Dimensions

Model Number

ML300-8-H-200-RT/25/95/127

Background suppression sensor
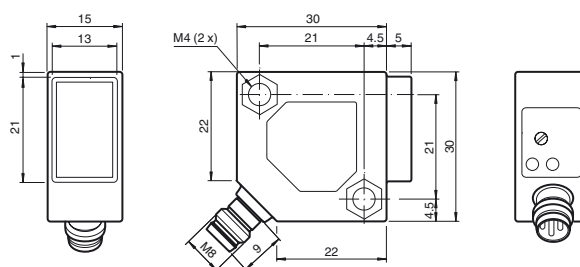with 2 m fixed cable

Features

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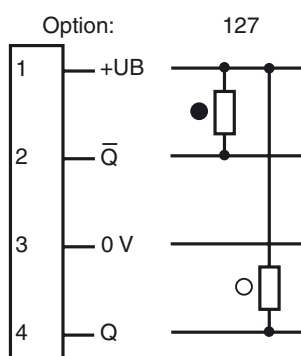- Easy to use
- Visible red light
- 45° connector

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.
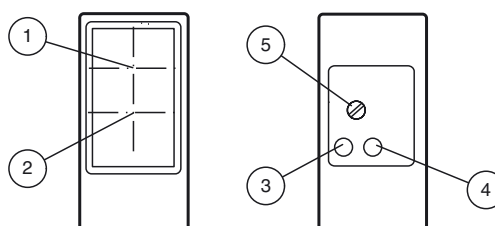
Electrical connection

Option: 127

○ = Light on
● = Dark on

Pinout

Indicators/operating means

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

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

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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 indicator	LED yellow: lights up when output is active LED green: lights when object is detected
Control elements	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 / dark on
Signal output		2 NPN outputs, complementary, short-circuit proof, reverse-polarity protection, 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

Degree of protection	IP67
Connection	M8 x 1 connector, 4-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	CCC approval / marking not required for products rated ≤36 V

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

V31-GM-2M-PVC
Female cordset, M8, 4-pin, PVC cable

V31-WM-2M-PVC
Female cordset, M8, 4-pin, PVC cable

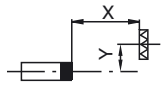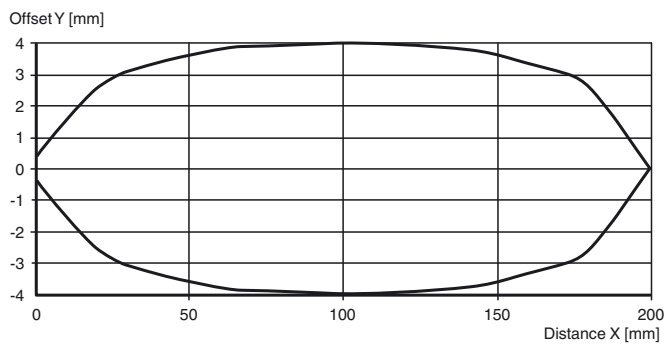**V31-WM-2M-PUR**
Female cordset, M8, 4-pin, PUR cable

V31-GM-2M-PUR
Female cordset, M8, 4-pin, PUR cable

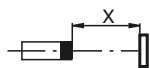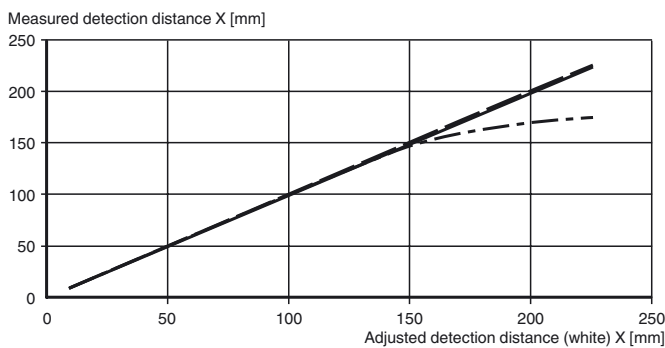Other suitable accessories can be found at www.pepperl-fuchs.com

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Curves/Diagrams

Characteristic response curve

Offset Y [mm]

Distance X [mm]

white 90 %

Difference in detection distance

Measured detection distance X [mm]

Adjusted detection distance (white) X [mm]

white 90 %
grey 18 %
black 6 %

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

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