



**Model Number**

**ML300-55-2m-RT/59/98/103**

Retroreflective sensor with 3-pin, M8 x 1 connector

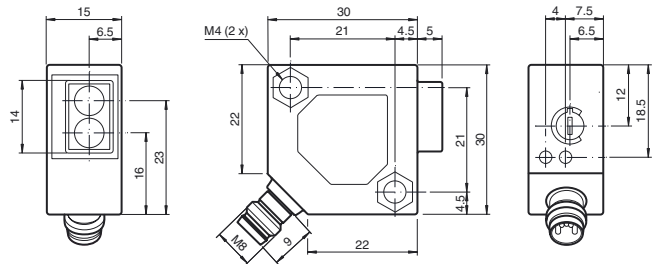
**Features**

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

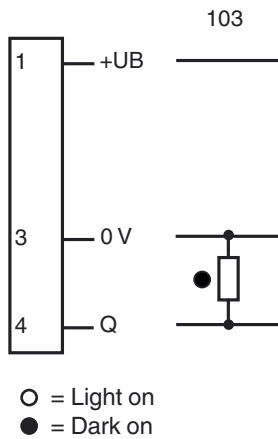
**Product information**

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**



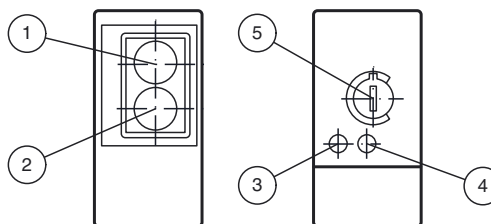
**Electrical connection**



**Pinout**



**Indicators/operating means**



1	Receiver	
2	Emitter	
3	Switching state	yellow
4	Stability control	green
5	Sensitivity adjustment	

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

**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. 20 mA

**Output**

Switching type	dark on	
Signal output	1 PNP 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

**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 $\leq 36$ 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**

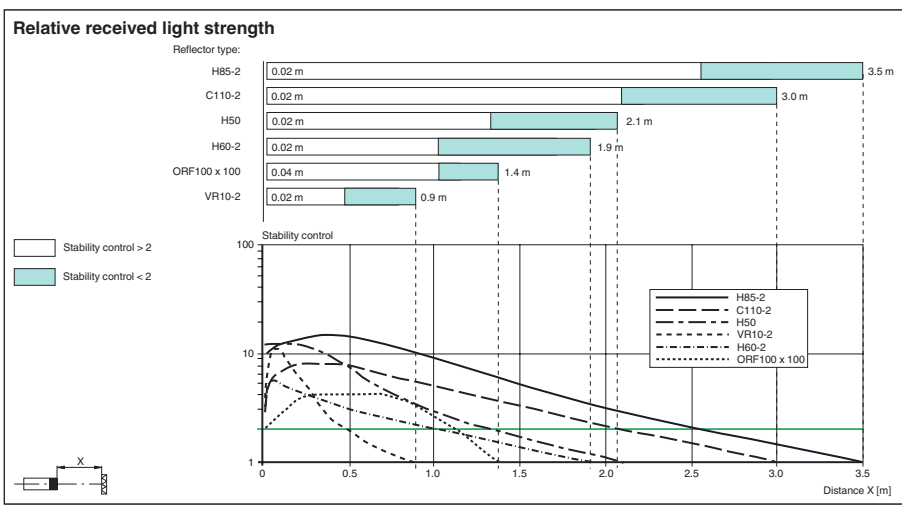
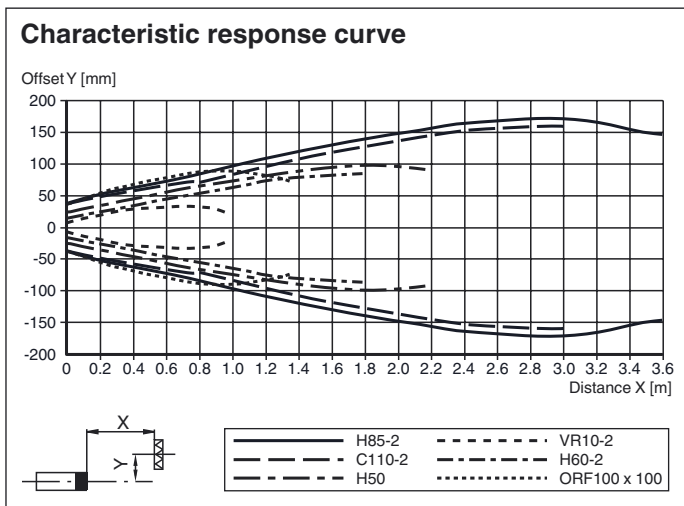
Reflector, rectangular 60 mm x 19 mm, mounting holes

**OFR-100/100**

Reflective tape 100 mm x 100 mm

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Curves/Diagrams**



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