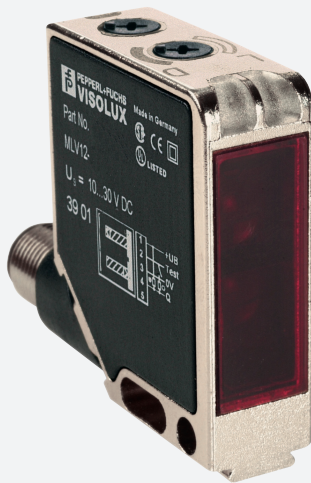




Background suppression sensor MLV12-8-H-250-RT-2572

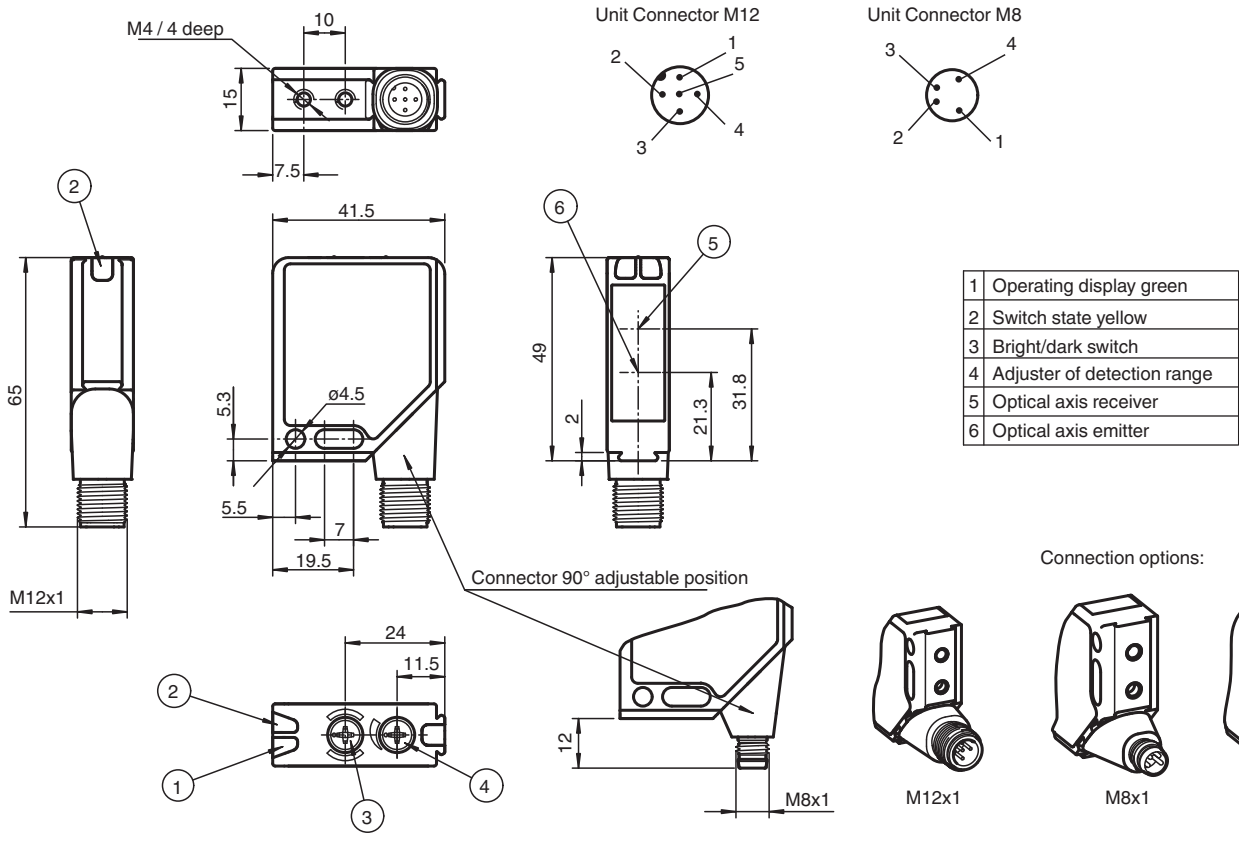


- Reliable detection of all surfaces, independent of color and structure
- Minimal black-white difference
- Ultra bright LEDs for power on and switching state
- Flashing power on LED in case of short-circuit
- Not sensitive to ambient light, even with switched energy saving lamps
- Multiple device installation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

