



Retroreflective sensor

ML100-55-8032



- No controls
- Miniature design
- Easy to use
- Clearly visible LEDs for Power ON, switching state and weak signal indication
- Very bright, highly visible light spot
- Full metal thread mounting
- Not sensitive to ambient light

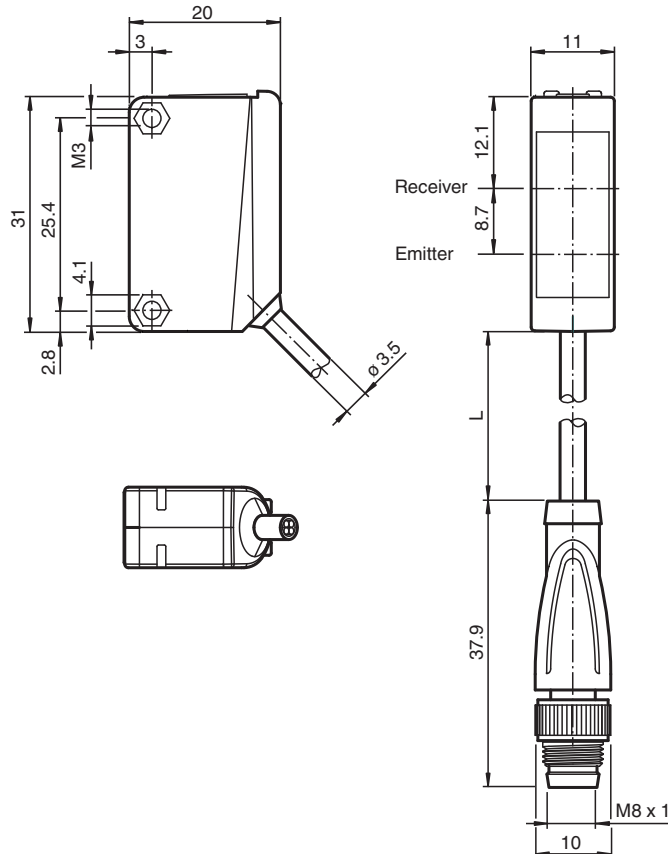
Retroreflective sensor with polarization filter, plastic housing, 5 m detection range, red light, dark on, DC version, PNP output, no controls, fixed cable with M8 plug



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.

Dimensions



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

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PEPPERL+FUCHS

Technical Data

General specifications

Effective detection range	0 ... 5 m
Reflector distance	0.01 ... 5 m
Threshold detection range	7 m
Reference target	H50 reflector
Light source	LED
Light type	modulated visible red light
Polarization filter	yes
Diameter of the light spot	approx. 500 mm at a distance of 7 m
Opening angle	approx. 4 °
Optical face	frontal
Ambient light limit	EN 60947-5-2:2007+A1:2012
Accessories provided	Adapter plate

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	LED yellow: lights up when receiving the light beam ; flashes when falling short of the operating reserve; OFF when light beam is interrupted

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	< 20 mA

Output

Switching type	dark-on	
Signal output		1 PNP 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	1000 Hz
Response time	0.5 ms	

Conformity

Product standard	EN 60947-5-2
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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

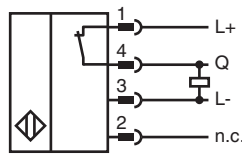
Housing width		11 mm
Housing height		31 mm
Housing depth		20 mm
Degree of protection		IP67
Connection		300 mm fixed cable with M8 connector, 4-pin
Material		
Housing		PC (Polycarbonate)
Optical face		PMMA
Cable		
Length	L	0.3 m

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Mass	approx. 20 g	
Tightening torque, fastening screws		0.6 Nm

Connection



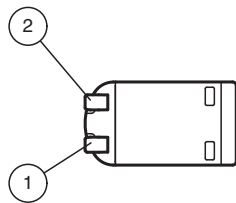
Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Indication

