



Background suppression sensor

MLV41-8-H-120-RT/65b/95/136

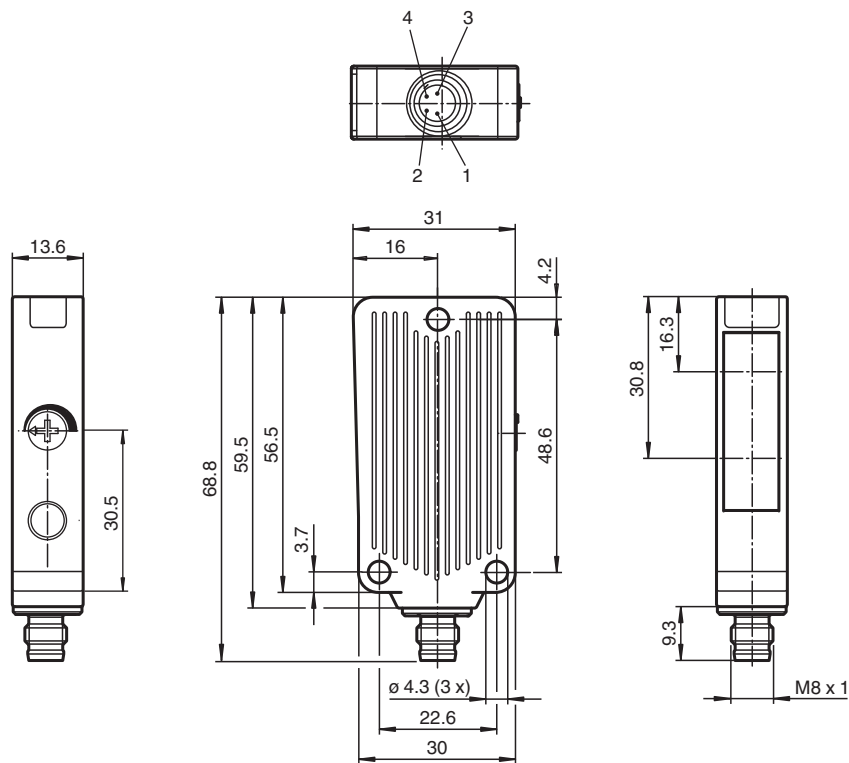


- Reliable detection of all surfaces, independent of color and structure
- Precision background suppression, adjustable
- Low sensitivity to target color
- PowerBeam transmitter LED
- Very small light beam diameter

Triangulation sensor with background suppression in corrosion-resistant metal housing with sensing-by-ranging functionality, IO-Link interface, 120 mm adjustable detection range, red light, push-pull output, M8 plug



Dimensions



Technical Data

General specifications

Release date: 2022-03-30 Date of issue: 2022-03-30 Filename: 245701_eng.pdf

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

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Technical Data

| | | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Detection range | 20 ... 120 mm Black-white difference < 3% | |
| Adjustment range | 20 ... 120 mm | |
| Reference target | standard white, 100 mm x 100 mm | |
| Light source | LED | |
| Light type | modulated visible red light | |
| Diameter of the light spot | approx. 4 mm at sensor range 100 mm | |
| Opening angle | approx. 2.5 ° | |
| Ambient light limit | 25000 Lux | |
| Functional safety related parameters | | |
| MTTF _d | 500 a | |
| Mission Time (T _M) | 20 a | |
| Diagnostic Coverage (DC) | 0 % | |
| Indicators/operating means | | |
| Operation indicator | LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz) | |
| Function indicator | 2 LEDs yellow ON: object inside the scanning range OFF: object outside the scanning range | |
| Control elements | Sensing range adjuster | |
| Electrical specifications | | |
| Operating voltage | U _B | 10 ... 30 V DC , class 2 |
| Ripple | max. 10 % | |
| No-load supply current | I ₀ | max. 25 mA at 24 V supply voltage |
| Output | | |
| Switching type | dark-on | |
| Signal output | 2 push-pull (4 in 1) outputs, short-circuit protected, reverse polarity protected | |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 100 mA | |
| Voltage drop | U _d | ≤ 2 V DC |
| Switching frequency | f | 200 Hz |
| Response time | 2.5 ms | |
| Conformity | | |
| Product standard | EN 60947-5-2 | |
| Approvals and certificates | | |
| EAC conformity | TR CU 020/2011 | |
| UL approval | cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure) | |
| CCC approval | CCC approval / marking not required for products rated ≤36 V | |
| Ambient conditions | | |
| Ambient temperature | -20 ... 60 °C (-4 ... 140 °F) | |
| Storage temperature | -40 ... 75 °C (-40 ... 167 °F) | |
| Mechanical specifications | | |
| Housing width | 31 mm | |
| Housing height | 56.5 mm | |
| Housing depth | 13.6 mm | |
| Degree of protection | IP67 | |
| Connection | M8 x 1 connector, 4-pin | |
| Material | | |
| Housing | Aluminum , Delta-Seal coated | |
| Optical face | glass pane | |
| Connector | metal | |
| Mass | approx. 40 g | |

