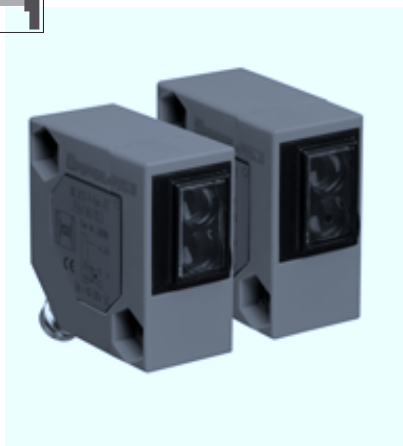




Model Number

ML300-P-12m-IR/76b/95/127

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

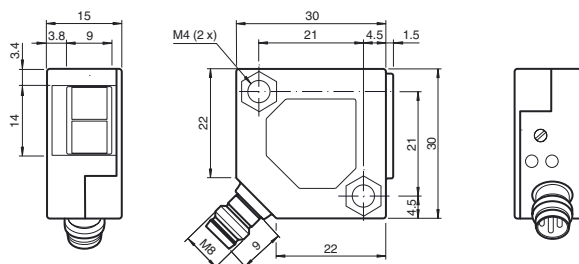
Features

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

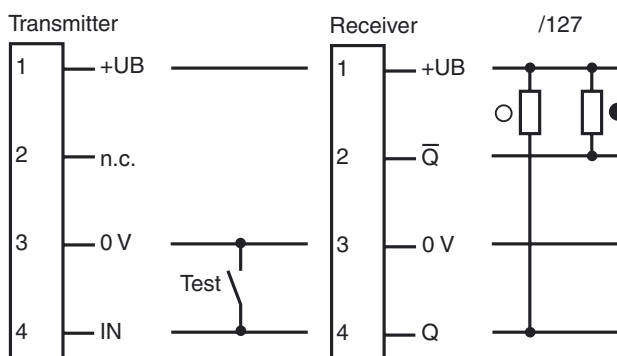
Product information

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

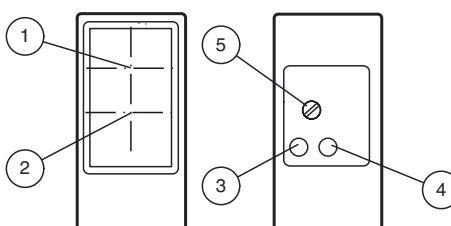


○ = Light on
● = Dark on

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

Technical data

System components

Emitter	ML300-T-12m-IR/76b/95
Receiver	ML300-R-12m-IR/25/95/127

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

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	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

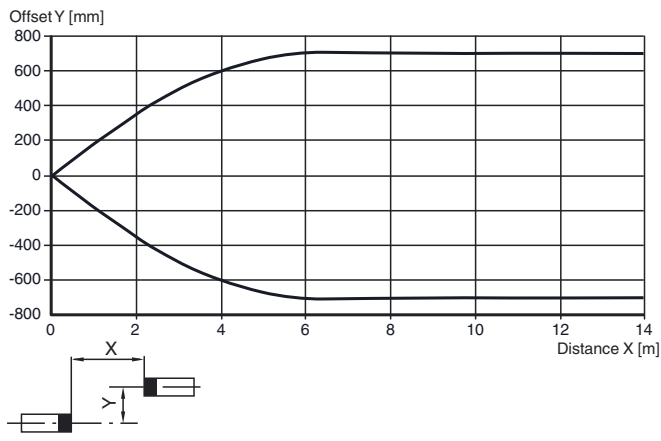
V31-WM-5M-PUR

4-pin, M8 socket, PUR cable

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

Curves/Diagrams

Characteristic response curve



Relative received light strength

