



Model Number

ML300-55-2m-RT/59/98/103

Retroreflective sensor
with 3-pin, M8 x 1 connector

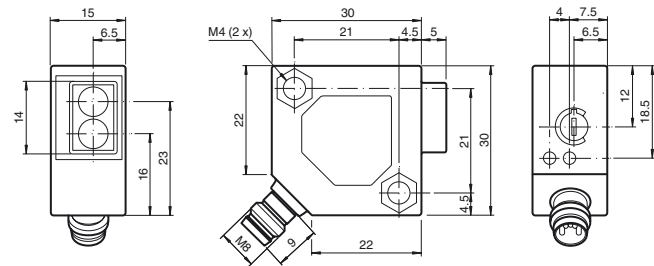
Features

- Miniature design
- Easy to use
- Visible red light
- 45° connector

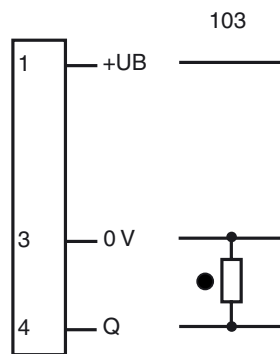
Product information

The ML300 series has a robust miniature housing and all the standard functional principles. Of particular note are the sensors with analog output, which return a value proportional to the distance. The 45° plug/cable connection ensures flexible mounting. An LED indicates a weak signal, e.g. due to dirt.

Dimensions



Electrical connection



○ = Light on
● = Dark on

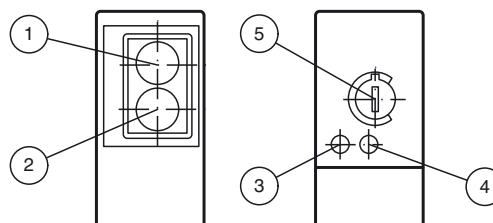
Pinout



Wire colors in accordance with EN 60947-5-2

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

Indicators/operating means



| | | |
|---|------------------------|--------|
| 1 | Receiver | |
| 2 | Emitter | |
| 3 | Switching state | yellow |
| 4 | Stability control | green |
| 5 | Sensitivity adjustment | |

Technical data**General specifications**

| | |
|----------------------------|--------------------------------------|
| Effective detection range | 0 ... 2 m |
| Reflector distance | 0.02 ... 2 m |
| Threshold detection range | 3.5 m |
| Reference target | H85-2 reflector |
| Light source | LED |
| Light type | modulated visible red light , 660 nm |
| Polarization filter | yes |
| Diameter of the light spot | approx. 200 mm at 2 m |
| Angle of divergence | approx. 6 ° |
| Ambient light limit | |
| Continuous light | 10000 Lux |
| Modulated light | 5000 Lux |

Indicators/operating means

| | |
|--------------------|--|
| Function indicator | LED yellow: lights up when output is active LED green: Sufficient stability control |
| Control elements | sensitivity adjustment |

Electrical specifications

| | | |
|------------------------|-------|----------------|
| Operating voltage | U_B | 10 ... 30 V DC |
| Ripple | | max. 10 % |
| No-load supply current | I_0 | max. 20 mA |

Output

| | | |
|---------------------|---|----------|
| Switching type | dark on | |
| Signal output | 1 PNP output, short-circuit protected, reverse polarity protected, open collector | |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 0.1 A | |
| Voltage drop | U _d | ≤ 2 V DC |
| Switching frequency | f | 1000 Hz |
| Response time | 0.5 ms | |

Conformity

| | |
|------------------|--------------|
| Product standard | EN 60947-5-2 |
|------------------|--------------|

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 55 °C (-13 ... 131 °F) |
|---------------------|--------------------------------|

Mechanical specifications

| | |
|----------------------|-------------------------|
| Housing width | 30 mm |
| Housing height | 30 mm |
| Housing depth | 15 mm |
| Degree of protection | IP65 |
| Connection | M8 x 1 connector, 3-pin |
| Material | |
| Housing | ABS |
| Optical face | plastic |
| Connector | metal |
| Mass | 18 g |

Compliance with standards and directives

| | |
|-----------------------------|---|
| Standard conformity | |
| Shock and impact resistance | EN 60947-5-7 30 g, 11 ms, all axes |
| Vibration resistance | EN 60947-5-7, 10-55 Hz/1.5 mm amplitude, all axes |

Approvals and certificates

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

Accessories**OMH-ML300-01**

Bracket for mounting ML300 series sensors

OMH-ML300-02

Bracket for mounting ML300 series sensors on a 35 mm DIN rail

V3-GM-2M-PVC

Female cordset single-ended, M8, 3-pin, PVC cable

V3-WM-2M-PVC

Female cordset single-ended, M8, 3-pin, PVC cable

V3-WM-2M-PUR

Female cordset single-ended, M8, 3-pin, PUR cable

REF-H85-2

Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes

REF-C110-2

Reflector, round \varnothing 84 mm, central mounting hole

REF-H50

Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap

REF-H60-2

Reflector with mounting holes

REF-VR10-2

Reflector, rectangular 60 mm x 19 mm, mounting holes

OFR-100/100

Reflective tape 100 mm x 100 mm

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

Curves/Diagrams

