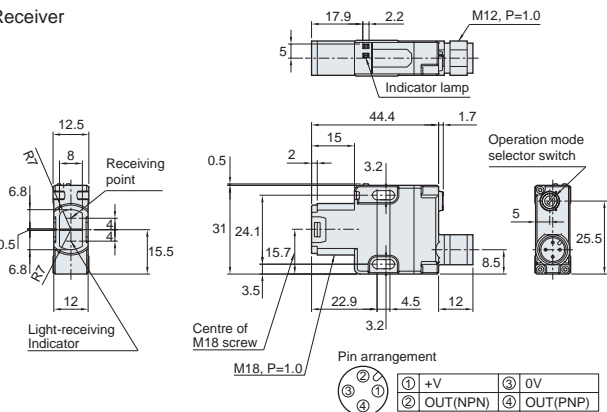


Transmitter

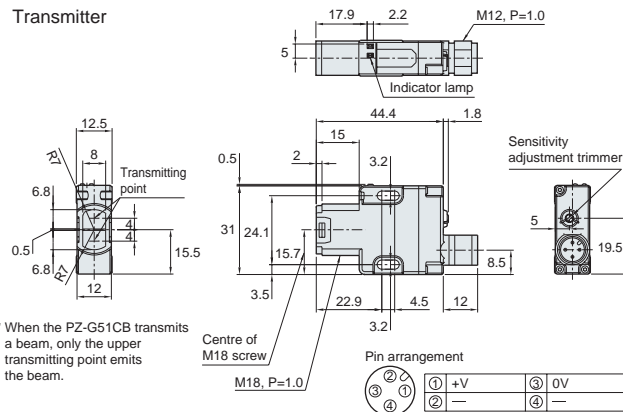


### PZ-G51CB/G52CB

Receiver



Transmitter

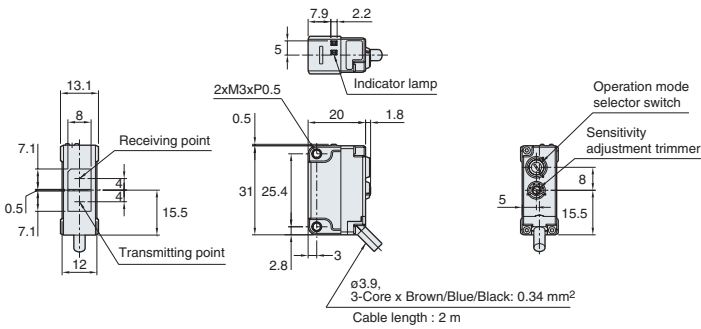


# Dimensions

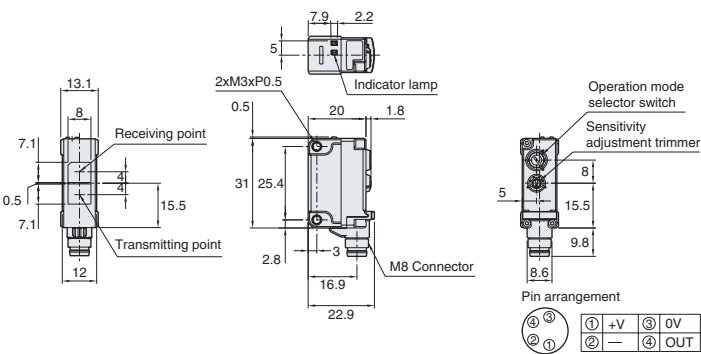
Unit: mm

## Sensors (reflective / polarised retro-reflective type)

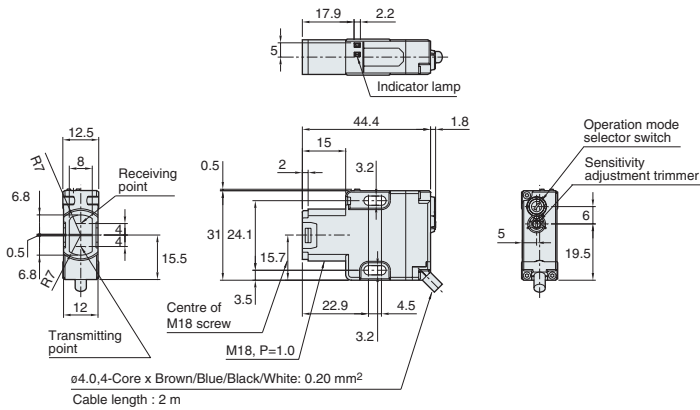
PZ-G□N/G□P(□:41/42/101/102/61/62)



