



### Model Number

**ML300-8-600-RT/59/102/115**

Diffuse mode sensor  
with 2 m fixed cable

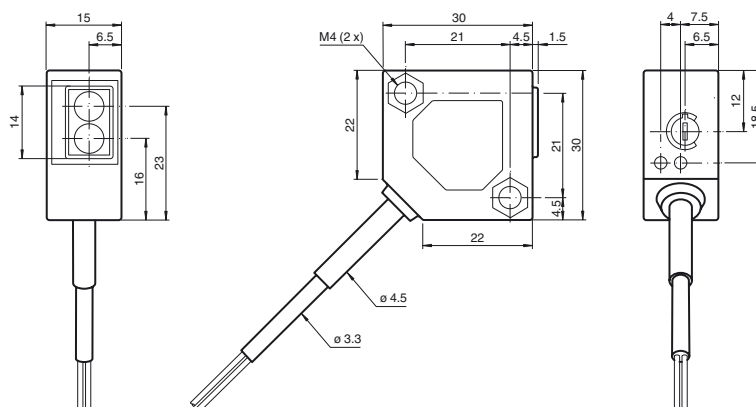
### Features

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

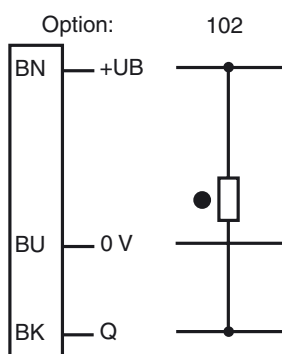
### Product information

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

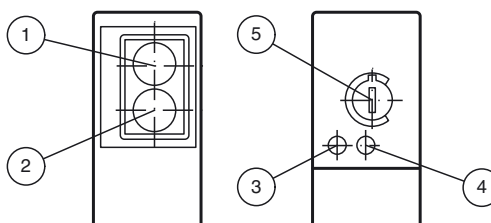


### Electrical connection



- = Light on  
● = Dark on

### Indicators/operating means



|   |                        |        |
|---|------------------------|--------|
| 1 | Receiver               |        |
| 2 | Emitter                |        |
| 3 | Switching state        | yellow |
| 4 | Stability control      | green  |
| 5 | Sensing range adjuster |        |

## Technical data

### General specifications

|                            |                                        |
|----------------------------|----------------------------------------|
| Detection range            | 0 ... 600 mm , adjustable              |
| Adjustment range           | 150 ... 600 mm                         |
| Reference target           | standard white 200 mm x 200 mm         |
| Light source               | LED                                    |
| Light type                 | modulated visible red light , 660 nm   |
| Diameter of the light spot | approx. 130 mm at a distance of 600 mm |
| Angle of divergence        | approx. 13 °                           |
| Ambient light limit        |                                        |
| Continuous light           | 10000 Lux                              |
| Modulated light            | 5000 Lux                               |

### Indicators/operating means

|                    |                                                                                       |
|--------------------|---------------------------------------------------------------------------------------|
| Function indicator | LED yellow: lights up when output is active<br>LEDgreen: Sufficient stability control |
| Control elements   | Detection range adjuster                                                              |

### Electrical specifications

|                        |       |                |
|------------------------|-------|----------------|
| Operating voltage      | $U_B$ | 10 ... 30 V DC |
| Ripple                 |       | max. 10 %      |
| No-load supply current | $I_0$ | max. 30 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 <sub>d</sub>                                                                    | ≤ 2 V DC |
| Switching frequency | f                                                                                 | 1000 Hz  |
| Response time       | 0.5 ms                                                                            |          |

### Ambient conditions

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

### Mechanical specifications

|                      |                 |
|----------------------|-----------------|
| Degree of protection | IP65            |
| Connection           | 2 m fixed cable |
| Material             |                 |
| Housing              | ABS             |
| Optical face         | plastic         |
| Cable                | PVC             |
| Mass                 | 75 g            |

### Compliance with standards and directives

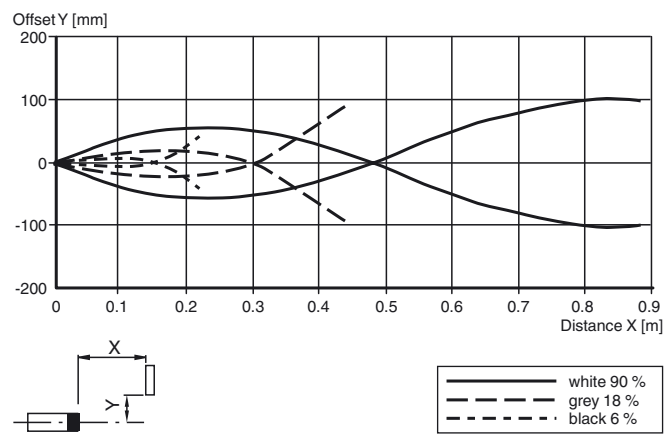
|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| Directive conformity        |                                                   |
| EMC Directive 2004/108/EC   | EN 60947-5-2:2007                                 |
| Standard conformity         |                                                   |
| Product standard            | EN 60947-5-2:2007<br>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 |

### Approvals and certificates

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

## Curves/Diagrams

Characteristic response curve



## 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](http://www.pepperl-fuchs.com)

