



Retroreflective sensor ML100-6-5052



- User-friendliest photoelectric sensor series for standard applications
- Miniature design
- Not sensitive to ambient light
- Metal-reinforced fastening holes
- Additional resistance 10 kOhm
- Version with infrared light

Retroreflective sensor without polarization filter



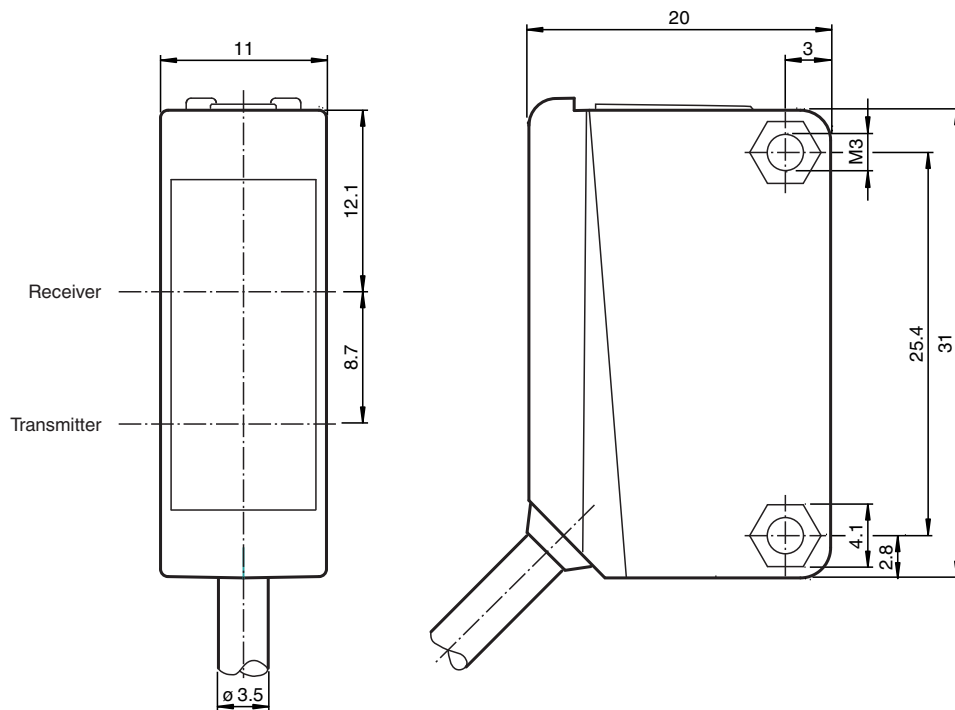
Function

The optical sensors of this series are suitable for both standard and demanding applications. The series features a miniature housing design, two M3 metal-threaded mounting holes and a highly visible LED status indicator. Each device is equipped with a sensitivity adjuster and a light-on/dark-on changeover switch for increased flexibility. A wide variety of versions are available in both infrared light and red light with PowerBeam for easy alignment. Special versions with BlueBeam are suitable for challenging applications like those in the solar and battery industries.

Application

- Presence monitoring for general machine automation
- Congestion monitoring
- Track loading
- Completeness checks
- Object tracking - solar cells/float glass/LCD detection

Dimensions



Technical Data

General specifications

Effective detection range	0 ... 7.5 m
Reflector distance	0.1 ... 7.5 m
Threshold detection range	9 m
Reference target	H50 reflector
Light source	IRED
Light type	modulated infrared light
Polarization filter	no
Diameter of the light spot	approx. 650 mm at a distance of 9 m
Opening angle	approx. 4 °
Optical face	frontal
Ambient light limit	EN 60947-5-2:2007+A1:2012

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 LED yellow: switching state
Control elements	sensitivity adjustment
Control elements	Light-on/dark-on changeover switch

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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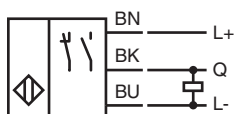
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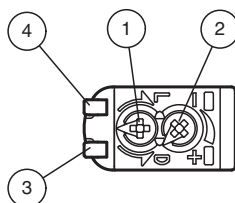
Technical Data

Ripple		max. 10 %
No-load supply current	I_0	< 20 mA
Output		
Switching type	The switching type of the sensor is adjustable. The default setting is: light-on	
Signal output	1 PNP, short-circuit protected, with 10 kOhm pull-down-resistor ; reverse polarity protected	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA , resistive load	
Voltage drop	U_d	≤ 1.5 V DC
Switching frequency	f	500 Hz
Response time	1 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	fixed cable	
Material		
Housing	PC (Polycarbonate)	
Optical face	PMMA	
Mass	approx. 30 g	
Tightening torque, fastening screws	0.6 Nm	
Cable length	0.5 m	