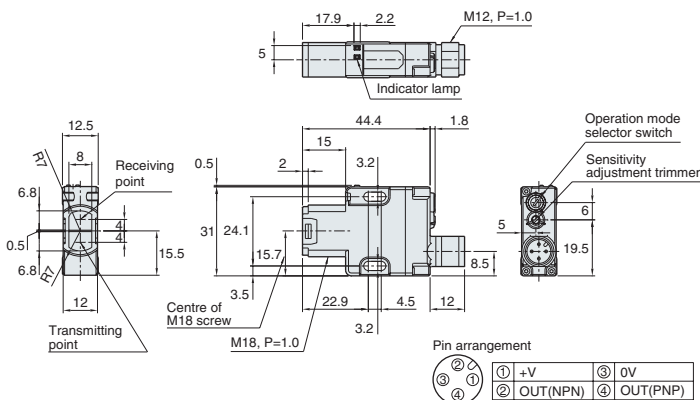
PZ-G□CN/G□CP(□:41/42/101/102/61/62)



PZ-G□B(□:41/42/101/102/61/62)

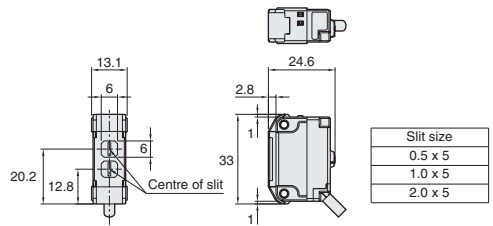


PZ-G□CB(□:41/42/101/102/61/62)

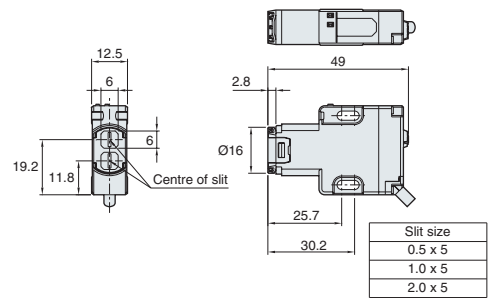


## Attachments (optional)

OP-85136 + PZ-G52

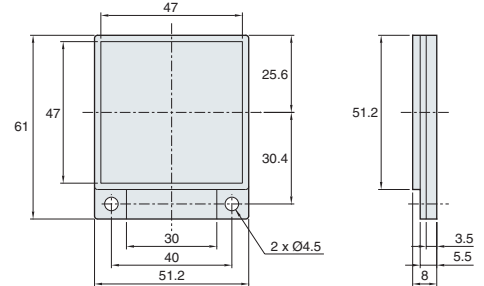


OP-85135 + PZ-G52B

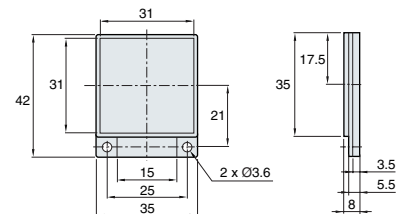


## Reflectors (optional)

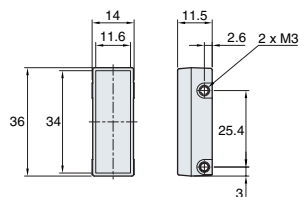
OP-84219(R-2L)



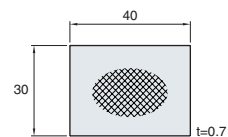
OP-96436(R-3)



R-5

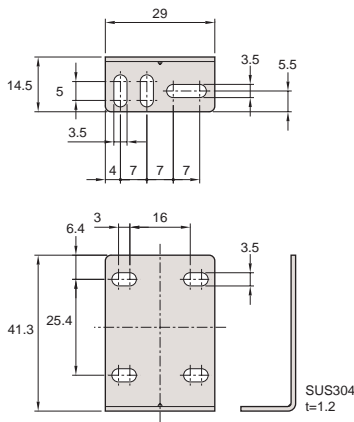


OP-84221 (reflective tape)

