

MV-PE5603(-P)

Built-In Amplifier Photoelectric Sensor



CE RoHS

Introduction

MV-PE5603(-P) photoelectric sensor adopts specialized chips, offering advantages like simplicity, reliability, and fast response. It supports sensitivity adjustment and light-on/dark-on switch.

Key Features

- Provides a red spot for ease of alignment.
- Adapts to complex light environment with anti-interference capability.
- Easy to use.

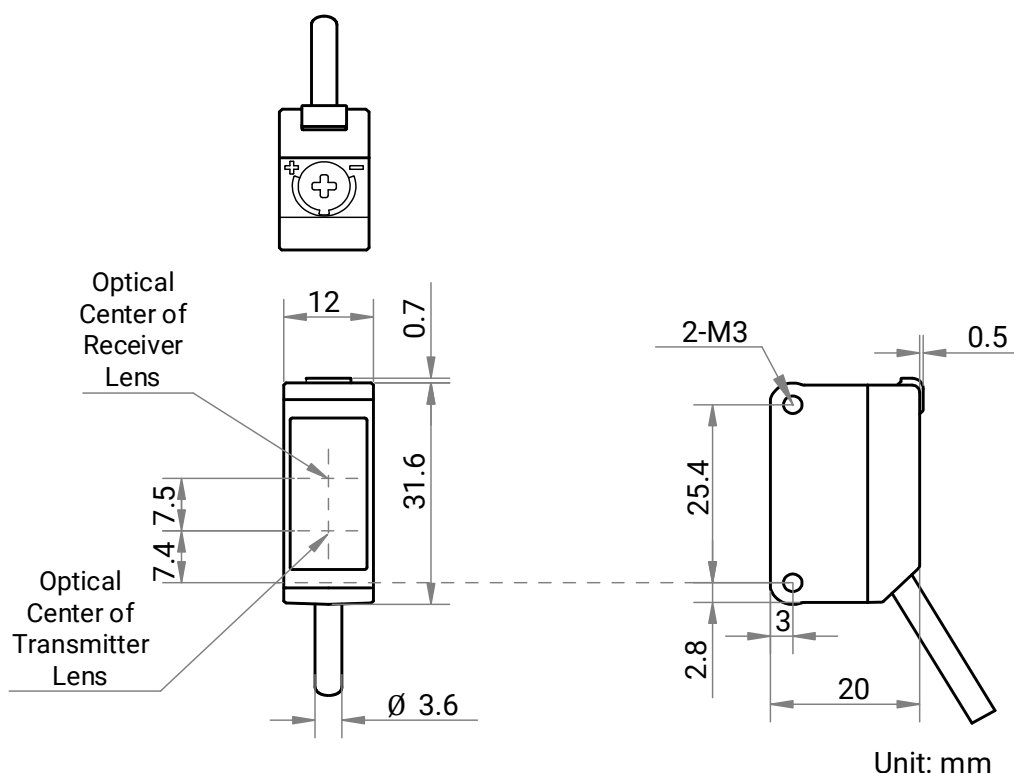
Available Model

- NPN type: MV-PE5603
- PNP type: MV-PE5603-P

Applicable Industry

Robotics, logistics, and industrial manufacturing.

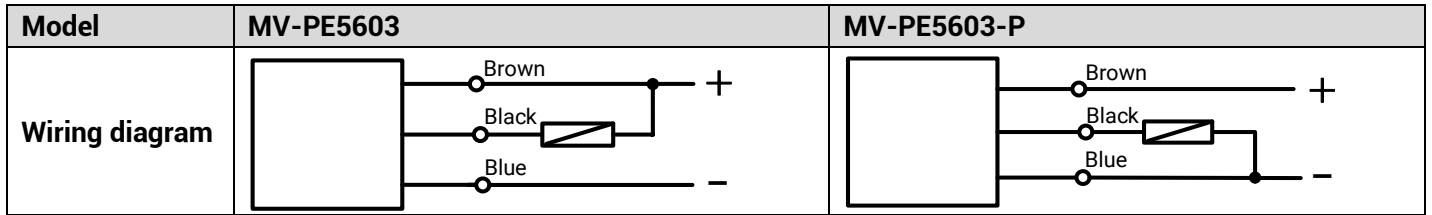
Dimension



Specification

Parameter	Model	MV-PE5603	MV-PE5603-P
	Built-In Amplifier Photoelectric Sensor		
Performance			
Detecting distance	1000 mm		
Sensing target	White paper (300 mm × 300 mm)		
Output	NPN (supports light-on/dark-on switch)		PNP (supports light-on/dark-on switch)
Light source	Red LED 660 nm		
Response time	≤ 500 μs		
Hysteresis	< 10% of set distance		
Sensitivity adjustment	Trimmer (200°)		
Electrical feature			
Supply voltage	12 VDC to 24 VDC ± 10%		
Residual voltage	≤ 2 VDC		
Operating current	≤ 20 mA		
Max. sink/source current	≤ 100 mA		
Circuit protection	Reverse polarity protection, overcurrent protection, and overvoltage protection		
Insulation resistance	20 MΩ or more (between the terminal block for power supply and the housing)		
Withstand voltage	1000 VAC, 1 min (between the terminal block for power supply and the housing)		
Mechanical			
Dimension	20 mm × 12 mm × 31.6 mm (0.8" × 0.5" × 1.2")		
Weight	Approx. 45 g (0.1 lb.) (including cable)		
Temperature	Working temperature: -25 °C to 55 °C (-13 °F to 131 °F) Storage temperature: -30 °C to 70 °C (-22 °F to 158 °F)		
Humidity	35% RH to 85% RH		
Ambient illumination	Sunlight: < 10000 lux Incandescent lamp: < 3000 lux		
Ingress protection	IP67		
Material	Housing: polycarbonate Lens: acrylic		
Indicator	Operation indicator: orange Stability indicator: green		
Connecting method	Cable lead-out (standard length: 2 m, 78.7")		
Vibration resistance	10 Hz to 500 Hz, double amplitude 1.5 mm (0.1"), 2 hours in each of the X, Y, and Z directions		
Shock resistance	500 m/s ² , 3 times in each of the X, Y, and Z directions		
General			
Certification	CE, RoHS		

Wiring Method



Relationship of Detection Status and Indicators

	Detection Status	Output	Operation Indicator	Stability Indicator
Light-ON/LO	Stable, incident light	ON	ON ¹	ON
	Unstable, incident light			OFF
	Unstable, no incident light	OFF	OFF ²	ON
	Stable, no incident light			ON
Dark-ON/DO	Stable, incident light	OFF	OFF	ON
	Unstable, incident light			OFF
	Unstable, no incident light	ON	ON	OFF
	Stable, no incident light			ON

Note:

1. The operation indicator is ON: The amount of incident light entering the receiver is above the operating level.
2. The operation indicator is OFF: The amount of incident light entering the receiver is below the operating level.

Spot Diameter

