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Sensors

Micro Photoelectric Sensors >

Amplifier Built-in / U-shaped
Micro Photoelectric Sensor
[Compact / Cable type]PM-45 >

PM-L45

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PM-L45 | Amplifier Built-in / U-shaped Micro Photoelectric Sensor [Compact / Cable type]PM- 45



*Photo may vary from actual product.



Configuration examples of IO-Link compatible devices

Product			
			Download
	Catalog/ Datasheet	CAD	Manual
Product	Amplifier Built-in / U-shaped Micro Photoelectric Sensor		
Details	Compact / Cable type [L type]		
Product Name	Amplifier Built-in / U-shaped Micro Photoelectric Sensor [Compact / Cable type]PM-45		

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Technical Support

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General Inquiries

As of October 17, 2024 (JST)

*Specifications and design of the products are subject to change without notice for the product improvement.

Spec Detail

Specifications and design of the products are subject to change without notice for the product improvement.

Item	Specifications
Product Number	PM-L45
Part Number	PM-L45
Products Name	Amplifier Built-in / U-shaped Micro Photoelectric Sensor



Item		Specifications
		Download
Catalog/ Datasheet	CAD	Manual
Applicable regulations and certifications		CE Marking (EMC Directive, RoHS Directive), UKCA Marking (EMC Regulations, RoHS Regulations), ISO 13849-1 (Category 1, PLc) (Note), UL/c-UL Recognition certification (Note) : Conformed from December 2021 production.
Sensing range		6 mm 0.236 in (fixed)
Minimum sensing object		0.8 × 1.2 mm 0.031 × 0.047 in opaque object
Hysteresis		0.05 mm 0.002 in or less
Repeatability		0.01 mm 0.0004 in or less
Supply voltage		5 to 24 V DC ±10 % Ripple P-P 10 % or less
Current consumption		15 mA or less
Output		NPN open-collector transistor <ul style="list-style-type: none"> •Maximum sink current: 50 mA •Applied voltage: 30 V DC or less (between output and 0 V) •Residual voltage: 2 V or less (at 50 mA sink)

Item		Specifications
		Download
Catalog/ Datasheet	CAD	Manual
Output:Output operation		outputs: Light-ON / Dark-ON
Output:Short-circuit protection		Incorporated
Response time		Under light received condition: 20 μ s or less Under light interrupted condition: 80 μ s or less (Maximum response frequency: 3 kHz) (Note) (Note) : Refer to the note on the specification page for the response frequency.
Operation indicator		Orange LED (lights up under light received condition)
Pollution degree		3
Protection		IP64 (IEC)
Ambient temperature		-25 to +55 $^{\circ}$ C -13 to +131 $^{\circ}$ F (No dew condensation or icing allowed), Storage: -30 to +80 $^{\circ}$ C -22 to +176 $^{\circ}$ F
Ambient humidity		5 to 85 % RH, Storage: 5 to 95 % RH
Ambient illuminance		Fluorescent light: 1,000 lx at the light-

Item		Specifications
		Download
Catalog/ Datasheet	CAD	Manual
Voltage withstandability		supply terminals connected together and enclosure
Insulation resistance		20 MΩ, or more, with 250 V DC megger between all supply terminals connected together and enclosure
Vibration resistance		10 to 2,000 Hz frequency, 1.5 mm 0.059 in double amplitude (maximum acceleration 196 m/s ²) in X, Y and Z directions for two hours each
Shock resistance		15,000 m/s ² acceleration (1,500 G approx.) in X, Y and Z directions three times each
Emitting element		Infrared LED (Peak emission wavelength: 855 nm 0.034 mil , non-modulated)
Material		Enclosure: PBT Display section: Polycarbonate
Cable		0.09-mm ² 4-core cabtyre cable, PVC, 1 m 3.281 ft long
Wiring length		Extension up to total 100 m 328.084 ft is



Item		Specifications
		Download
Catalog/ Datasheet	CAD	Manual
		<p>is extended to 20 m 65.617 ft or longer, confirm that the supply voltage at the end of the cable attached to the sensor is 4.5 V or higher.</p> <p>(Note 2) : For safety applications, do not exceed 30 m 98.425 ft.</p>
	Weight	<p>Net weight: 10 g approx.</p> <p>Gross weight: 15 g approx.</p>
	Remark	<p>Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +23 °C +73.4 °F.</p>

Recently checked products

- [FP0 \(Discontinued Products\) >](#)
- [GX-M SERIES \(Discontinued Products\) >](#)
- [Compact Multi-voltage Photoelectric Sensor NX5 >](#)

Recently checked product numbers

- [PM-R44 | Small U-shaped Micro Photoelectric Sensor\[Amplifier Built-in\] >](#)
- [PM-44/PM-54\(Discontinued\)](#)
- [PM-R65 | Amplifier Built-in / U-shaped Micro Photoelectric Sensor \[Compact / Connector built-in type\] PM-65 >](#)
- [PM-R65-P | Amplifier Built-in / U-shaped Micro Photoelectric Sensor \[Compact / Connector built-in type\] PM-65 >](#)



Download		
Catalog/ Datasheet	CAD	Manual

Connector built-in type] PM-65

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Guidelines for Ordering and Usage



Requests to customers (FA Sensors & Components [Excluding motors])

Requests to cu	Catalog/ Datasheet	CAD	Download Manual

Components & Devices

- Relays / Couplers
- Connectors
- Switches
- Encoders / Potentiometers
- Touch Solutions

FA Sensors & Components

- Fiber Sensors
- Photoelectric Sensors / Laser Sensors
- Micro Photoelectric Sensors
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- Inductive Proximity Sensors
- Particular Use Sensors
- Sensor Options
- Wire-Saving Systems
- Programmable Controllers / Motion Controller
- Human Machine Interface
- Pressure Sensors / Flow Sensors
- Measurement Sensors

- Static Control Devices
- Laser Markers / 2D Code Readers
- Machine Vision System
- Energy Management Solutions

Motors for FA & Industrial Application

- AC Servo
- Motors for HVAC & Automotive

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