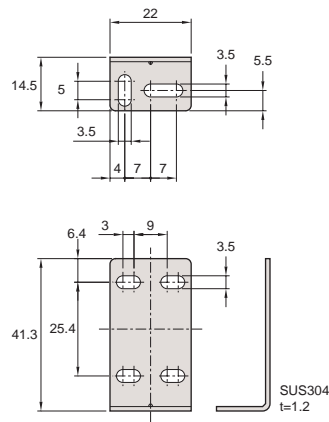


**Mounting brackets / Rectangular models (Optional)**

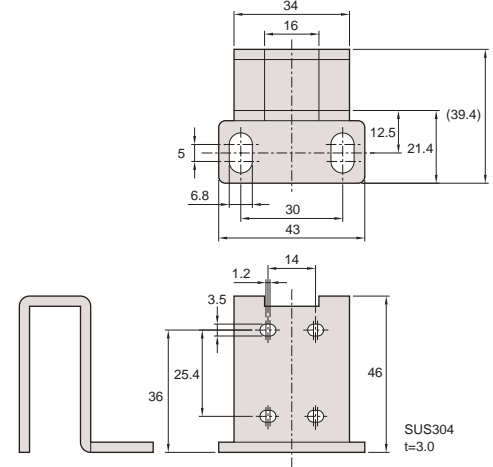
PZ-B41A



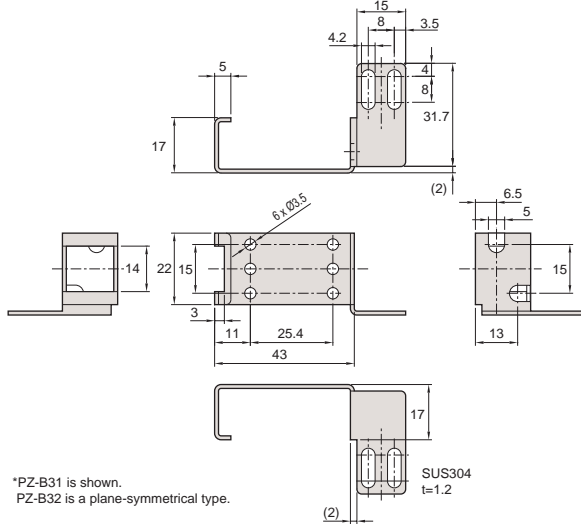
PZ-B01A



PZ-B61

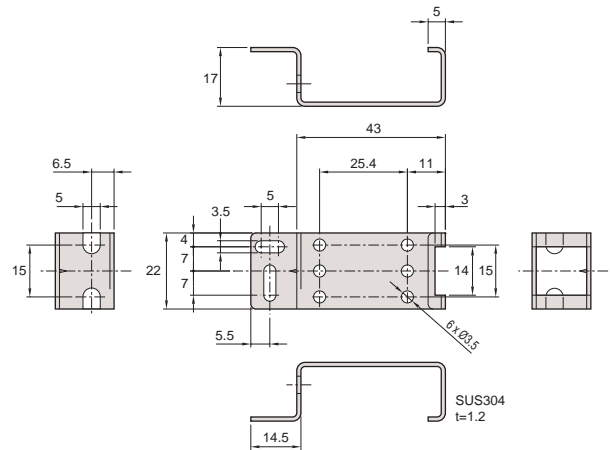


PZ-B31/B32

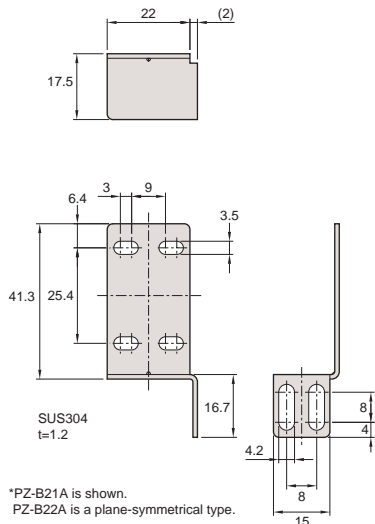


\*PZ-B31 is shown.  
PZ-B32 is a plane-symmetrical type.

