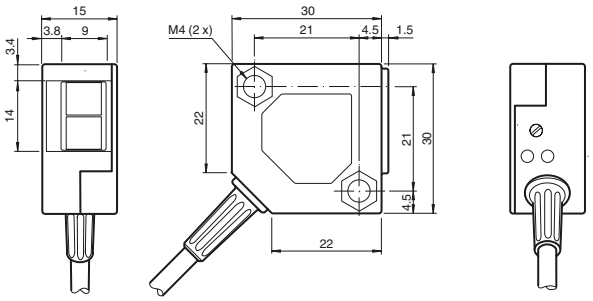
Dimensions



Model Number

ML300-P-12m-IR/76b/115/120

Thru-beam sensor

with 2 m fixed cable

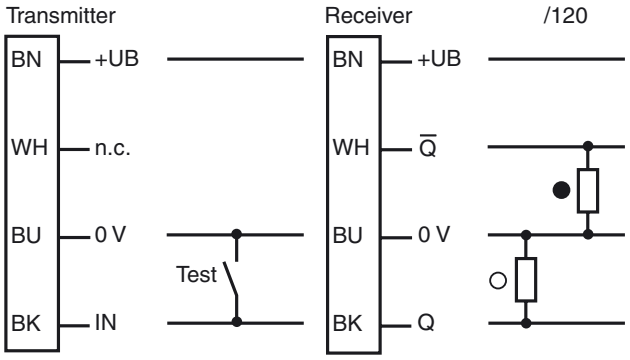
Features

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

Product information

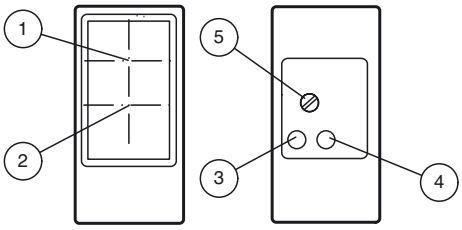
The ML300 series has a robust miniature housing and all the standard functional principles. Of particular note are the sensors with analog output, which return a value proportional to the distance. The 45° plug/cable connection ensures flexible mounting. An LED indicates a weak signal, e.g. due to dirt.

Electrical connection



○ = Light on
● = Dark on

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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Technical data

System components		
Emitter		ML300-T-12m-IR/76b/115
Receiver		ML300-R-12m-IR/25/115/120
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. 1.5 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
Output		
Switching type		light on / dark on
Signal output		2 PNP outputs, complementary, 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)
Mechanical specifications		
Protection degree		IP67
Connection		2 m fixed cable
Material		
Housing		PBT
Optical face		glass pane
Cable		PVC
Mass		150 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.

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

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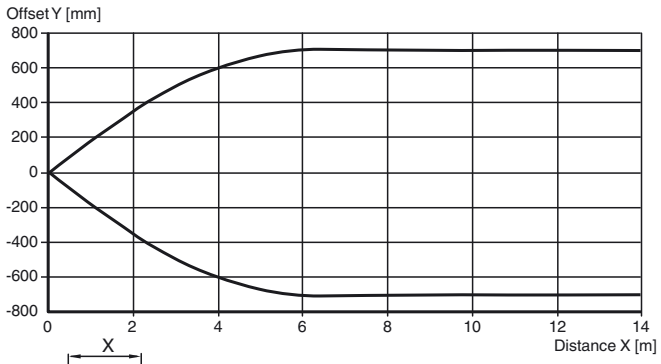
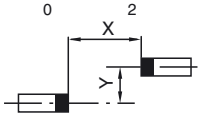
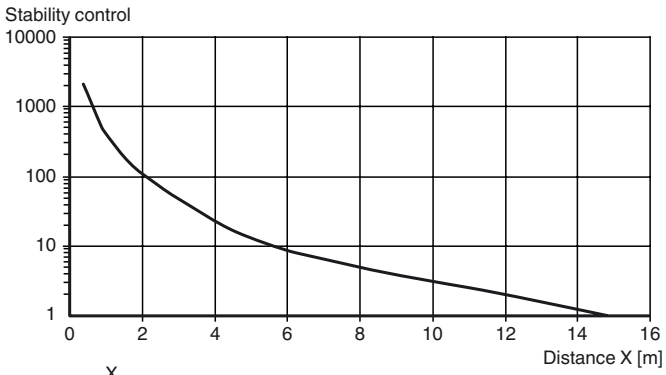
Curves/Diagrams

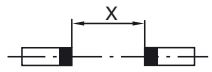
Characteristic response curve





Relative received light strength





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