Connection

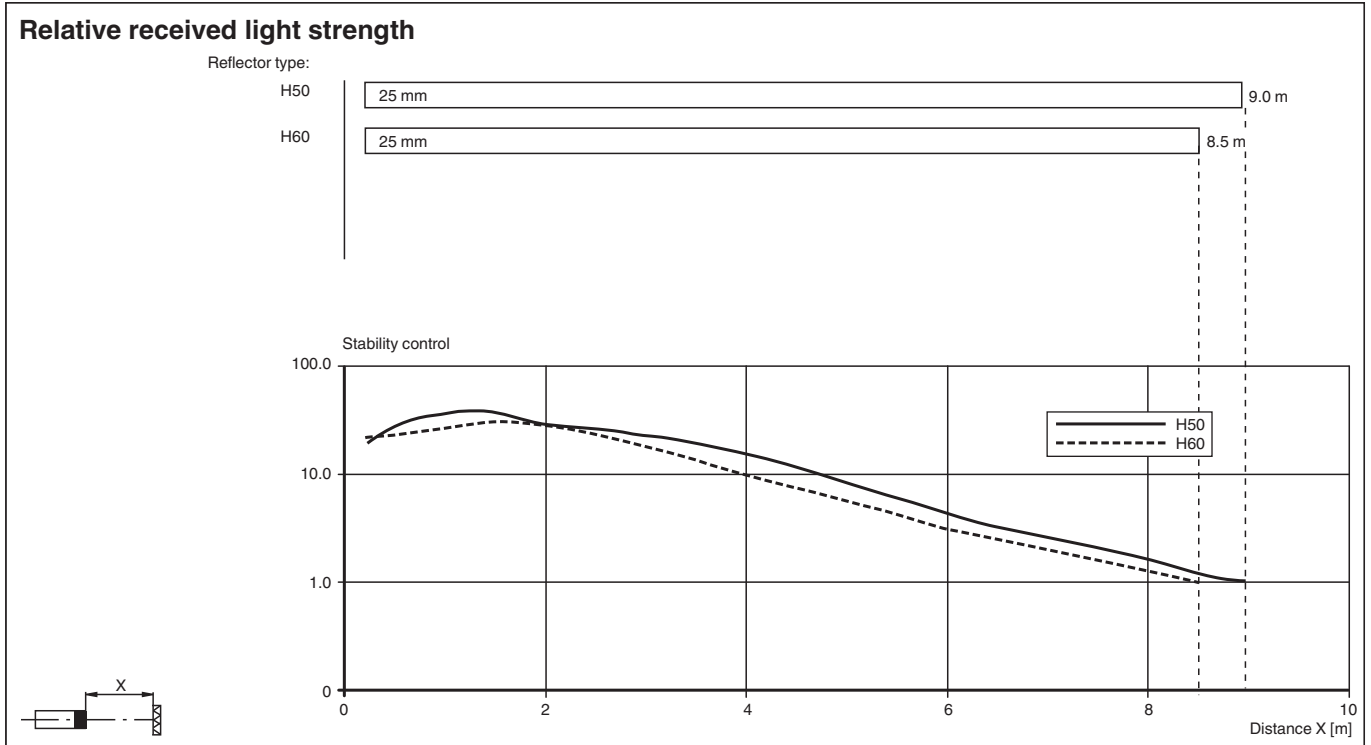
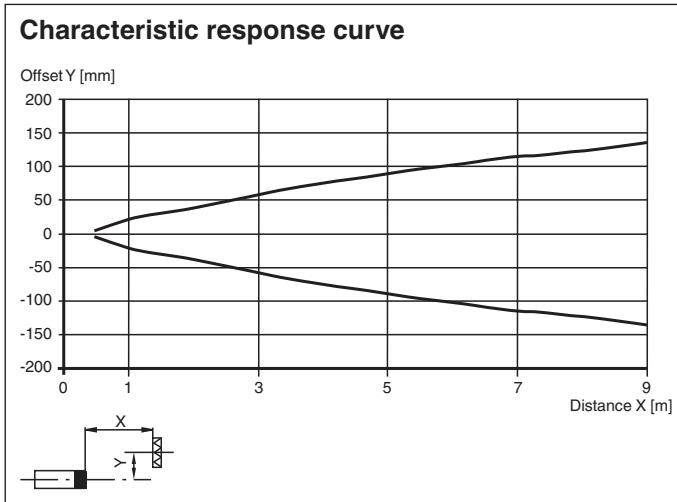


Assembly



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

Characteristic Curve







System Description

System Description


The retro-reflective sensor contains both an emitter and a receiver in a single housing. A reflector reflects the light from emitter back to the receiver. If an object interrupts the light beam, the switching function is initiated.

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

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Accessories

	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 for ML100 series
	REF-H33	Reflector with screw fixing
	REF-H85-2	Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes
	REF-H50	Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap
	OFR-100/100	Reflective tape 100 mm x 100 mm