



Retroreflective sensor
with 3-pin, M8 x 1 connector

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

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.

○ = Light on
● = Dark on

The diagrams illustrate the correct and incorrect placement of a door handle. The left diagram shows the handle centered vertically and horizontally, with callouts 1 and 2. The right diagram shows the handle off-center, with callouts 3, 4, and 5.

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 LEDgreen: 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. 25 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	≤ 2 V DC
Switching frequency	f	1000 Hz
Response time	0.5 ms	

Ambient conditions

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

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

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007
Standard conformity	
Product standard	EN 60947-5-2:2007 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 ≤ 36 V
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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, M8, 3-pin, PVC cable

V3-WM-2M-PVC

Female cordset, M8, 3-pin, PVC cable

V3-GM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

V3-WM-2M-PUR

Cable socket, 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