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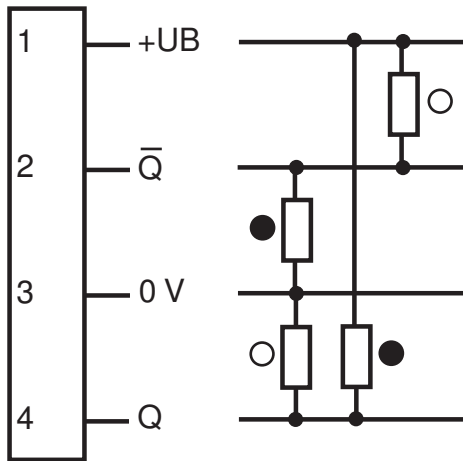
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Connection Assignment

Option:



○ = Light on
● = Dark on

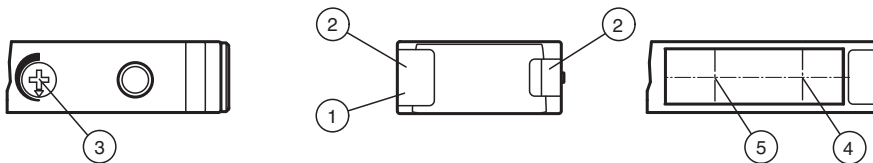
Connection Assignment



Wire colors in accordance with EN 60947-5-2

- 1 | BN (brown)
- 2 | WH (white)
- 3 | BU (blue)
- 4 | BK (black)

Assembly

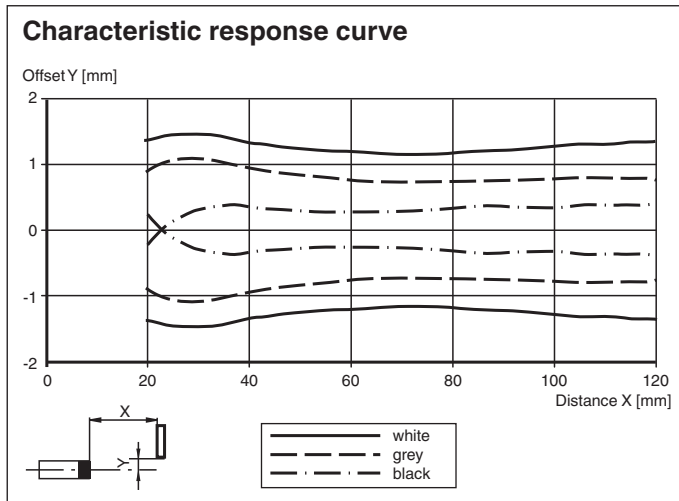


| | | | | | |
|---|-------------------------|---|--------------------------|---|-----------------------|
| 1 | Operating display green | 3 | Sensing range adjuster | 5 | Optical axis receiver |
| 2 | Function display yellow | 4 | Optical axis transmitter | | |





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Characteristic Curve



Accessories

| | | |
|-------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------|
|  | OMH-09 | Mounting bracket for Sensors series MLV41 for M12 rod mounting |
|  | OMH-40 | Mounting bracket |
|  | V31-WM-2M-PUR | Female cordset single-ended M8 angled A-coded, 4-pin, PUR cable grey |
|  | V31-GM-2M-PUR | Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey |