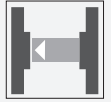




Thru-beam sensor M100/MV100-IR/76b/102/115



- Miniature design
- Easy to use
- Full metal thread mounting
- Highly visible LEDs for Power ON and switching state
- Not sensitive to ambient light

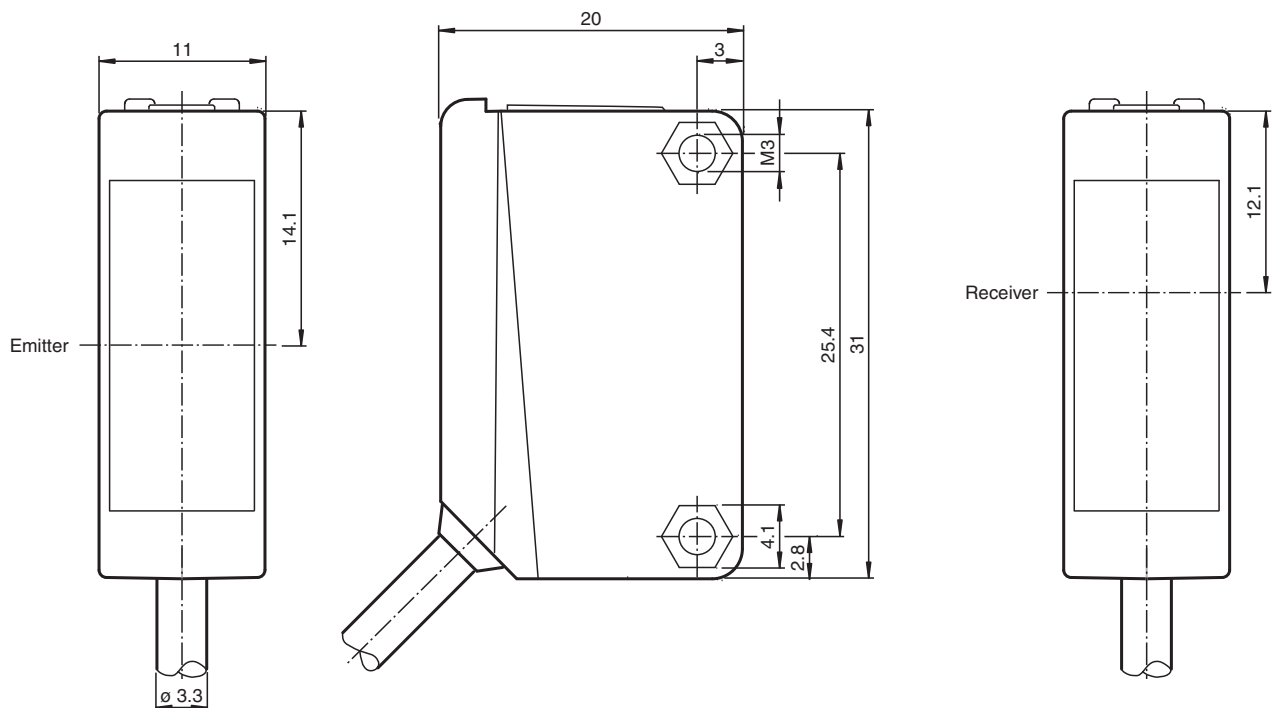
Thru-beam sensor, 15 m detection range, infrared light, light/dark on, DC version, NPN output, sensitivity adjuster, emitter switch-off, fixed cable



Function

The ML100 series is characterized by its miniature housing with integral, all-metal threaded bushings. All versions are equipped with a visible red transmitter LED. This greatly simplifies installation and commissioning. The switching states are easily visible from all directions thanks to the highly visible LEDs.

Dimensions



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

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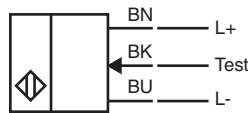
Technical Data