PZ-B11

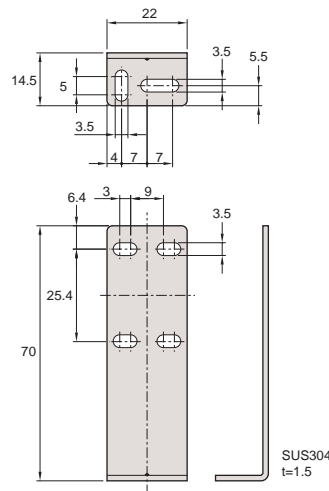


PZ-B21A/B22A

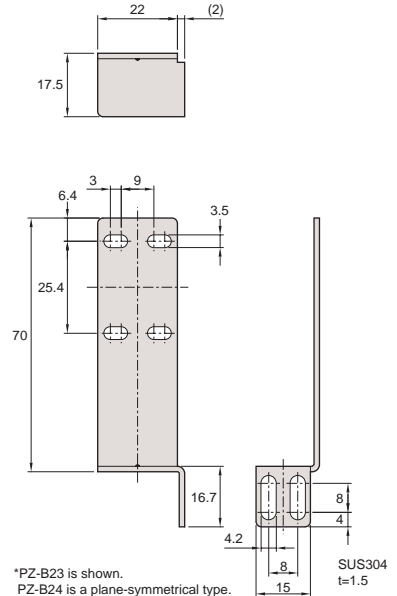


\*PZ-B21A is shown.  
PZ-B22A is a plane-symmetrical type.

PZ-B02



PZ-B23/B24



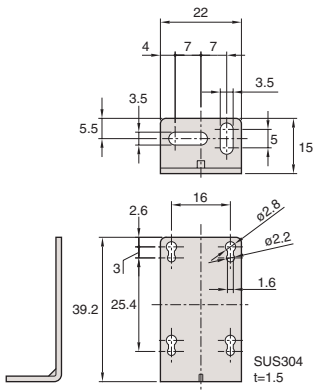
\*PZ-B23 is shown.  
PZ-B24 is a plane-symmetrical type.

# Dimensions

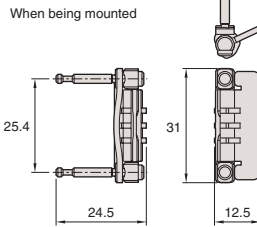
Unit: mm

## Mounting brackets / Rectangular models (Optional)

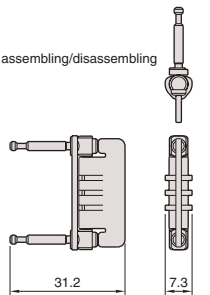
### PZ-B81



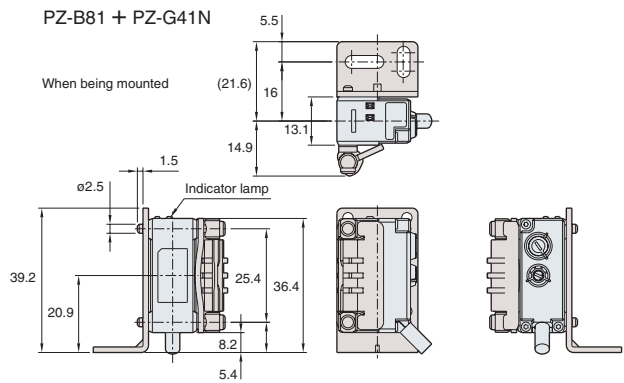
OP-84220  
(One piece is supplied for PZ-B81/B83)



