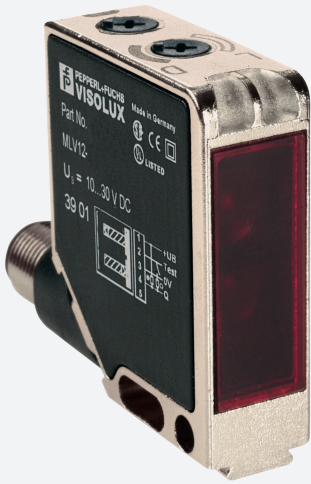


Background suppression sensor MLV12-8-H-250-RT-2572

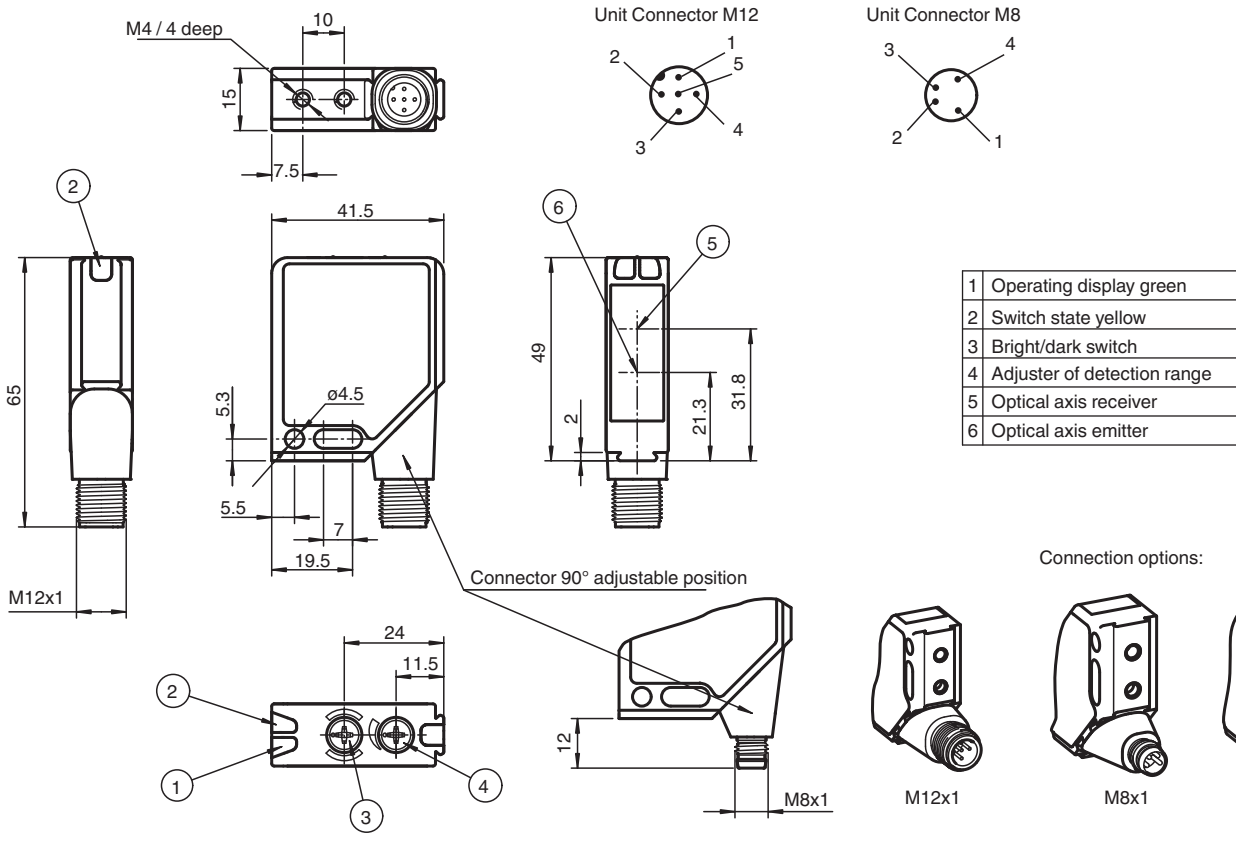


- Reliable detection of all surfaces, independent of color and structure
- Minimal black-white difference
- Ultra bright LEDs for power on and switching state
- Flashing power on LED in case of short-circuit
- Not sensitive to ambient light, even with switched energy saving lamps
- Multiple device installation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

Background suppression sensor



Dimensions



Release date: 2022-02-07 Date of issue: 2022-02-07 Filename: 119846_eng.pdf

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

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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 |
| Opening angle | | 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 |
| 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 | | |
| EAC conformity | | TR CU 020/2011 |
| 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 |

