**Model Number**

ML300-P-6m-RT/25/103/115
Thru-beam sensor with 2 m fixed cable

**Features**

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

<table>
<thead>
<tr>
<th>Transmitter</th>
<th>Receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>BN +UB</td>
<td>BN +UB</td>
</tr>
<tr>
<td>BU 0 V</td>
<td>BU 0 V</td>
</tr>
<tr>
<td>BK n.c.</td>
<td>BK Q</td>
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</tbody>
</table>

  ○ = Light on
  • = Dark on

  **Indicators/operating means**

  1. Receiver
  2. Emitter
  3. Switching state yellow only Receiver
  4. Stability control green only Receiver
  5. Sensitivity adjustment only Receiver
## Thru-beam sensor ML300-P-6m-RT/25/103/115

### Technical data

#### System components
- Emitter: ML300-T-6m-RT/115
- Receiver: ML300-R-6m-RT/25/103/115

#### 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
- Angle of divergence: approx. 5°
- Ambient light limit:
  - Continuous light: 10000 Lux
  - Modulated light: 5000 Lux

#### Indicators/operating means
- Function display:
  - LED yellow: lights up when output is active
  - LED green: Sufficient stability control
- Controls: sensitivity adjustment

#### Electrical specifications
- Operating voltage: $U_B = 10 \ldots 30$ V DC
- Ripple: max. 10%
- No-load supply current:
  - Emitter: $I_0 \leq 20$ mA
  - Receiver: $I_0 \leq 20$ mA

#### Output
- Switching type: light on
- Signal output: 1 PNP output, short-circuit protected, protected from reverse polarity, open collector
- Switching voltage: max. 30 V DC
- Switching current: max. 0.1 A
- Voltage drop: $U_d \leq 2$ V DC
- Switching frequency: 1000 Hz
- Response time: 0.5 ms

#### Ambient conditions
- Ambient temperature: -25 ... 55 °C (-13 ... 131 °F)

#### Mechanical specifications
- Protection degree: IP65
- Connection: 2 m fixed cable
- Material:
  - Housing: ABS
  - Optical face: plastic
  - Cable: PVC
- Mass: 150 g (emitter and receiver)

#### Compliance with standards and directives
- Product standard:
  - IEC 60947-5-2:2007
- 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

### 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

Other suitable accessories can be found at www.pepperl-fuchs.com
### Curves/Diagrams

#### Characteristic response curve

Offset Y [mm]

Distance X [m]

![Characteristic response curve diagram](image)

#### Relative received light strength

Stability control

Relative received light strength

Distance X [m]

![Relative received light strength diagram](image)