

Multi-voltage Power Supply Photoelectric Sensors

PW Series



Ultra-small sensor head

All PW Series sensors have a long-detecting distance: 1 m **3.3'** for the diffuse-reflective type, 5 m **16.4'** for the retro-reflective type, and 10 m **32.8'** for the thru-beam type. The powerful light beam allows stable sensor operation even in dusty environments.



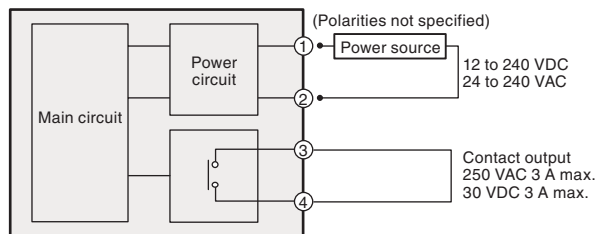
Multi-mode timer (Models: **PW-41J**, **51J**, **61J**)

The output time for models equipped with a timer can be set within a range of 0.1 to 5 seconds. The timer operates in three ways: ON-delay mode, OFF-delay mode, and One-shot mode.

Slit plate enhances detection accuracy

The thru-beam types (PW-51 and PW-51J) are equipped with a slit plate that reduces the light to a narrow beam. This allows an object as small as 3 x 6 mm **0.12" x 0.24"** to be detected from a distance of 1.5 m **4.9'**. A narrow beam has other advantages, including maintaining a constant detection, and preventing interference when 2 or more sensors are installed in parallel.

Input/Output Circuits



* The transmitter of the thru-beam type is provided with power terminals only.

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Lineup

Type	Appearance	Detecting distance	Timer mode	Model
Thrubeam			-	PW-51
			0.1 to 5 s	PW-51J
Retro-reflective			-	PW-61
			0.1 to 5 s	PW-61J
Diffuse-reflective			-	PW-41
			0.1 to 5 s	PW-41J

1. Opaque materials of 3 x 6 mm 0.12"x0.24" with slit plate attached (at detecting distance of 1.5 m 4.9')

Specifications

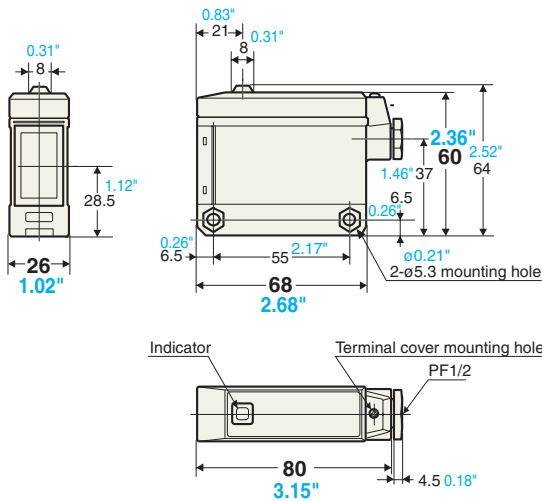
Type	Thrubeam		Retro-reflective		Diffuse-reflective	
Model	PW-51	PW-51J	PW-61	PW-61J	PW-41	PW-41J
Detecting distance	10 m 32.8' 1.		0.1 to 5 m 0.3' to 16.4' (with R-1)		1 m 3.3' (with 200 x 200 mm 7.87" white mat paper)	
Standard detectable	Opaque materials (15 x 15 mm 0.59" min.) ¹		Opaque materials (30 x 30 mm 1.18" min.)		Opaque and transparent materials	
Hysteresis	-					
Response time	20 ms max.					
Light source	Infrared LED					
Sensitivity adjustment	-				1-turn trimmer (240°)	
Operation mode	LIGHT-ON/DARK-ON (switch-selectable)					
Indicator	Output: Red LED, Power: Red LED (thrubeam type only)					
Timer mode	-	0.1 to 5 s ²	-	0.1 to 5 s ²	-	0.1 to 5 s ²
Control output	SPST-NO relay contact, 250 VAC 3 A max., 30 VDC 3 A max. (resistive load)					
Power supply	24 to 240 VAC ±10%, 50/60 Hz, 12 to 240 VDC ±10%					
Power consumption	3 VA max. (both transmitter and receiver)		3 VA max.			
Enclosure rating	IP66					
Ambient light	Incandescent lamp: 5,000 lux max., Sunlight: 20,000 lux max.					
Ambient temperature	-10 to +60°C (14 to 140°F), No freezing					
Relative humidity	35 to 85%, No condensation					
Materials	Housing: PBT, Lens: acrylic, Terminal cover: Polysulfone					
Weight	Transmitter: Approx. 70 g Receiver: Approx. 90 g	Transmitter: Approx. 70 g Receiver: Approx. 95 g	Approx. 95 g	Approx. 100 g	Approx. 95 g	Approx. 100 g

1. Opaque materials of 3 x 6 mm 0.12" x 0.24" with slit plate attached (at detecting distance of 1.5 m 4.9')
2. ON-delay, OFF-delay, and One-shot modes are selectable.

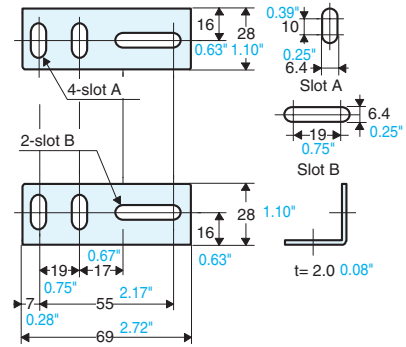
Dimensions

Unit: mm inch

PW-51/51J/61/61J/41/41J With slit plate (standard accessory for **PW-51/51J**)



Mounting bracket (standard)



Reflector **R-1** (accessory for **PW-61/61J**)

