



# Retroreflective sensor RL28-55/49/82b/105

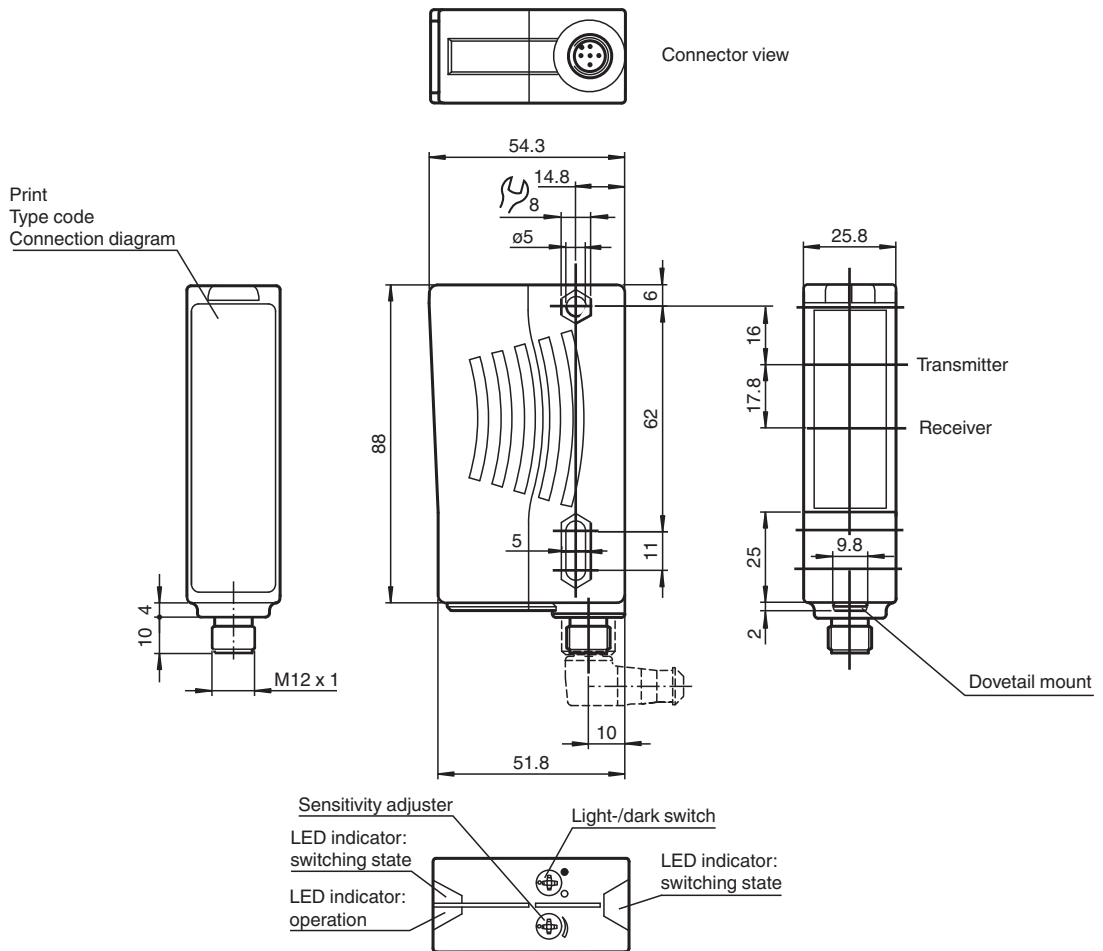


- Ultra bright LEDs for power on, weak signal indication and switching state
- Not sensitive to ambient light, even with switched energy saving lamps
- Waterproof, degree of protection IP67
- Protection class II

Retroreflective sensor with polarization filter



## Dimensions



Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 419081\_eng.pdf

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

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## Technical Data

General specifications		
Effective detection range		0 ... 17 m
Reflector distance		0.05 ... 17 m
Threshold detection range		21 m
Reference target		H85-2 reflector
Light source		LED
Light type		modulated visible red light , 660 nm
Polarization filter		yes
Diameter of the light spot		approx. 290 mm at a distance of 17 m
Opening angle		emitter 1.2° receiver 2°
Ambient light limit		80000 Lux
Functional safety related parameters		
MTTF <sub>d</sub>		950 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green
Function indicator		2 LEDs yellow, light up when light beam is free, flash when falling short of the stability control, off when light beam is interrupted
Control elements		sensitivity adjustment (Adjustment to < 25% of the effective operating range) , Light-on/dark-on changeover switch
Electrical specifications		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		10 %
No-load supply current	I <sub>0</sub>	≤ 40 mA
Output		
Stability alarm output		1 PNP, inactive when falling short of the stability control for 10;s immediately inactive if 4 light beam interruptions take place
Switching type		light/dark on switchable
Signal output		1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected , open collectors
Switching voltage		max. 30 V DC
Switching current		max. 200 mA
Switching frequency	f	1000 Hz
Response time		0.5 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
Protection class		II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval		E87056 , cULus Listed , class 2 power supply , type rating 1
Ambient conditions		
Ambient temperature		-40 ... 60 °C (-40 ... 140 °F)
Storage temperature		-40 ... 60 °C (-40 ... 140 °F)
Mechanical specifications		
Housing width		25.8 mm
Housing height		88 mm
Housing depth		54.3 mm
Degree of protection		IP67
Connection		5-pin, M12 x 1 connector
Material		
Housing		Plastic ABS
Optical face		plastic
Connector		plastic

