



Thru-beam sensor ML300-P-6m-RT/59/102/115



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

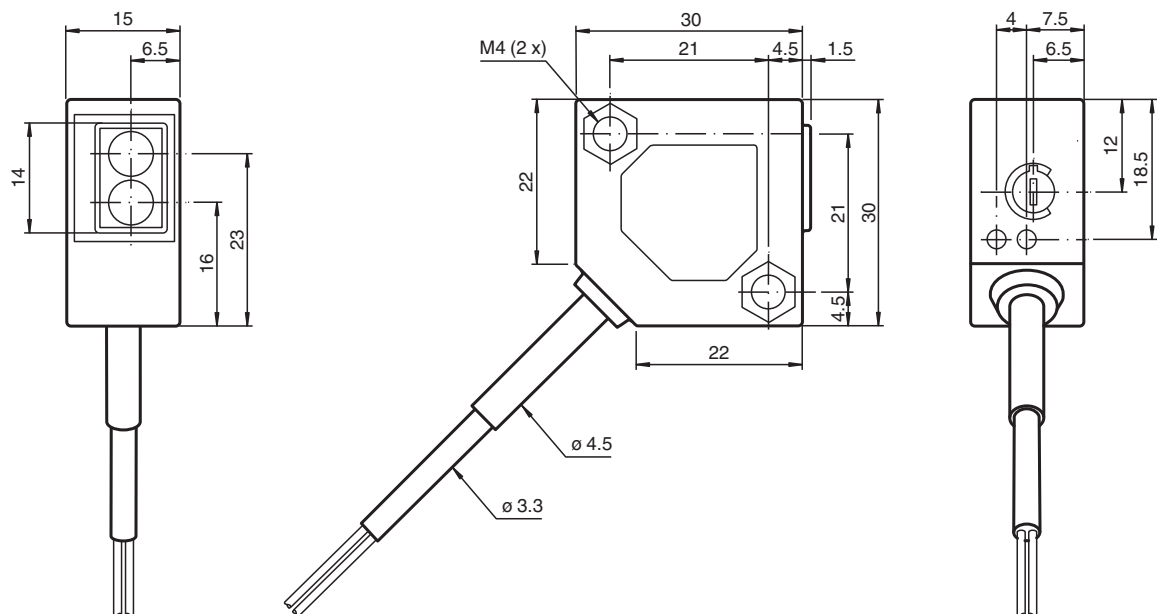
Thru-beam sensor



Function

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



Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 238207_eng.pdf

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

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Technical Data

System components

| | |
|----------|--------------------------|
| Emitter | ML300-T-6m-RT/115 |
| Receiver | ML300-R-6m-RT/59/102/115 |

General specifications

| | |
|----------------------------|------------------------------------|
| Effective detection range | 0 ... 6 m |
| Threshold detection range | 8 m |
| Light source | LED |
| Light type | modulated visible red light 660 nm |
| Diameter of the light spot | approx. 500 mm at 6 m |
| Opening angle | approx. 5 ° |
| 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 | Emitter: ≤ 20 mA Receiver: ≤ 15 mA |

Output

| | | |
|---------------------|----------------|---|
| Switching type | dark-on | |
| Signal output | | 1 NPN 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 |
|------------------|--------------|

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

| | |
|--------------|--|
| UL approval | no |
| CCC approval | CCC approval / marking not required for products rated ≤ 36 V |

