MLV12-8-H-250-RT-2572





Model Number

MLV12-8-H-250-RT-2572

Background suppression sensor with metal connector M12; 5-pin, 90° convertible

Features

- Reliable detection of all surfaces, independent of color and structure
- Minimal black-white difference
- Ultra bright LEDs for power on and • switching state
- Flashing power on LED in case of ٠ short-circuit
- Not sensitive to ambient light, even • with switched energy saving lamps
- Multiple device installation possible, • no mutual interference (no cross-talk)
- Protection class II ٠

Electrical connection



= Dark on

Refer to "General Notes Relating to Pepperl+Fuchs Product Information" Pepperl+Fuchs Group www.pepperl-fuchs.com

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Technical data		
General specifications		20 250 mm , adjustable
Detection range Detection range min.		20 250 mm
Detection range max.		20 250 mm
Adjustment range		50 250 mm
Light source		LED
Light type		modulated visible red light , 660 nm
Black/White difference (6 %/90 %))	10 % at 250 mm
Diameter of the light spot		8 mm at Tw 250 mm
Angle of divergence		1.5 °
Ambient light limit		
Continuous light		30000 Lux
Modulated light		5000 Lux
Functional safety related parame	eters	
MTTF _d		650 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		LED succes flashes in second faborit singuit
Operation indicator Function indicator		LED green, flashes in case of short-circuit 2 LEDs yellow
Function indicator		ON: object inside the scanning range OFF: object outside the scanning range
Control elements		potentiometer for light/dark, detection range adjustment
Electrical specifications		
Operating voltage	UB	20 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	≤ 55 mA
Output		
Switching type		light/dark on switchable
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 0.25 A
Voltage drop	U _d	≤ 2.5 V DC 1000 ms
Switch-on delay Switching frequency	t _{on} f	500 Hz
Response time	•	1 ms
Conformity		
Product standard		EN 60947-5-2
Ambient conditions		
Ambient temperature		-40 50 °C (-40 122 °F)
Storage temperature		-40 75 °C (-40 167 °F)
Mechanical specifications		
Housing width		41.5 mm
Housing height		49 mm
Housing depth		15 mm
Degree of protection		IP67
Connection		Metal connector, M12, 5-pin, 90° rotatable
Material		
Housing		Frame: nickel plated, die cast zinc, Laterals: glass-fiber reinforced plastic PC
Optical face		Plastic pane
Mass Compliance with standards and directives		60 g
Standard conformity		
Shock and impact resistance		IEC / EN 60068. half-sine, 40 g in each X, Y and Z directions
Vibration resistance		IEC / EN 60068-2-6. Sinus. 10 -150 Hz, 5 g in each X, Y and Z directions
Approvals and certificates		
Protection class		II, rated voltage \leq 300 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval		cULus
CCC approval		CCC approval / marking not required for products rated ${\leq}36~V$

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Curves/Diagrams



Curves/Diagrams



Additional information

Intended use:

The transmitter and receiver are located in the same housing for direct detection sensors with background masking. Marking of objects outside the detection range is achieved by arranging the angle between the transmitter and receiver (2 receiver elements).

Objects are detected independently of their surface structures, brightness and colour, as well as the brightness of the background.

Mounting instructions:

The sensors can be fastened directly with fixing screws or with a support bracket (not included with delivery).

The surface underneath must be flat to prevent the housing from moving when it is tightened into position. We recommend securing the nut and screw in place with spring washers to prevent the sensor from going out of adjustment.

Adjustment:

After the operating voltage is applied, the LED is lit green.

Align the sensor to the object. If the object is within the detection range, the yellow LED lights up.

Object motion direction:

For a rliable detektion, the objects motion direction must be either towards the sensor or away from it. In case of transversal motion, the motion direction must be transversal to the emitter/receiver orientation.

Maintenance:

We recommend cleaning the optical surface and checking the fixation/alignment and electrical connections at regular intervals.

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