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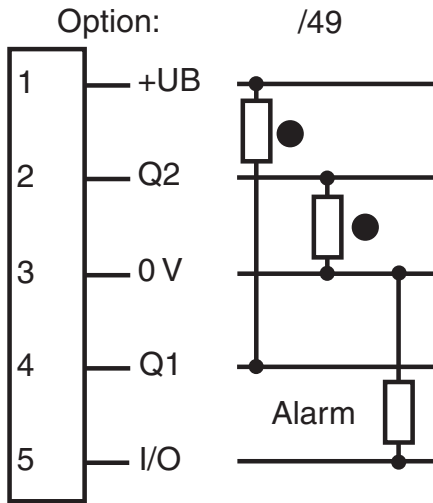
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**Technical Data**

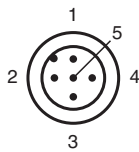
Mass	70 g
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**Connection Assignment**



○ = Light on  
● = Dark on

**Connection Assignment**



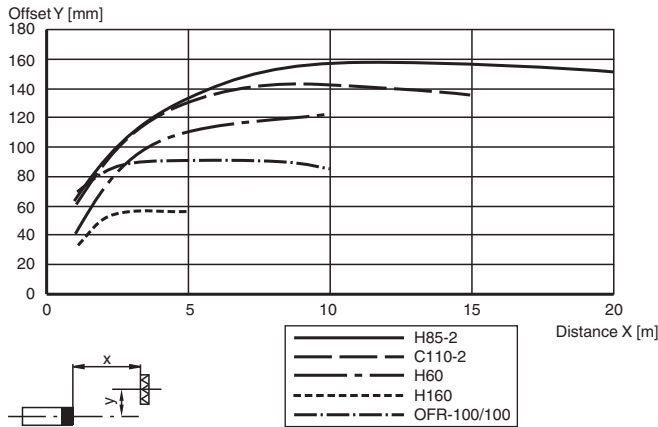
Wire colors in accordance with EN 60947-5-2

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

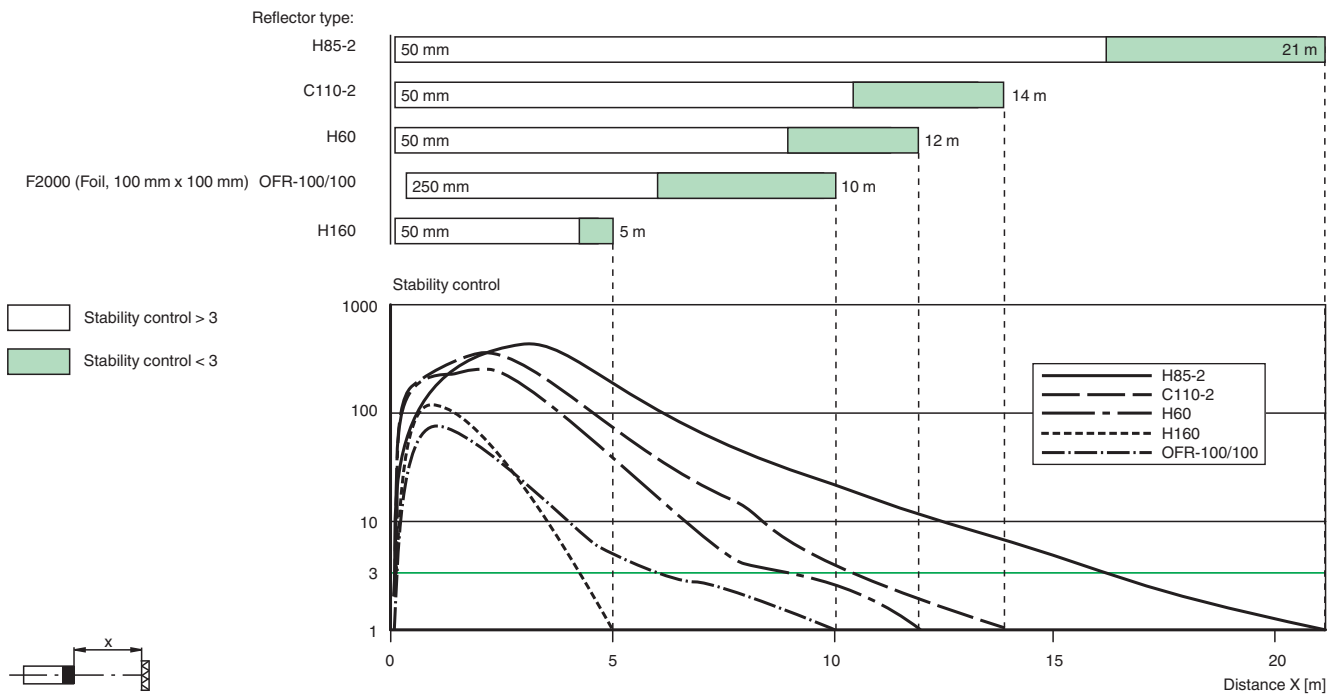
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# Characteristic Curve

## Characteristic response curve



## Relative received light strength



# Application



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## Accessories

	<b>OMH-05</b>	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
	<b>OMH-21</b>	Mounting bracket: mounting aid for sensors in the RL* series
	<b>OMH-22</b>	Mounting aid for RL* series
	<b>OMH-RLK29-HW</b>	Mounting bracket for rear wall mounting
	<b>OMH-RL28-C</b>	Weld slag cover model