Model Number

ML300-8-H-200-RT/25/98/103

Background suppression sensor
with M8, 3-pin metal connector

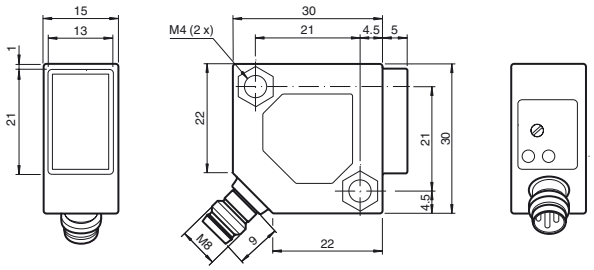
Features

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

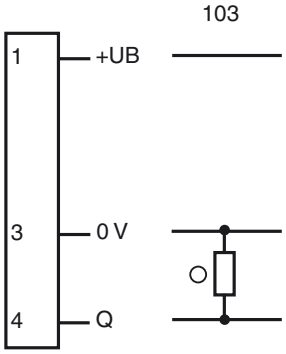
Product information

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

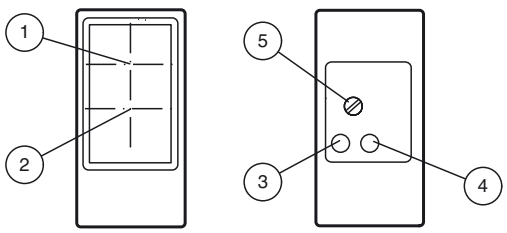


○ = Light on
● = Dark on

Pinout



Indicators/operating means



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

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USA: +1 330 486 0001 fa-info@us.pepperl-fuchs.com
Germany: +49 621 776-4411 fa-info@pepperl-fuchs.com
Singapore: +65 6779 9091 fa-info@sg.pepperl-fuchs.com

Technical data

General specifications		
Detection range		0 ... 200 mm , adjustable
Detection range min.		5 ... 25 mm
Detection range max.		0 ... 200 mm
Adjustment range		25 ... 200 mm
Reference target		standard white, 100 mm x 100 mm
Light source		LED
Light type		modulated visible red light , 660 nm
Black/White difference (6 %/90 %)		15 % at 200 mm
Diameter of the light spot		approx. 12 mm at a distance of 200 mm
Angle of divergence		approx. 3.5 °
Ambient light limit		
Continuous light		10000 Lux
Modulated light		5000 Lux
Accessories provided		Mounting bracket OMH-ML300-01 Screwdriver
Indicators/operating means		
Function display		LED yellow: lights up when output is active LED green: lights when object is detected
Controls		Detection range adjuster
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		max. 20 %
No-load supply current	I_0	max. 25 mA
Output		
Switching type		light 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	≤ 2 V DC
Switching frequency	f	500 Hz
Response time		1 ms
Ambient conditions		
Ambient temperature		-25 ... 55 °C (-13 ... 131 °F)
Mechanical specifications		
Protection degree		IP67
Connection		M8 x 1 connector, 3-pin
Material		
Housing		PBT
Optical face		glass pane
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	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

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

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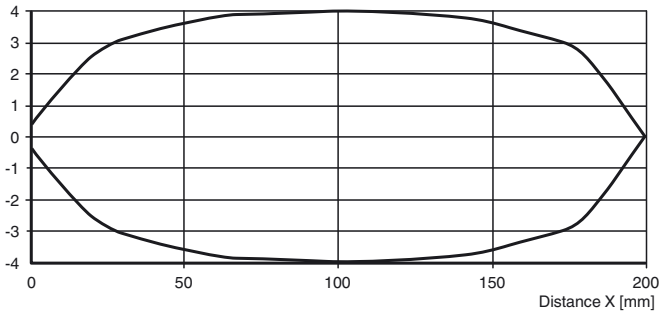
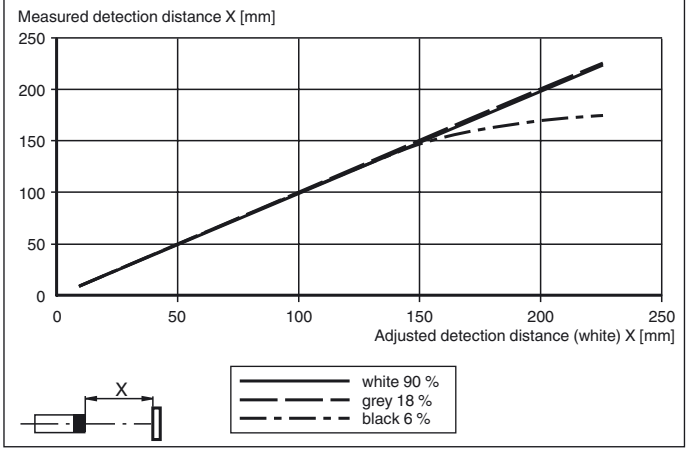
Curves/Diagrams

Characteristic response curve



Difference in detection distance



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