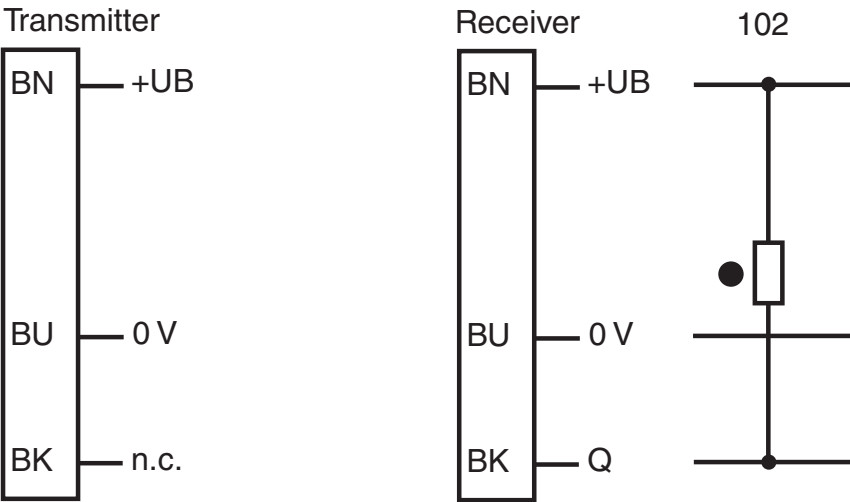
Ambient conditions

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

Mechanical specifications

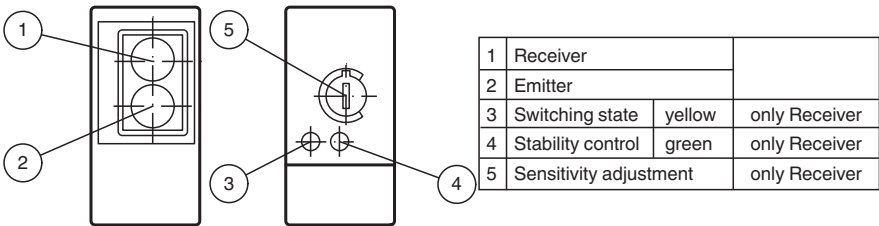
| | |
|----------------------|------------------------------|
| Housing width | 30 mm |
| Housing height | 30 mm |
| Housing depth | 15 mm |
| Degree of protection | IP65 |
| Connection | 2 m fixed cable |
| Material | |
| Housing | ABS |
| Optical face | plastic |
| Cable | PVC |
| Mass | 150 g (emitter and receiver) |

Connection Assignment

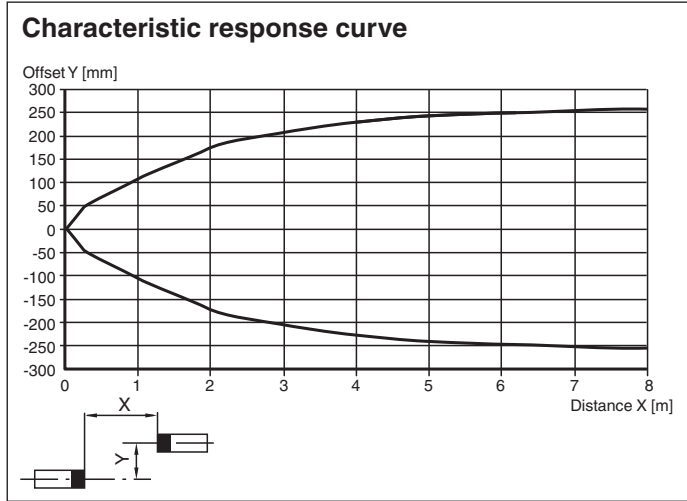


○ = Light on
● = Dark on

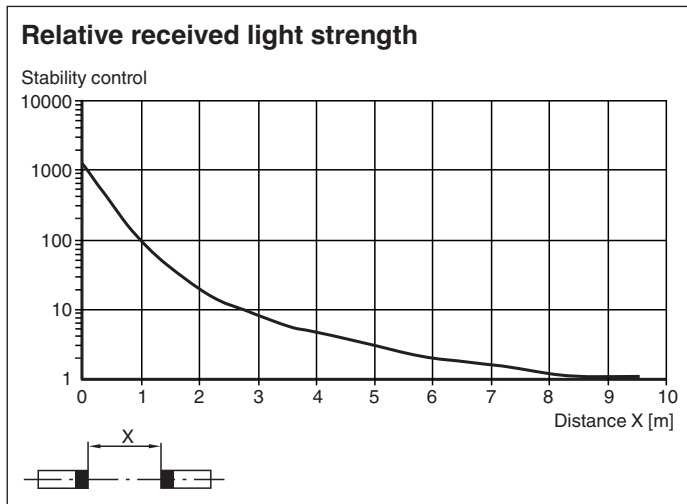
Assembly



Characteristic Curve



Characteristic Curve



Accessories

| | | |
|---|---------------------|---|
|  | OMH-ML300-01 | Bracket for mounting ML300 series sensors |
|---|---------------------|---|