



**Model Number**

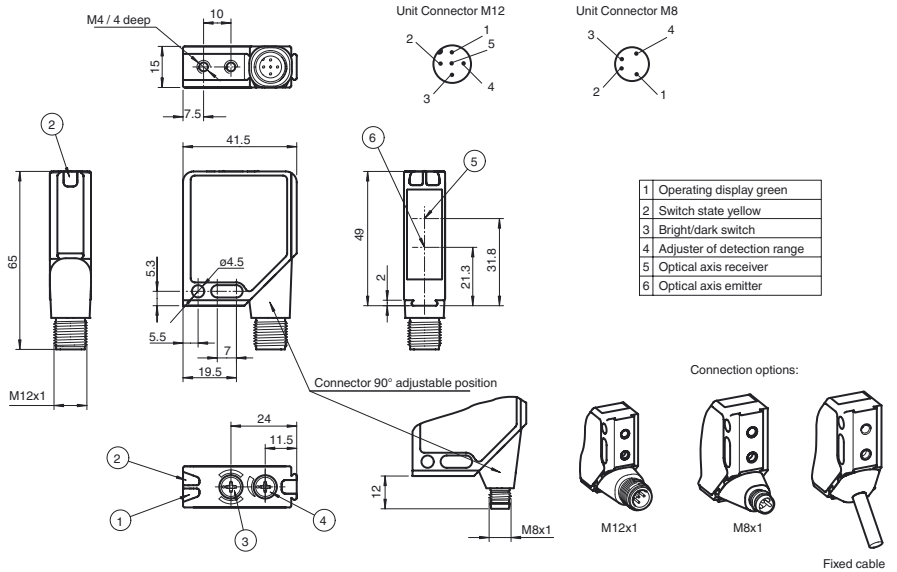
**MLV12-8-H-250-RT/65b/124/128/134**

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

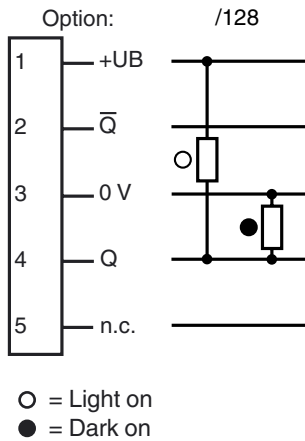
**Features**

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

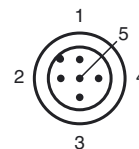
**Dimensions**



**Electrical connection**



**Pinout**



Release date: 2014-05-12 17:25 Date of issue: 2014-05-23 121671\_eng.xml

**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 <sub>d</sub>              | 650 a |
| Mission Time (T <sub>M</sub> ) | 20 a  |
| Diagnostic Coverage (DC)       | 0 %   |

**Indicators/operating means**

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Operation indicator | LED green, flashes in case of short-circuit                                                     |
| Function indicator  | 2 LEDs yellow<br>ON: object inside the scanning range<br>OFF: object outside the scanning range |
| Control elements    | potentiometer for light/dark, detection range adjustment                                        |

**Electrical specifications**

|                        |                |                |
|------------------------|----------------|----------------|
| Operating voltage      | U <sub>B</sub> | 10 ... 30 V DC |
| Ripple                 |                | max. 10 %      |
| No-load supply current | I <sub>0</sub> | ≤ 55 mA        |

**Output**

|                     |                                                                                                   |            |
|---------------------|---------------------------------------------------------------------------------------------------|------------|
| Switching type      | light/dark on switchable                                                                          |            |
| Signal output       | 1 push-pull (4 in 1) output, short-circuit protected, reverse polarity protected, 0.2 A / 30 V DC |            |
| Switching voltage   | max. 30 V DC                                                                                      |            |
| Switching current   | max. 0.2 A                                                                                        |            |
| Voltage drop        | U <sub>d</sub>                                                                                    | ≤ 2.5 V DC |
| Switching frequency | f                                                                                                 | 1000 Hz    |
| Response time       |                                                                                                   | 0.5 ms     |

**Ambient conditions**

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -40 ... 60 °C (-40 ... 140 °F) |
| Storage temperature | -40 ... 75 °C (-40 ... 167 °F) |

**Mechanical specifications**

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

**Compliance with standards and directives**

|                             |                                                                          |
|-----------------------------|--------------------------------------------------------------------------|
| Standard conformity         |                                                                          |
| Product standard            | EN 60947-5-2:2007<br>IEC 60947-5-2:2007                                  |
| 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                   |

**Accessories****OMH-MLV12-HWG**

Mounting bracket for series MLV12 sensors

**OMH-MLV12-HWK**

Mounting bracket for series MLV12 sensors

**OMH-K01**

dove tail mounting clamp

**OMH-K02**

dove tail mounting clamp

**OMH-K03**

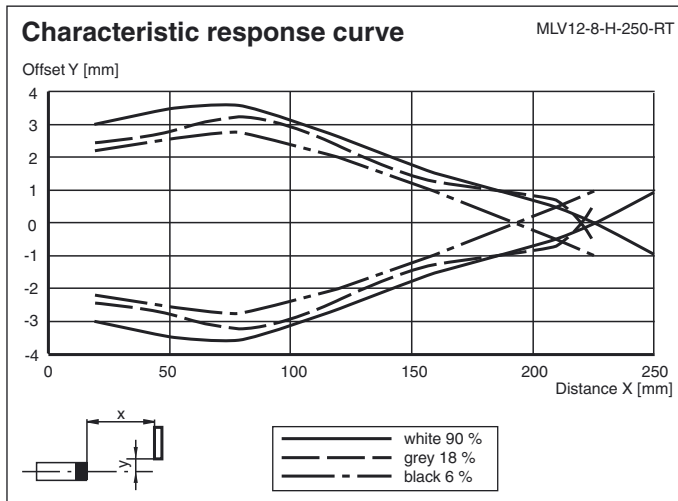
dove tail mounting clamp

**OMH-06**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

## Curves/Diagrams



## Curves/Diagrams

