

CE

Model Number

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

Retroreflective sensor
with 3-pin, M8 x 1 connector

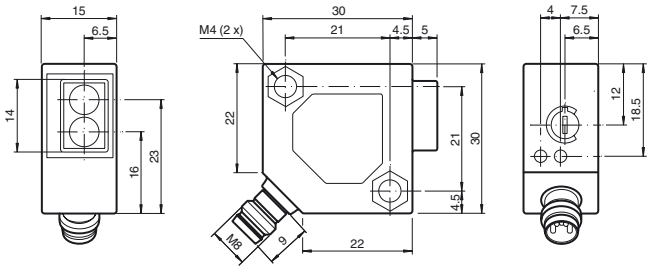
Features

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

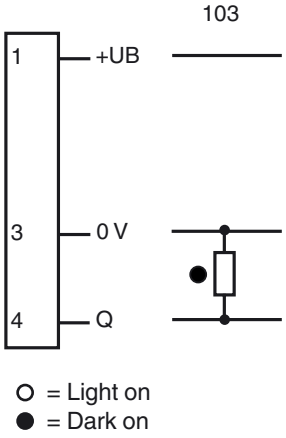
Product information

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

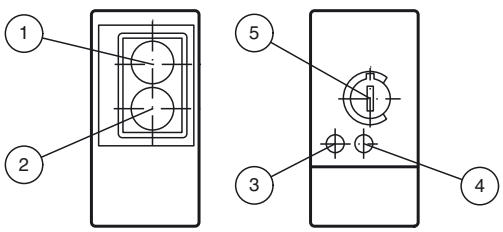


○ = Light on
● = Dark on

Pinout



Indicators/operating means



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

Release date: 2011-12-20 15:55 Date of issue: 2012-01-09 238186_eng.xml

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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
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 display		LED yellow: lights up when output is active LEDgreen: Sufficient stability control
Controls		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, protected from reverse polarity, 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)
Mechanical specifications		
Protection degree		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		
UL approval		no
CCC approval		Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

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
Cable socket, M8, 3-pin, PVC cable

V3-WM-2M-PVC
Cable socket, 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 ø 84 mm, central mounting hole

REF-H50
Reflector, rectangular 51 mm x 51 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

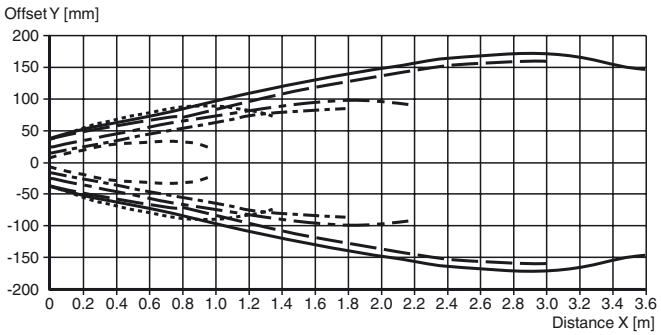
Other suitable accessories can be found at www.pepperl-fuchs.com

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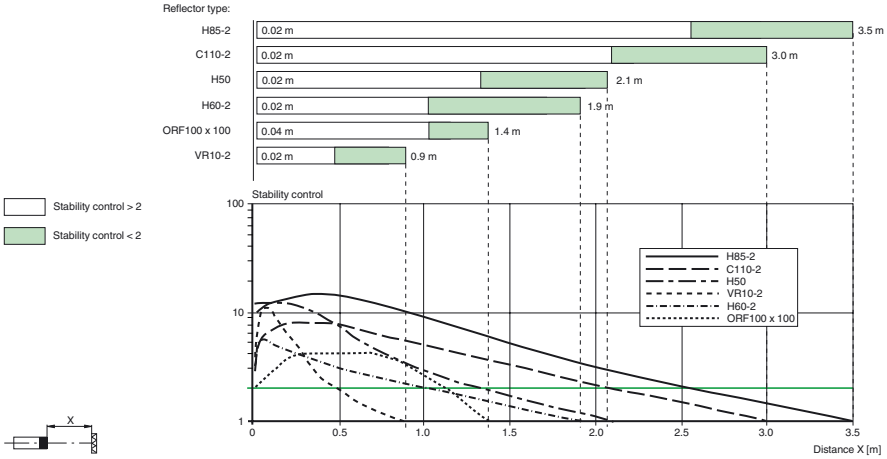
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Curves/Diagrams

Characteristic response curve



Relative received light strength



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