Dimensions

Model Number

ML300-8-1200-IR/25/82d/103/115

Diffuse mode sensor
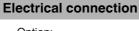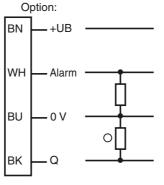with 2 m fixed cable

Features

- Miniature design
- Easy to use
- Infrared light
- High operating range
- 45° cable 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.
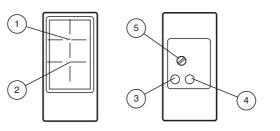
Electrical connection

Option:

BN	+UB	
WH	Alarm	
BU	0 V	
BK	Q	

○ = Light on
● = Dark on

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".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

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Technical data

General specifications

Detection range	0 ... 1200 mm , adjustable
Adjustment range	250 ... 1200 mm
Reference target	standard white 200 mm x 200 mm
Light source	IRED
Light type	modulated infrared light , 880 nm
Diameter of the light spot	approx. 160 mm at a distance of 1200 mm
Angle of divergence	approx. 8 °
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: Sufficient stability control
Control elements	Sensing range adjuster

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC
Ripple		max. 20 %
No-load supply current	I_0	max. 20 mA

Output

Pre-fault indication output		1 PNP, inactive when falling short of the stability control , open collector , short-circuit protected, reverse polarity protected , 100 mA max
Switching type		light on / 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	≤ 2 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms

Conformity

Product standard	EN 60947-5-2

Ambient conditions

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

Mechanical specifications

Housing width	30 mm
Housing height	30 mm
Housing depth	15 mm
Degree of protection	IP67
Connection	2 m fixed cable
Material	
Housing	PBT
Optical face	glass pane
Cable	PVC
Mass	75 g

Compliance with standards and directives

Standard conformity	
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

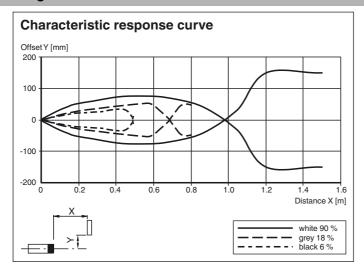**OMH-ML300-02**
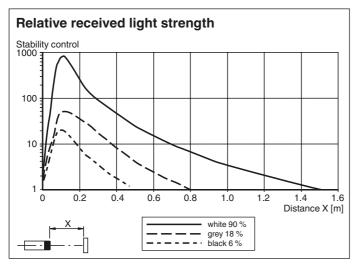Bracket for mounting ML300 series sensors on a 35 mm DIN rail

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

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

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Curves/Diagrams

Characteristic response curve

Offset Y [mm]

Distance X [m]

	white 90 %
	grey 18 %
	black 6 %

Relative received light strength

Stability control

Distance X [m]

	white 90 %
	grey 18 %
	black 6 %

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

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