Background suppression sensor



Dimensions



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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

Technical Data

General specifications

Detection range	20 ... 250 mm , adjustable
Detection range min.	20 ... 50 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 parameters

MTTF _d	650 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED green, flashes in case of short-circuit
Function indicator	2 LEDs yellow 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	U _B	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
Switch-on delay	t _{on}	1000 ms
Switching frequency	f	500 Hz
Response time		1 ms

Conformity

Product standard	EN 60947-5-2
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Compliance with standards and directives

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 ≤ 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 ≤36 V

Ambient conditions

Ambient temperature	-40 ... 50 °C (-40 ... 122 °F)
Storage temperature	-40 ... 75 °C (-40 ... 167 °F)

Mechanical specifications

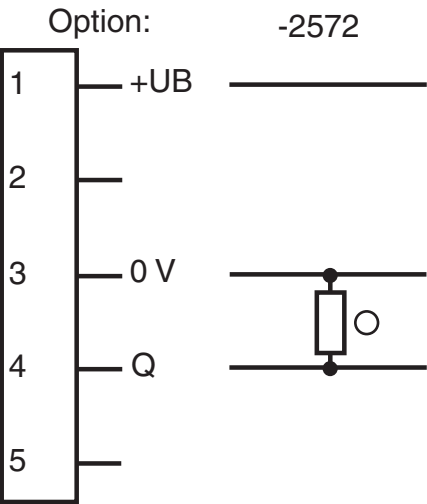
Housing width	41.5 mm
Housing height	49 mm
Housing depth	15 mm
Degree of protection	IP67

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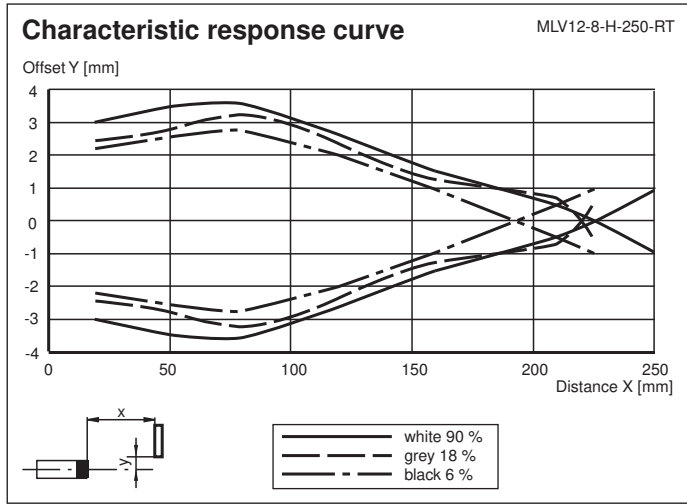
Technical Data

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	60 g

Connection Assignment

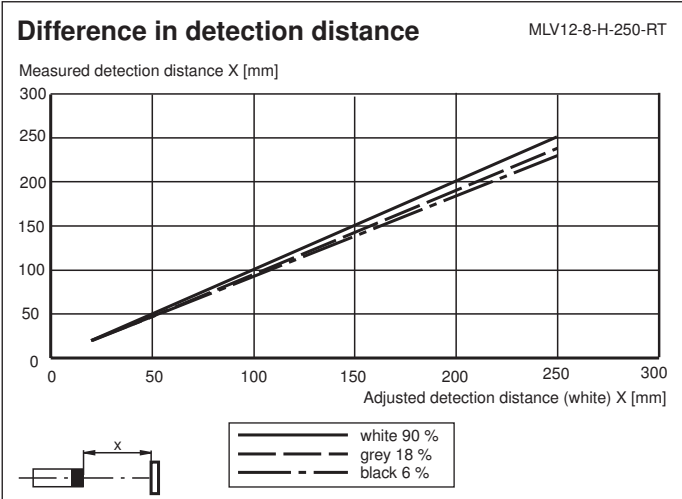


○ = Light on
● = Dark on



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Characteristic Curve



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 reliable detection, the object's 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.