

## Diffuse mode sensor

ML300-8-600-RT/25/102/115



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

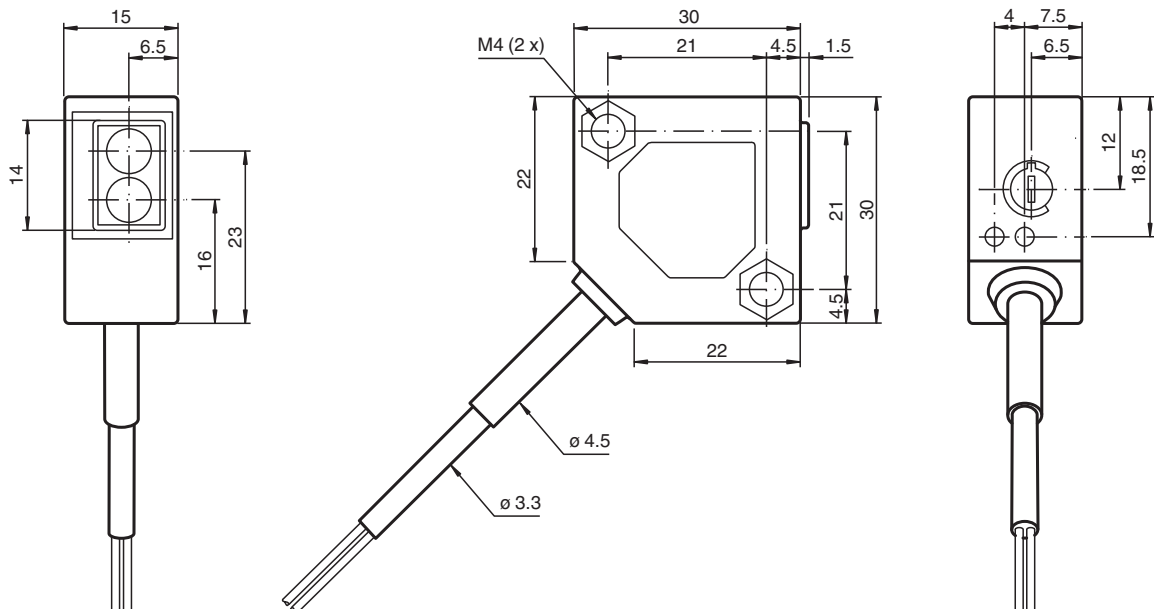
Diffuse mode sensor, miniature design, 600 mm adjustable detection range, red light, light on, NPN output, fixed cable



### 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

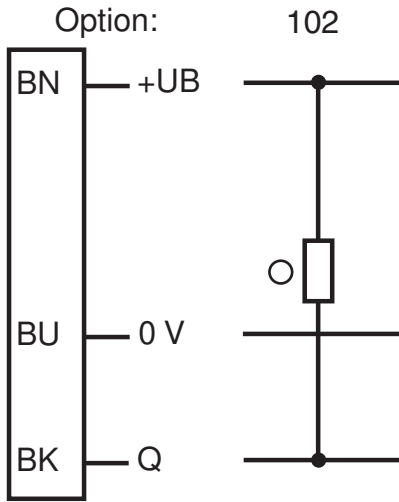


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## Technical Data

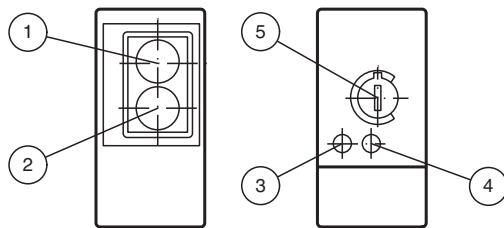
| General specifications                   |       |  |
|--|-------|--|
| Detection range                          |       | 0 ... 600 mm , adjustable  |
| Adjustment range                         |       | 150 ... 600 mm   |
| Reference target                         |       | standard white 200 mm 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   |
| Opening angle                            |       | 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>LED green: Sufficient stability control |
| Control elements                         |       | Sensing range adjuster   |
| Electrical specifications                |       |  |
| Operating voltage                        | $U_B$ | 10 ... 30 V DC   |
| Ripple                                   |       | max. 10 %  |
| No-load supply current                   | $I_0$ | max. 35 mA   |
| Output                                   |       |  |
| Switching type                           |       | light-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                             | $U_d$ | $\leq 2$ 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               |       |  |
| CCC approval                             |       | CCC approval / marking not required for products rated $\leq 36$ 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                                     |       | 75 g   |

**Connection Assignment**



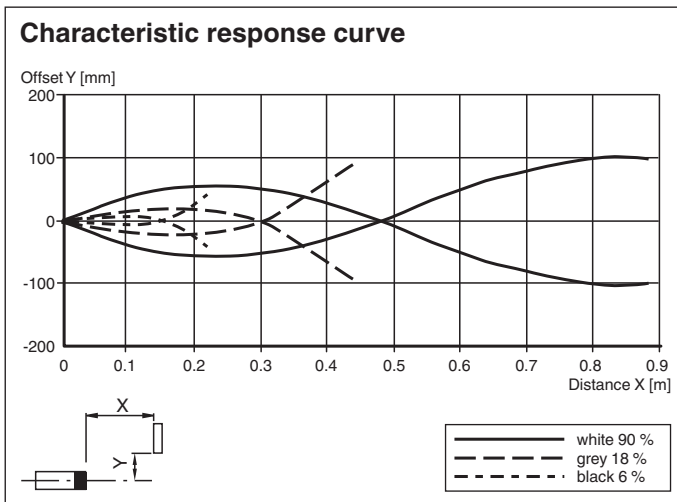
○ = Light on  
● = Dark on

**Assembly**



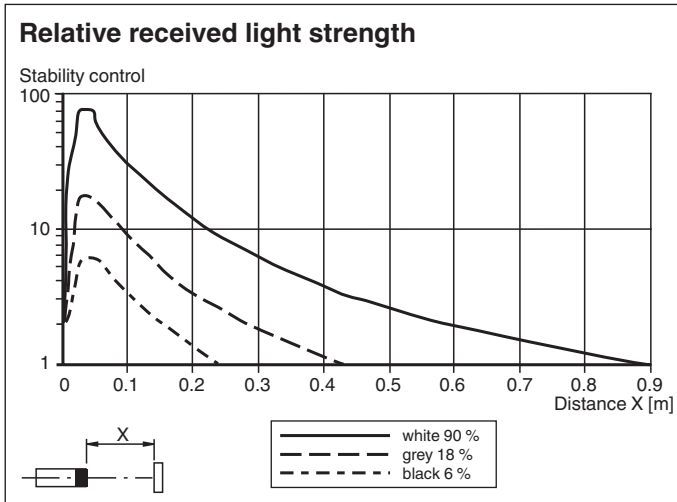
|   |                        |        |
|---|------------------------|--------|
| 1 | Receiver               |        |
| 2 | Emitter                |        |
| 3 | Switching state        | yellow |
| 4 | Stability control      | green  |
| 5 | Sensing range adjuster |        |

**Characteristic Curve**



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## Characteristic Curve



## Accessories

|   |                            |  |
|---|----------------------------|--|
|  | <p><b>OMH-ML300-01</b></p> | <p>Bracket for mounting ML300 series sensors</p> |
|---|----------------------------|--|

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