









Model Number

ML6-8-H-40-RT/95/102

Background suppression sensor with 4-pin, M8 x 1 connector

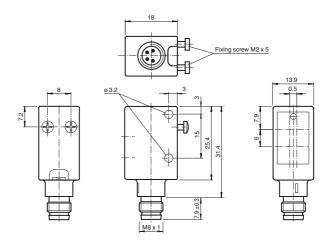
Features

- Precise background suppression
- · Very small black-white difference
- Small, sharp light spot
- Highly visible LEDs for Power-On, switching status, short-circuit, and undervoltage
- Metal-reinforced fastening holes
- Tamper-proof version with no adjustments
- NPN version

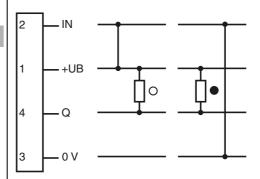
Product information

The ML6 series is characterized by a robust, powerful and standard design in a miniature housing. The housing offers IP67/IP69K degree of protection, a food-grade lens, highly visible LEDs and robust all-metal bushings for mounting. Adjustable and tamper-proof sensors with a double push-pull output are available. The sensors have a high ambient light limit. Reflections from the background are suppressed. The unusually small, sharp light spot and the quick response time offer maximum switching precision on object edges. Clearly visible red light sources facilitates alignment. A high-performance fixed focus background suppressor is a useful feature. The sensors are suitable for precise object detection and open up a wide range of application fields.

Dimensions



Electrical connection



- O = Light on
- = Dark on

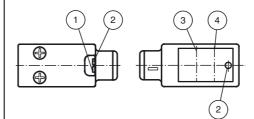
Pinout

Wire colors in accordance with EN 60947-5-2

2 4 3

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

Indicators/operating means



| 1 | operating display | green | | |
|---|-----------------------------------|--------|--|--|
| 2 | indication of the switching state | yellow | | |
| 3 | receiver axis | | | |
| 4 | emitter axis | | | |
| | | | | |

| Technical data | | |
|---|----------------|--|
| General specifications | | |
| Detection range | | 10 40 mm |
| Detection range max. | | 10 50 mm |
| Background suppression | | starts from 50 mm |
| Light source | | LED |
| Light type | | modulated visible red light , 660 nm |
| Black/White difference (6 %/90 % |) | approx. 3 mm |
| Diameter of the light spot | | approx. 3 mm at 40 mm |
| Angle of divergence Ambient light limit | | approx. 5 ° |
| Continuous light | | 40000 Lux |
| Modulated light | | 5000 Lux |
| Functional safety related param | eters | |
| MTTF _d | | 1940 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 | | LED yellow: lights when object is detected |
| Electrical specifications | | |
| Operating voltage | U _B | 10 30 V DC |
| Ripple | | 10 % |
| No-load supply current | I ₀ | < 25 mA |
| Output | | |
| Switching type | | light/dark on electrically switchable |
| Signal output | | NPN, open collector short-circuit protected reverse polarity protected |
| Switching voltage | | max. 30 V DC |
| Switching current | | max. 100 mA |
| Voltage drop | U_d | ≤ 2.5 V DC |
| Switching frequency | f | 1000 Hz |
| Response time | | 0.5 ms |
| Conformity | | |
| Product standard | | EN 60947-5-2 |
| Ambient conditions | | |
| Ambient temperature | | -20 60 °C (-4 140 °F) |
| Storage temperature | | -20 75 °C (-4 167 °F) |
| Mechanical specifications | | |
| Housing width | | 13.9 mm |
| Housing height | | 31.4 mm |
| Housing depth | | 18 mm |
| Degree of protection | | IP67 / IP69K |
| Connection | | M8 x 1 connector, 4-pin |
| Material | | |
| Housing | | ABS |
| Optical face | | PMMA |
| Mass | | approx. 10 g |
| 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 | | |
| UL approval | | cULus Listed |
| | | |

Accessories

OMH-4.1

Mounting Clamp

OMH-ML6

Mounting bracket

OMH-ML6-U

Mounting bracket

OMH-ML6-Z

Mounting bracket

V31-GM-2M-PUR

Female cordset single-ended, M8, 4-pin, PUR cable

V31-WM-2M-PUR

Female cordset single-ended, M8, 4-pin, PUR cable

Other suitable accessories can be found at www.pepperl-fuchs.com

CCC approval

CCC approval / marking not required for products rated \leq 36 V