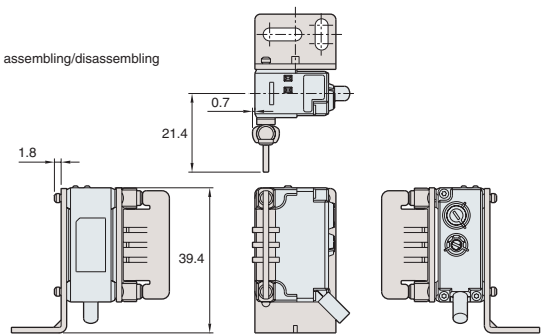
When assembling/disassembling



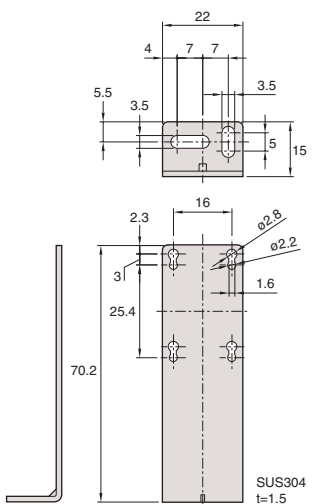
### PZ-B81 + PZ-G41N



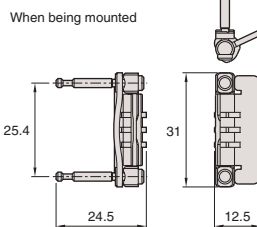
When assembling/disassembling



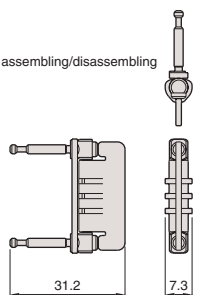
### PZ-B83



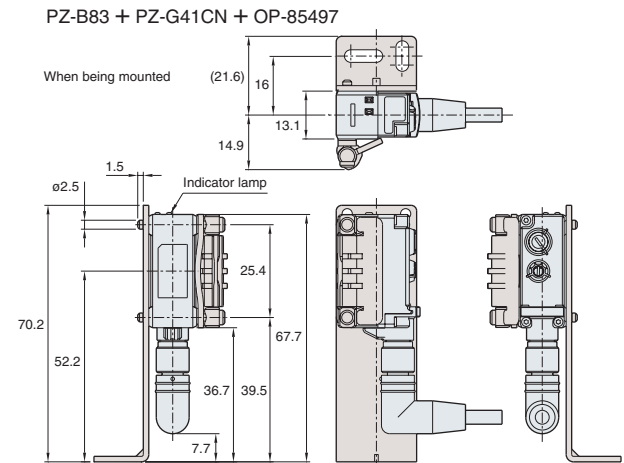
OP-84220  
(One piece is supplied for PZ-B81/B83)



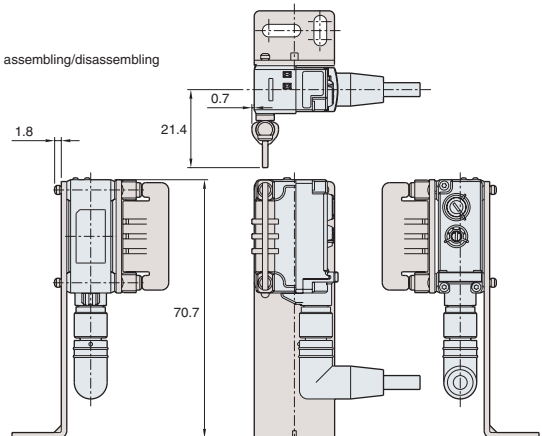
When assembling/disassembling



### PZ-B83 + PZ-G41CN + OP-85497



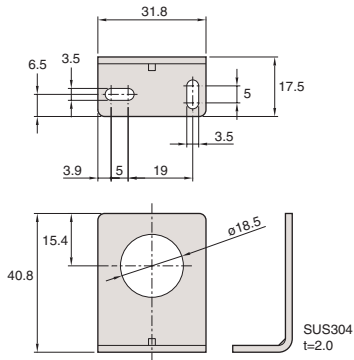
When assembling/disassembling



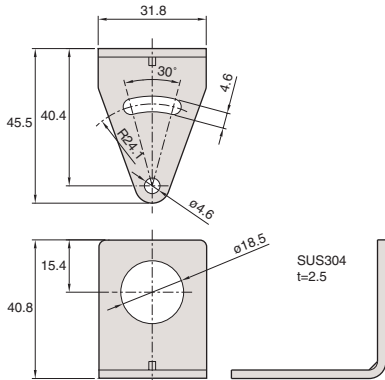


### Mounting brackets / Threaded models (Optional)

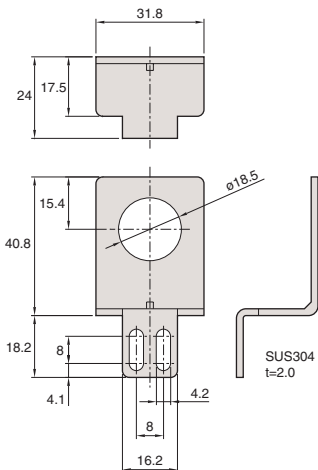
PZ-B03



PZ-B04

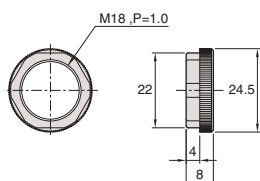


PZ-B25

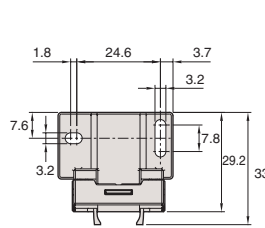


OP-84225

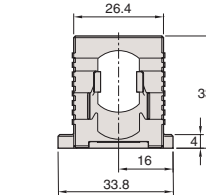
(One piece is supplied with threaded models)



