Dimensions

Model Number

ML300-P-6m-RT/25/98/103

Thru-beam sensor
with 3-pin, M8 x 1 connector

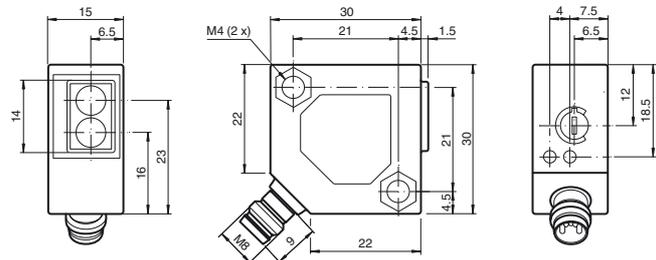## Features

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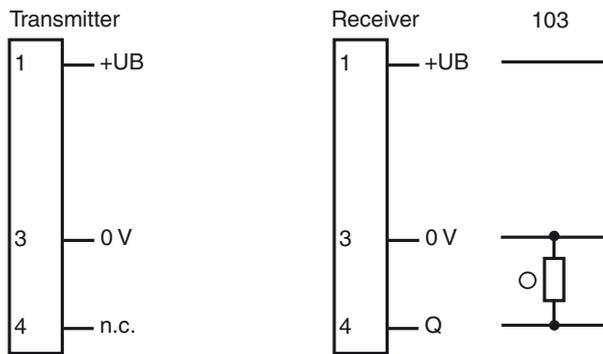- Easy to use
- Visible red light
- 45° connector

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.

Electrical connection

Transmitter

1	+UB
3	0 V
4	n.c.

Receiver   103

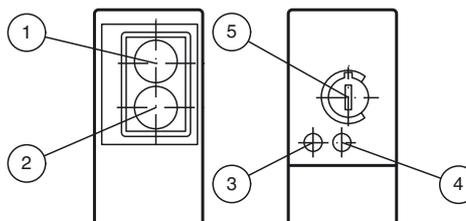| 1 | +UB |
| 3 | 0 V |
| 4 | Q |

○ = Light on
● = Dark on

Pinout

Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
3	BU	(blue)
4	BK	(black)

Indicators/operating means

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

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

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Technical data

System components

Emitter	ML300-T-6m-RT/98
Receiver	ML300-R-6m-RT/25/98/103

General specifications

Effective detection range	0 ... 6 m
Threshold detection range	8 m
Light source	LED
Light type	modulated visible red light 660 nm
Diameter of the light spot	approx. 500 mm at 6 m
Angle of divergence	approx. 5 °
Ambient light limit	
Continuous light	10000 Lux
Modulated light	5000 Lux

Indicators/operating means

Function indicator	LED yellow: lights up when output is active LED green: 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	Emitter: $\leq$ 20 mA Receiver: $\leq$ 20 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	$\leq$ 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

Degree of protection	IP65
Connection	M8 x 1 connector, 3-pin
Material	
Housing	ABS
Optical face	plastic
Connector	metal
Mass	35 g (emitter and receiver)

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

EAC conformity	TR CU 020/2011
CCC approval	CCC approval / marking not required for products rated $\leq$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

V3-GM-2M-PVC
Female cordset, M8, 3-pin, PVC cable
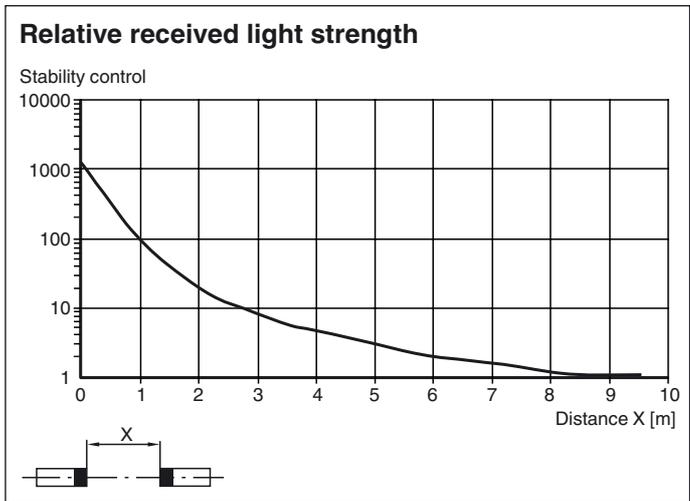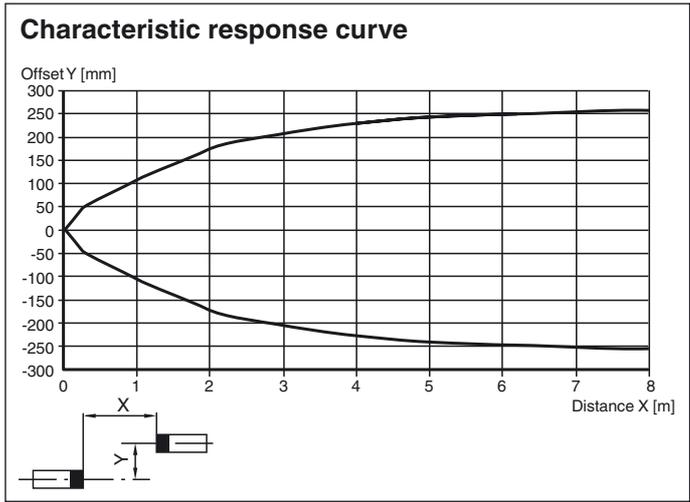
V3-WM-2M-PVC
Female cordset, M8, 3-pin, PVC cable

V3-WM-2M-PUR
Cable socket, M8, 3-pin, PUR cable

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

Curves/Diagrams

Characteristic response curve

Offset Y [mm]

Distance X [m]

Relative received light strength

Stability control

Distance X [m]

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

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