

# Transparent Target Photoelectric Sensor

## PZ2-62

### Features

- Stable detection of transparent targets
- Difference Expansion (DEX) circuit
- Ultra-compact body
- Visible beam spot

### Detecting Distance

Retro-reflective – 500 mm (19.69")



## Description

### Stable detection of highly transparent targets

Utilizing KEYENCE's original optical system and DEX circuit enables stable detection of highly transparent targets that cannot be detected with conventional photoelectric sensors.

### DEX circuit

The PZ2-62 employs a DEX (Difference Expansion) circuit (patented) that greatly amplifies the slight light attenuation caused by transparent targets ensuring stable detection.

### Easy-to-mount ultra-compact sensor

The compact body, 30 x 20 x 11 mm **1.18" x 0.79" x 0.43"**, requires little space, and can be mounted almost anywhere.

### Easy alignment of optical axis with visible beam spot

An ultra-bright red LED is employed as the light source, allowing the beam spot to be easily seen.

When the optical axis is aligned correctly, a red spot shines on the reflector. This allows you to confirm alignment of the optical axis.

### Removable cable greatly improves serviceability.

Mounting the sensor body and routing the cable can be performed independently, decreasing labor and time for setting up the sensor.

### Detection data for various transparent targets

#### (Typical example)

The data given below was obtained under the following conditions; an R-2 reflector was used, the detecting distance was 300 mm **11.81"**, and the target passed midway between the sensor and reflector.

	Target type	Interrupted light quantity (%)
Plate glass	50 x 50 mm <b>1.97"</b> t=1.8 <b>0.07"</b>	12.9
	50 x 50 mm <b>1.97"</b> t=2.7 <b>0.11"</b>	16.0
	50 x 50 mm <b>1.97"</b> t=4.7 <b>0.19"</b>	18.9
	50 x 50 mm <b>1.97"</b> t=10.2 <b>0.40"</b>	35.4
Acrylic plate	50 x 50 mm <b>1.97"</b> t=1.0 <b>0.04"</b>	11.4
Vinyl chloride plate	50 x 50 mm <b>1.97"</b> t=2.0 <b>0.08"</b>	21.7
Test tube	ø16.5 mm <b>ø0.65"</b> t=1.0 <b>0.04"</b>	72.0
Glass bottle	ø40 mm <b>ø01.57"</b> t=1.7 <b>0.07"</b>	70.9

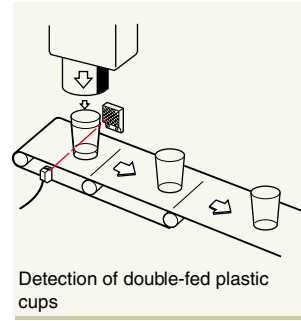
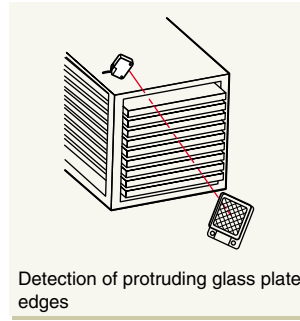
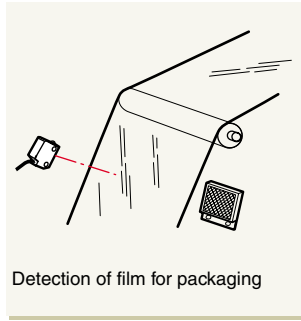
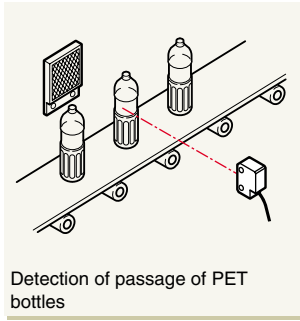
#### [Note]

When the target interrupts 5% or more of the entire light quantity, it can be detected.

When the target interrupts 20% or more, it can be detected stably.

# Transparent Target Photoelectric Sensor PZ2-62

## Applications

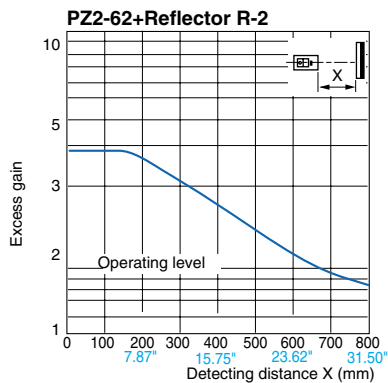


## Specifications

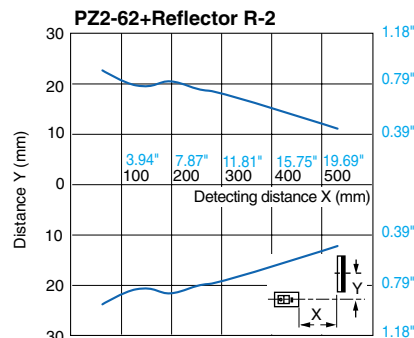
Type	Retro-reflective	
Model	NPN	PZ2-62
	PNP	PZ2-62P
Detecting distance	500 mm 19.69° (with R-2)	
Detectable object	Transparent and opaque materials	
Hysteresis	—	
Response Time	1 ms max.	
Light source	Visible red LED	
Sensitivity adjustment	1-turn trimmer (240°)	
Operation mode	LIGHT-ON/DARK-ON (switch-selectable)	
Indicators	Output and power: 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	35 mA max.	
Enclosure rating	IP-67	
Ambient light	Incandescent lamp: 5,000 lux max., Sunlight: 20,000 lux max.	
Ambient temperature	-20 to +55°C	
Housing	Glass-fiber reinforced resin	
Weight (including 2-m 6.6' connector cable)	Approx. 50 g	

## Characteristics

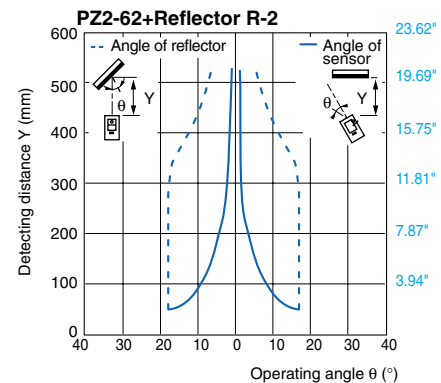
Receiver excess gain vs. detecting distance (Typical)



Parallel displacement of optical axis (Typical)



Optical axis angle (Typical)



\* For connection, adjustment, and dimension information, refer to the PZ2-61 information of the PZ2 Series.