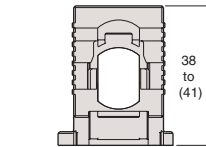
PZ-B82



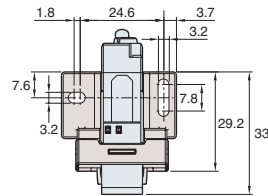
When being mounted



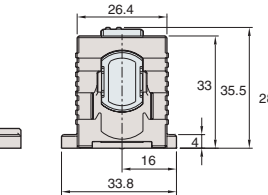
When assembling/disassembling



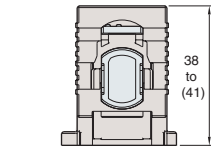
PZ-B82 + PZ-G41B



When being mounted



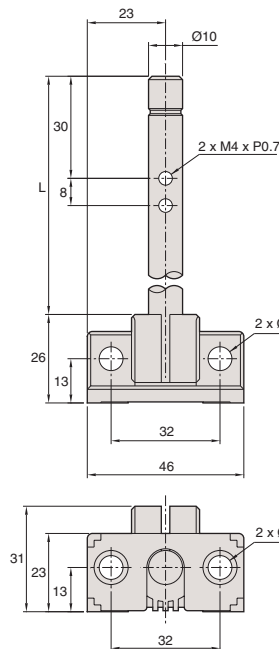
When assembling/disassembling



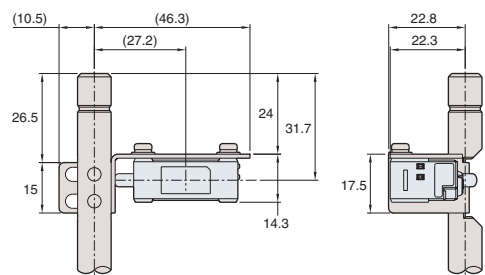
### Mounting brackets / Rectangular models / Threaded models (Optional)