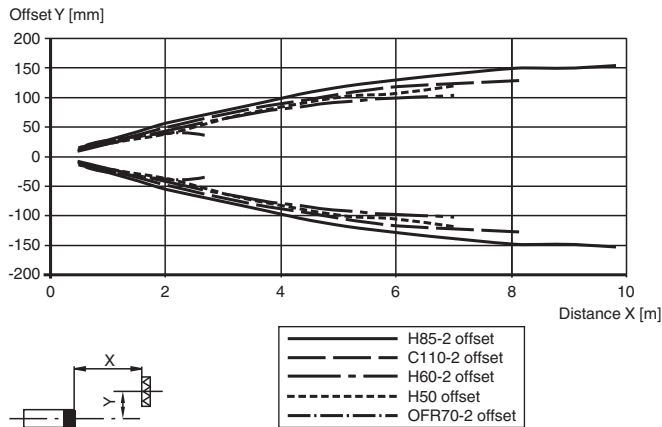


1	Signal display	yellow
2	Operating display	green

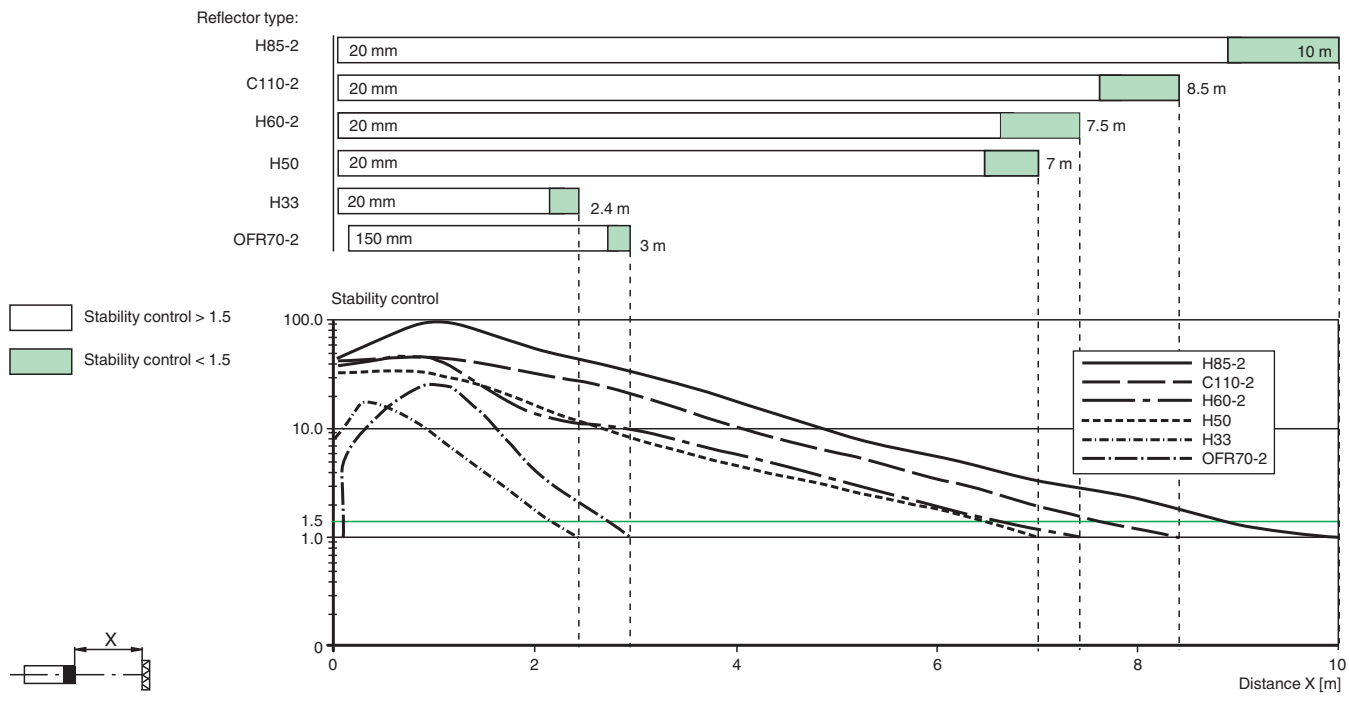
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Characteristic Curve

Characteristic response curve




Relative received light strength (typical)



Accessories

	OFR-70-2	Reflective tape 70 mm x 70 mm
	V31-GM-2M-PUR	Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey
	ADAPTER ML100	Adapter plate
	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

Accessories

	OFR-100/100	Reflective tape 100 mm x 100 mm
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