



**Model Number**

**ML300-P-12m-IR/76b/82d/95/103**

Thru-beam sensor  
with 4-pin, M8 x 1 connector

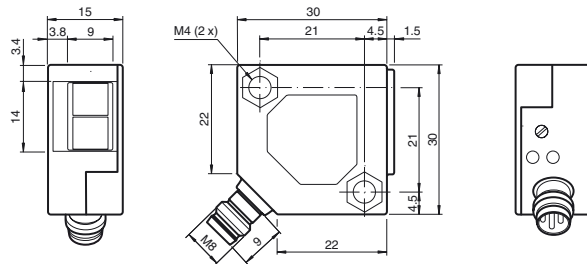
**Features**

- Miniature design
- Easy to use
- Infrared light
- High operating range
- 45° connector

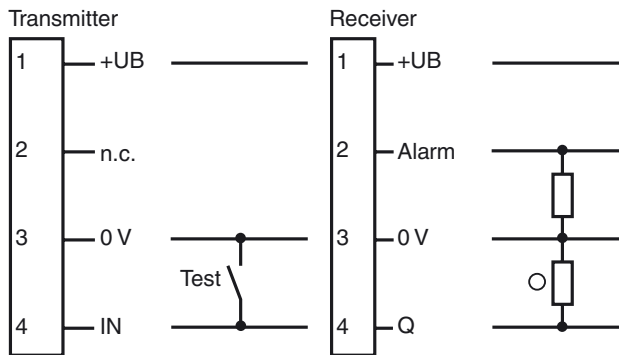
**Product information**

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**

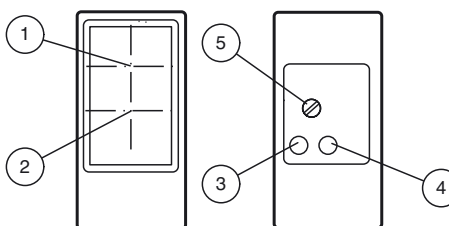


- = Light on
- = Dark on

**Pinout**



**Indicators/operating means**



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

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Subject to modifications without notice

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**Technical data****System components**

Emitter	ML300-T-12m-IR/76b/95
Receiver	ML300-R-12m-IR/25/82d/95/103

**General specifications**

Effective detection range	0 ... 12 m
Threshold detection range	14 m
Light source	IREd
Light type	modulated infrared light 880 nm
Diameter of the light spot	approx. 4 m at 12 m
Angle of divergence	approx. 7 °
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. 20 %
No-load supply current	$I_0$	Emitter: ≤ 15 mA Receiver: ≤ 10 mA

**Input**

Test input	emitter: 1 test input, not activated: < 4 V, activated: > 8 V or open
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**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	
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

**Ambient conditions**

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

Protection degree	IP67
Connection	M8 x 1 connector, 4-pin
Material	
Housing	PBT
Optical face	glass pane
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**

CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.
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**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**

M8, 4-pin socket, PVC cable

**V31-WM-2M-PVC**

M8, 4-pin socket, PVC cable

**V31-GM-5M-PUR**

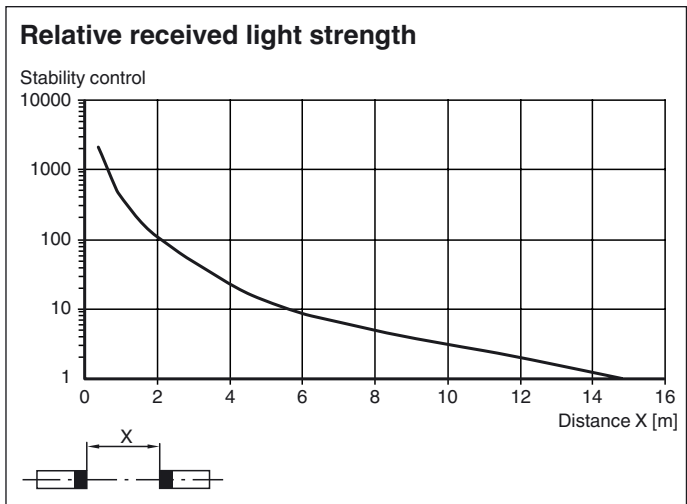
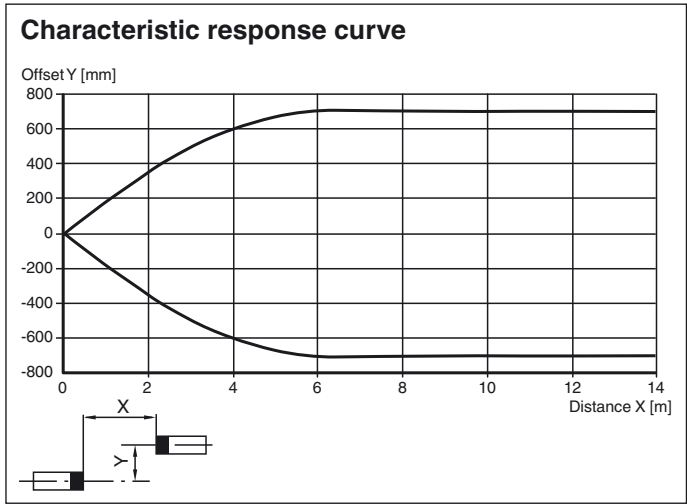
4-pin, M8 socket, PUR cable

**V31-WM-5M-PUR**

4-pin, M8 socket, PUR cable

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Curves/Diagrams**



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