PZ-S10A/S20A

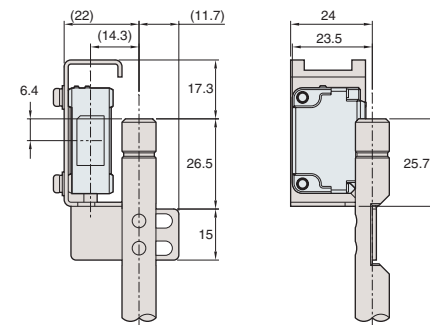
L=100 mm:PZ-S10A  
L=200 mm:PZ-S20A



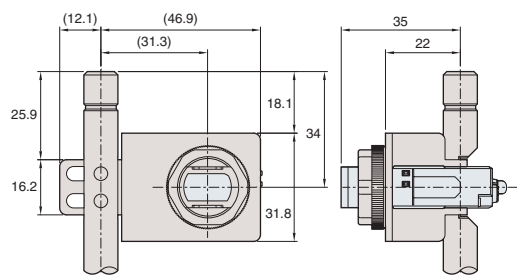
PZ-S□□A + PZ-B21A + PZ-G41N



PZ-S□□A + PZ-B31 + PZ-G41N



PZ-S□□A + PZ-B25 + PZ-G41B

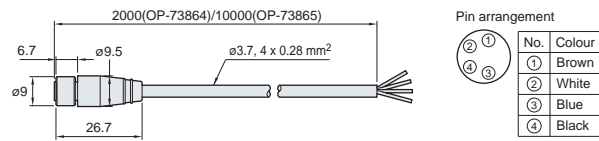


# Dimensions

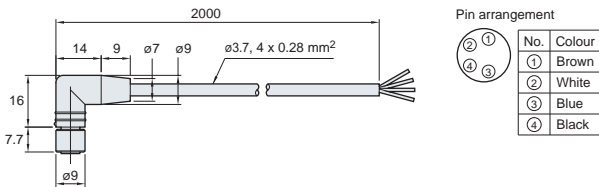
Unit: mm

## M8 connector cable (optional)

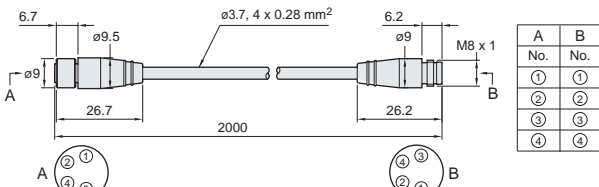
OP-73864/73865



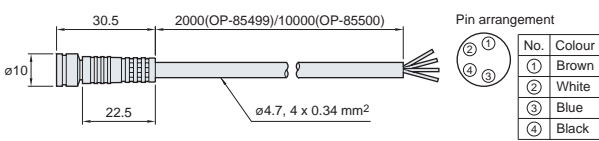
OP-85497



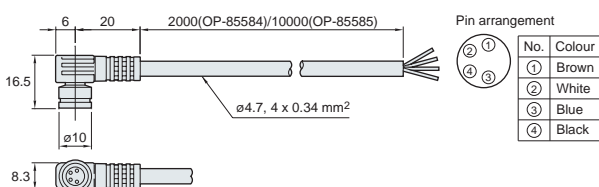
OP-85498



OP-85499/85500

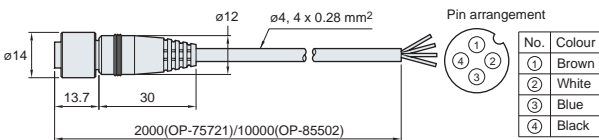


OP-85584/85585

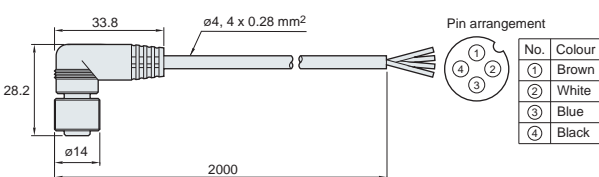


## M12 connector cable (optional)

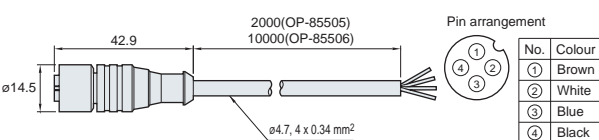
OP-75721/85502



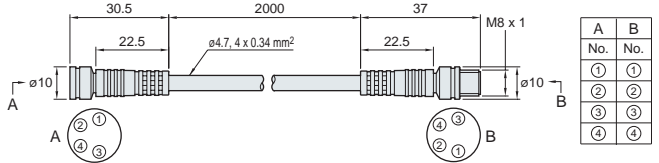
OP-75722



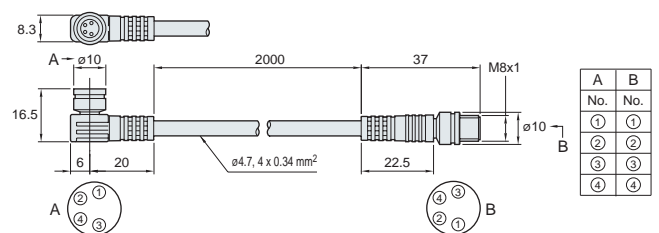
OP-85505/85506



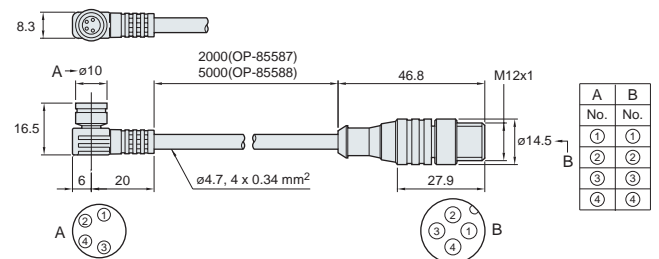
OP-85501



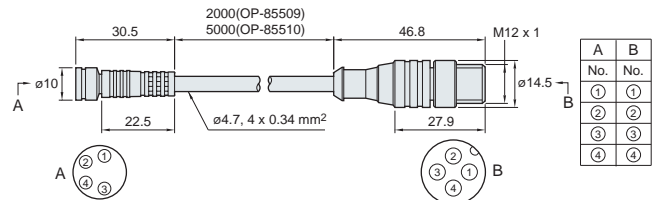
OP-85586



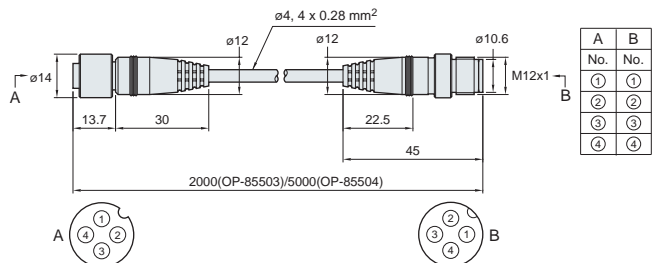
OP-85587/85588



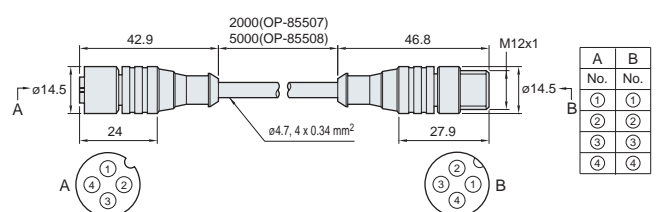
OP-85509/85510



OP-85503/85504



OP-85507/85508





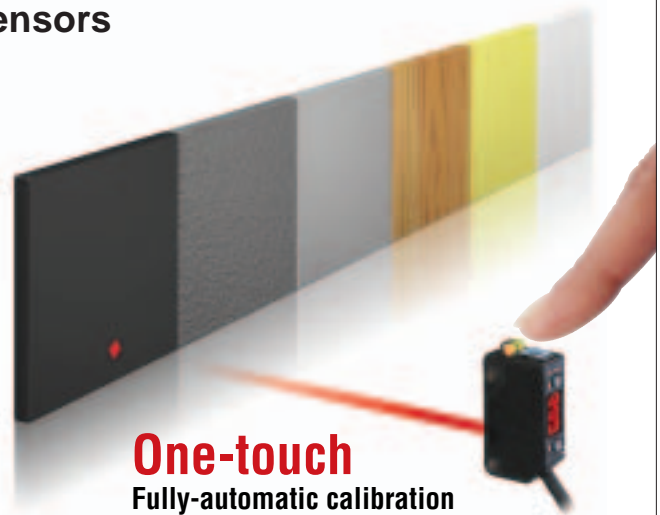
## Background Suppression Model Unaffected by Colour!

### Self-contained Photoelectric Sensors PZ-V Series



#### Features

- Intelligent reflective type unaffected by a target's colour or angle
- Digital display