System components			
Emitter		M100-IR/76b/115	
Receiver		MV100-IR/102/115	
General specifications			
Effective detection range		0 ... 15 m	
Threshold detection range		20 m	
Light source		IRED	
Light type		modulated infrared light	
Diameter of the light spot		approx. 1.5 m at a distance of 20 m	
Angle of divergence		approx. 2 °	
Optical face		frontal	
Ambient light limit		EN 60947-5-2	
Functional safety related parameters			
MTTF _d		860 a	
Mission Time (T _M)		20 a	
Diagnostic Coverage (DC)		0 %	
Indicators/operating means			
Operation indicator		LED green: power on	
Function indicator		Receiver: LED yellow, lights up when light beam is free, flashes when falling short of the stability control ; OFF when light beam is interrupted	
Control elements		sensitivity adjustment	
Control elements		Light-on/dark-on changeover switch	
Electrical specifications			
Operating voltage		U _B	10 ... 30 V DC
Ripple		max. 10 %	
No-load supply current		I ₀	Emitter: ≤ 15 mA Receiver: ≤ 8 mA
Input			
Test input		emitter deactivation at 0 V	
Output			
Switching type		The switching type of the sensor is adjustable. The default setting is: light-on	
Signal output		1 NPN output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage		max. 30 V DC	
Switching current		max. 100 mA , resistive load	
Voltage drop		U _d	≤ 1.5 V DC
Switching frequency		f	250 Hz
Response time		2 ms	
Conformity			
Product standard		EN 60947-5-2	
Approvals and certificates			
UL approval		cULus Listed, Class 2 Power Source or listed Power Supply with a limited voltage output with (maybe integrated) fuse (max. 3.3 A according UL248), Type 1 enclosure	
CCC approval		CCC approval / marking not required for products rated ≤36 V	
Ambient conditions			
Ambient temperature		-30 ... 60 °C (-22 ... 140 °F)	
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)	
Mechanical specifications			
Housing width		11 mm	
Housing height		31 mm	
Housing depth		20 mm	
Degree of protection		IP67	
Connection		2 m fixed cable	
Material			
Housing		PC (Polycarbonate)	

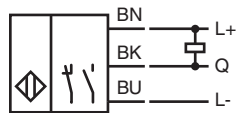
Technical Data

Optical face	PMMA
Mass	approx. 100 g (emitter and receiver)
Tightening torque, fastening screws	0.6 Nm
Cable length	2 m

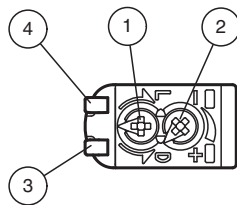
Connection



Connection

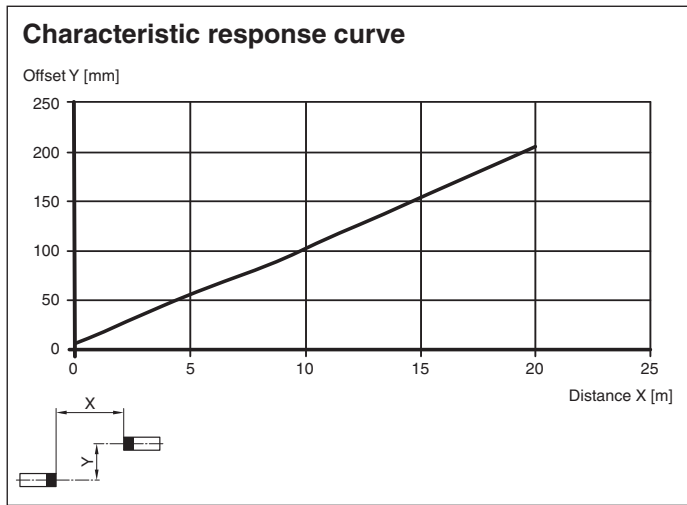


Assembly

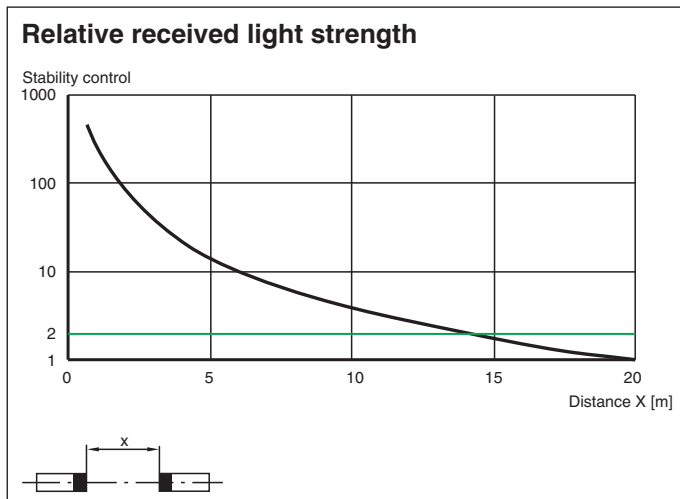


1	Light-Dark-switching	
2	Sensitivity adjuster	
3	Signal display	yellow
4	Operating display	green

Characteristic Curve



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Accessories

	OMH-ML100-09	Mounting aid for round steel $\varnothing$ 12 mm or sheet 1.5 mm ... 3 mm
	OMH-ML100-01	Mounting aid for ML100 series, mounting bracket
	OMH-ML100-02	Mounting aid for ML100 series, mounting bracket
	OMH-ML100-03	Mounting aid for round steel $\varnothing$ 12 mm or sheet 1.5 mm ... 3 mm
	OMH-ML100-04	Mounting aid for ML100 series, mounting bracket
	OMH-ML100-05	Mounting aid for ML100 series, mounting bracket
	OMH-F10-ML100	Mounting aid for ML100 series
	OMH-10	Mounting aid
	OMH-ML100-S2	Mounting aid for ML100 series, mounting bracket