



Model Number

ML6-8-H-150-IR/59/65a/115/136

Background suppression sensor with 2 m fixed cable

Features

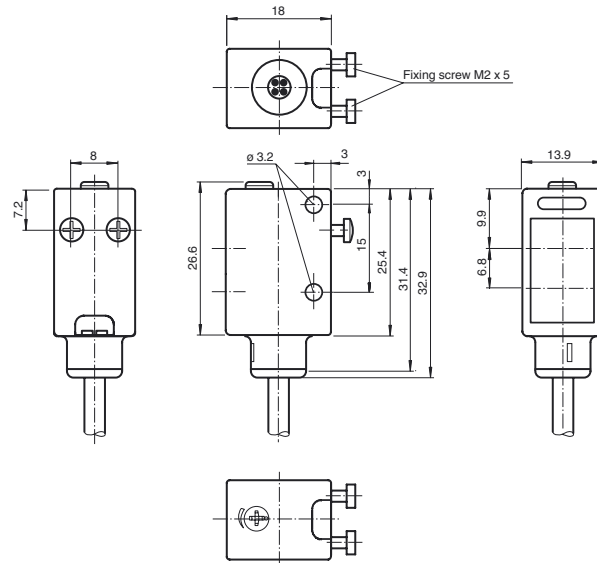
- Precise background suppression
- Adjustable background suppression
- Small, sharp light spot
- Very small black-white difference
- Highly visible LEDs for Power-On, switching status, short-circuit, and undervoltage
- Metal-reinforced fastening holes
- Push-pull output

Product information

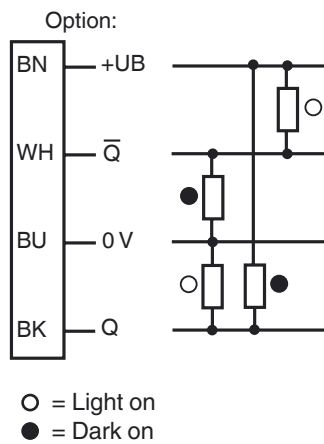
The ML6 series is characterized by a robust, powerful and standard design in a miniature housing. The housing offers IP67/IP69K degree of protection, a food-grade lens, highly visible LEDs and robust all-metal bushings for mounting. Adjustable and tamper-proof sensors with a double push-pull output are 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.

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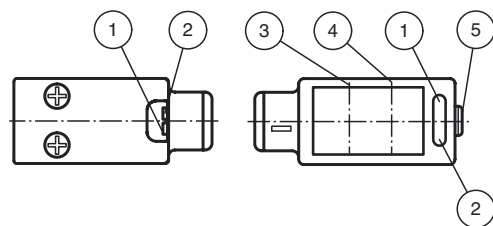
Dimensions



Electrical connection



Indicators/operating means



| | | |
|---|-----------------------------------|--------|
| 1 | operating display | green |
| 2 | indication of the switching state | yellow |
| 3 | receiver axis | |
| 4 | emitter axis | |
| 5 | detection range adjuster | |

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

Technical data**General specifications**

| | |
|---------------------------------|----------------------------------------|
| Detection range | 15 ... 150 mm |
| Detection range min. | 10 ... 30 mm |
| Detection range max. | 18 ... 150 mm |
| Adjustment range | 30 ... 150 mm |
| Reference target | standard white, 100 mm x 100 mm |
| Light source | IREL |
| Light type | modulated infrared light , 880 nm |
| Black/White difference (6%/90%) | < 15 % |
| Diameter of the light spot | approx. 6 mm at detection range 150 mm |
| Ambient light limit | |
| Continuous light | 40000 Lux |
| Modulated light | 5000 Lux |

Functional safety related parameters

| | |
|--------------------------------|--------|
| 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 |
| Control elements | Detection range adjuster |

Electrical specifications

| | | |
|------------------------|----------------|--------------------------|
| Operating voltage | U _B | 10 ... 30 V DC , class 2 |
| Ripple | | max. 10 % |
| No-load supply current | I ₀ | < 25 mA |

Output

| | | |
|---------------------|----------------------------------------------------------------------------------------------|------------|
| Switching type | light/dark on, programmable | |
| Signal output | 2 push-pull (4 in 1) outputs, complementary, short-circuit proof, 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 | | 500 μs |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -20 ... 60 °C (-4 ... 140 °F) |
| Storage temperature | -40 ... 75 °C (-40 ... 167 °F) |

Mechanical specifications

| | |
|----------------------|-----------------|
| Degree of protection | IP67 / IP69K |
| Connection | 2 m fixed cable |
| Material | |
| Housing | ABS |
| Optical face | PMMA |
| Cable | PUR |
| Mass | approx. 50 g |

Compliance with standards and directives

| | |
|-----------------------------|--------------------------------------------------------------------------|
| Standard conformity | |
| Product standard | EN 60947-5-2:2007 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

| | |
|--------------|--------------------------------------------------------------|
| UL approval | cULus Listed |
| CCC approval | CCC approval / marking not required for products rated ≤36 V |

Accessories

OMH-4.1
Mounting Clamp

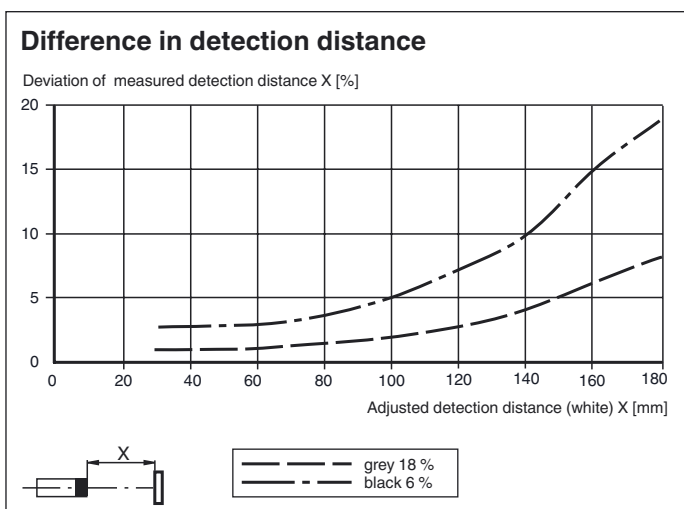
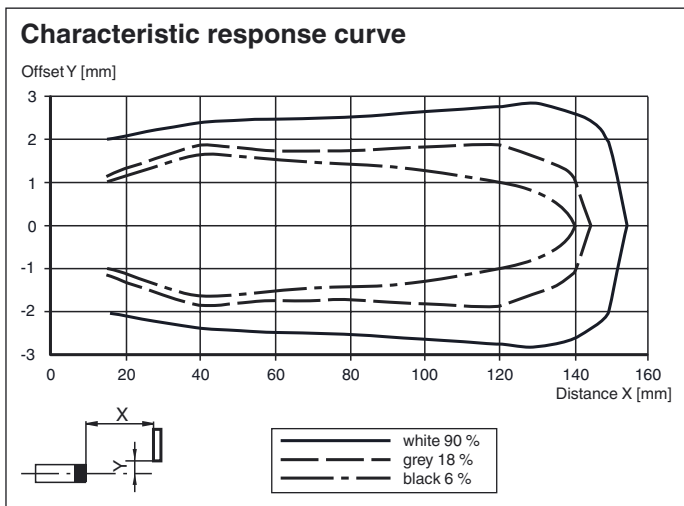
OMH-ML6
Mounting bracket

OMH-ML6-U
Mounting bracket

OMH-ML6-Z
Mounting bracket

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

Curves/Diagrams



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