- High-power custom red LED (Except for PZ-V71)
- High-intensity operation indicator

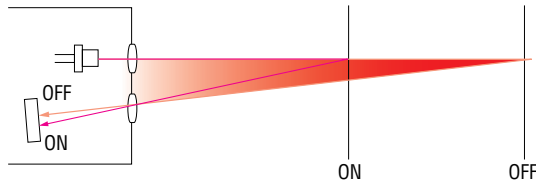


### Here's How

#### PSD (Position-Sensitive Detector)

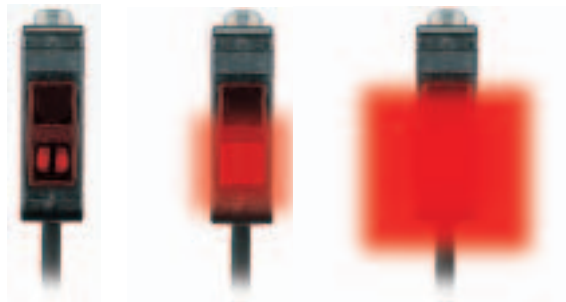
The target distance is detected according to the angle of the reflected light beam.

- Unaffected by a highly reflective target background
- Stable detection of targets with colours and materials of varying reflectance
- Highly accurate detection of minute objects



#### A.P.R. circuit (Automatic Power Reinforcement)

Stable detection is possible due to the A.P.R. circuit which automatically adjusts the amount of light emitted according to the colour and angle of the target.



#### Sensor head lineup

Type	Adjustment	Configuration	Detecting distance	Model		Connector	Cable
				NPN	PNP		
Intelligent reflective	PUSH Auto		900 mm	PZ-V71	PZ-V71P	M8 connector	2 m
				PZ-V72	PZ-V72P		0.13 m
				PZ-V73	PZ-V73P		0.3 m
			300 mm	PZ-V75 1.	—	—	2 m
				PZ-V31	PZ-V31P	—	2 m
				PZ-V32	PZ-V32P	M8 connector	0.13 m
				PZ-V33	PZ-V33P	M12 connector	0.3 m
				PZ-V35 1.	PZ-V35P 1.	—	2 m
				PZ-V11	PZ-V11P	—	2 m
			100 mm	PZ-V12	PZ-V12P	M8 connector	0.13 m
				PZ-V13	PZ-V13P	M12 connector	0.3 m
				PZ-V15 1.	—	—	2 m

1. Different frequency type

Specifications are subject to change without notice.

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