# Multi-voltage Power Supply Photoelectric Sensors

# **PW Series**



#### **ASK KEYENCE**

**1-888-KEYENCE** www.keyence.com/ASKG



#### FREE DOWNLOAD -

www.keyence.com/DLG

Free downloads for product and technical support are readily available in one convenient location

#### Ultra-small sensor head

All PW Series sensors have a longdetecting 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 thrubeam type. The powerful light beam allows stable sensor operation even in dusty environments.



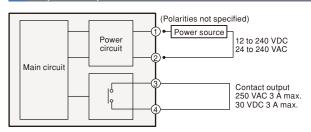
# Multi-mode timer (Models: PW-41J, 51J, 61J)

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 thrubeam 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



<sup>\*</sup> The transmitter of the thrubeam type is provided with power terminals only.

$\mathbf{a}$	ш	ľ
 11.00		ш

Туре	Appearance	Detecting distance	Timer mode	Model
Thrubeam		10 20 011	_	PW-51
	10 m 32.8 <sup>1</sup> 1.	0.1 to 5 s	PW-51J	
Retro-reflective		0.1 4- 5 = 0.014- 40.41 (with D.4)	-	PW-61
	0.1 to 5 m 0.3' to 16.4' (with <b>R-1</b> )	0.1 to 5 s	PW-61J	
Diffuse-reflective	1 - 0 01	-	PW-41	
		1 m 3.3'	0.1 to 5 s	PW-41J

<sup>1.</sup> 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')

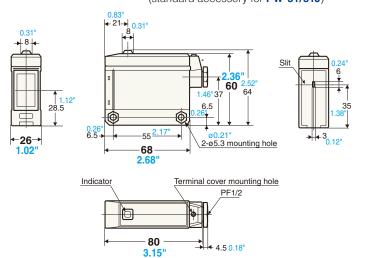
### Specifications

Туре	Thrubeam		Retro-reflective		Diffuse-reflective			
Model	PW-51	PW-51J	PW-61	PW-61J	PW-41	PW-41J		
Detecting distance	10 m 32.8′ <sup>1.</sup>		0.1 to 5 m 0.3' to 16.4' (with <b>R-1</b> )		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.) <sup>1.</sup>		Opaque materials (30 x 30 mm 1.18" min.)		Opaque and transparent materials		
Hysteresis	_			20% max. of detecting distance (150 mm 5.91" min. detecting distance)				
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 <sup>2.</sup>	_	0.1 to 5 s <sup>2.</sup>	_	0.1 to 5 s <sup>2.</sup>		
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		

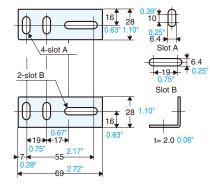
<sup>1.</sup> Opaque materials of 3 x 6 mm 0.12\* x 0.24\* with slit plate attached (at detecting distance of 1.5 m 4.9') 2. ON-delay, OFF-delay, and One-shot modes are selectable.

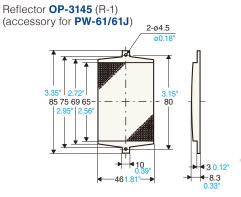
# **Dimensions** PW-51/51J/61/61J/41/41J

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



#### Mounting bracket (standard)





**New Products** 

**Fiberoptic** Sensors

Photoelectric Sensors

Proximity Sensors

Safety Equipment

Flow/ Pressure/ Temperature

Measurement Sensors

Controls

Static Eliminators

Vision Systems

Marking Equipment

**Code Readers** 

Handheld Mobile Computers

Microscopes

Projector/ 3D Measurement Systems