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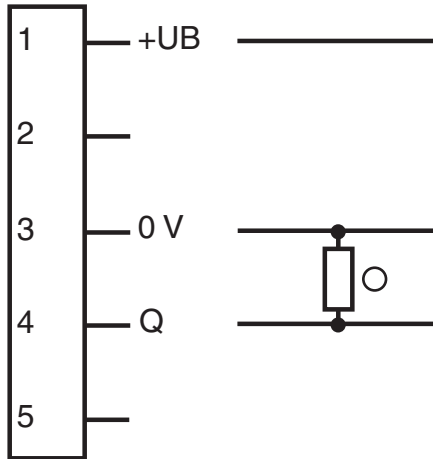
PEPPERL+FUCHS

Technical Data

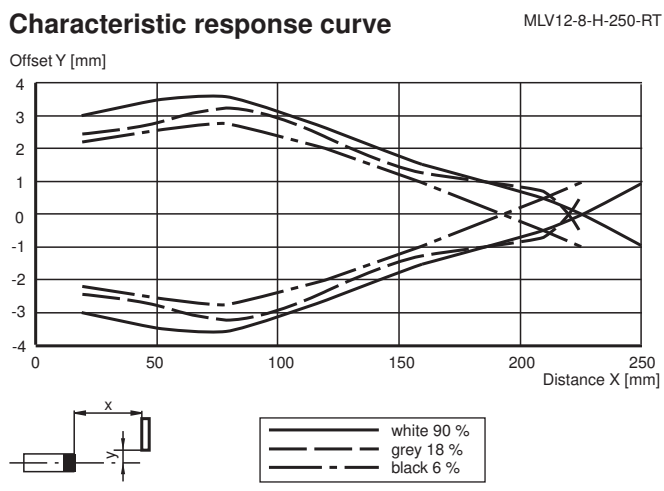
| | |
|----------------------|---|
| Degree of protection | IP67 |
| Connection | Metal connector, M12, 5-pin, 90° rotatable |
| Material | |
| Housing | Frame: nickel plated, die cast zinc, Laterals: glass-fiber reinforced plastic PC |
| Optical face | Plastic pane |
| Mass | 60 g |

Connection Assignment

Option: -2572

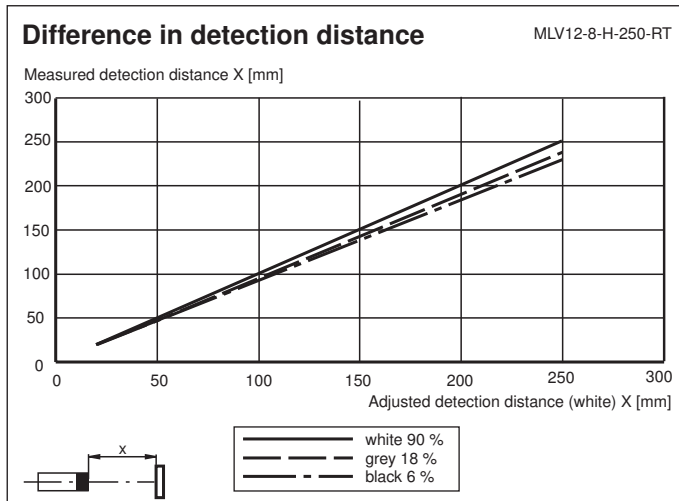


- = Light on
- = Dark on



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Characteristic Curve



System Description

System Description

The triangulation sensor with background suppression (BGS) contains both an emitter and a receiver in a single housing. Targeted blanking of objects outside the scanning range is made possible by a corresponding angle arrangement between emitter and receiver (2 receiver elements). The triangulation sensor (BGS) detects objects regardless of their surface structure, brightness and color, as well as the brightness of the background.

Mounting

Mounting

The sensors can be mounted directly with fixing screws or by using a mounting bracket. Mounting brackets are available as accessories. Ensure that the surface is flat to avoid housing distortion during mounting and fixing. Secure nut and bolt with spring washers to prevent misalignment of the sensor.

Commissioning

Aligning the sensor: Apply the operating voltage to the sensor. The operating indicator lights up green. Position the object at the desired maximum sensing range of the sensor and align the light spot with the object. The yellow signal indicator lights up when the object is detected.

Commissioning

Movement direction of the object: To ensure accurate detection, the object to be detected must be either moving toward the sensor or moving away from the sensor. If the object moves across the sensor, the movement must be made across the emitter/receiver connecting line.

Maintenance

Maintenance

Cleaning: Clean the optical interfaces of the sensor (e.g., lenses) at regular intervals.

Maintenance: Check the mounting fittings and the electrical connections regularly.