

MV-PE5502(-P)

Built-In Amplifier Photoelectric Sensor



RoHS

Introduction

MV-PE5502(-P) photoelectric sensor adopts specialized chips, offering advantages like simplicity, reliability, and fast response. It supports distance setting 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.
- Supports stable detection of low reflectivity objects.

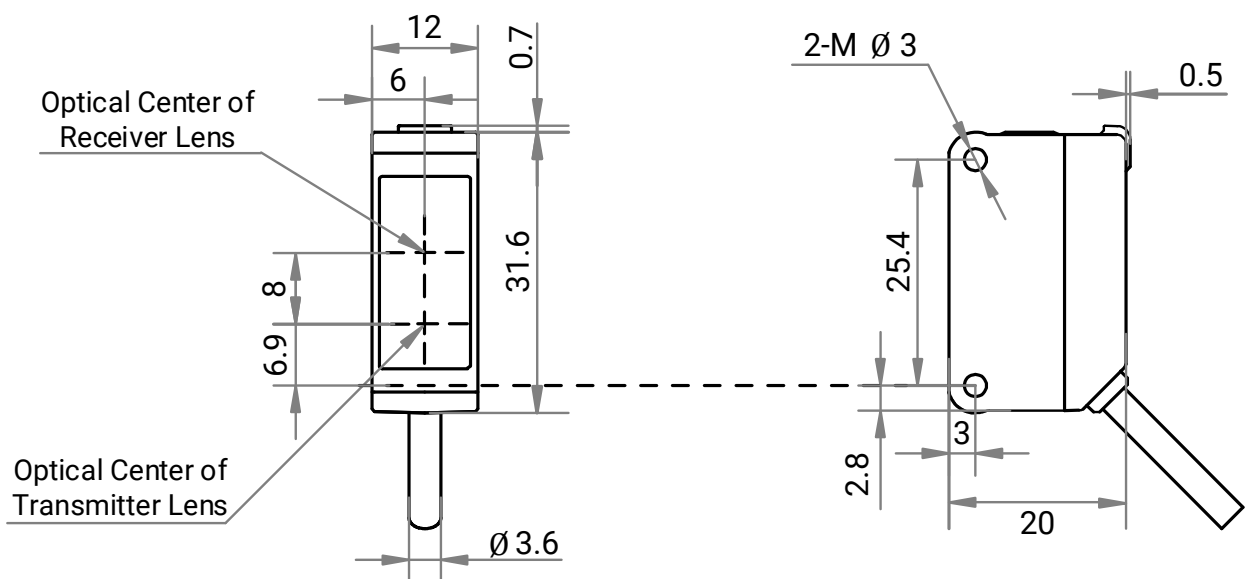
Available Model

- NPN type: MV-PE5502
- PNP type: MV-PE5502-P

Applicable Industry

Robotics, logistics, and industrial manufacturing.

Dimension

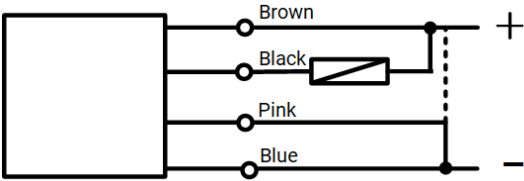
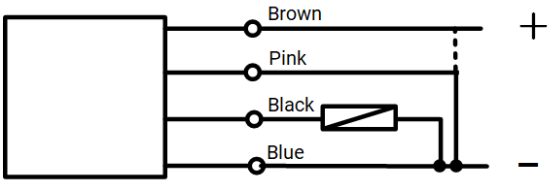


Unit: mm

Specification

	Model	MV-PE5502	MV-PE5502-P
Parameter		Built-In Amplifier Photoelectric Sensor	
Performance			
Detecting distance		10 mm to 350 mm	
Sensing target		Standard reflector (100 mm × 100 mm) with reflectivity of 5%	
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	
Distance setting adjustment		Multi-turn trimmer	
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

Model	MV-PE5502	MV-PE5502-P
Wiring diagram		

*The pink wire connected to the “-” terminal is for BGS function, while connected to the “+” terminal is for FGS function.

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

