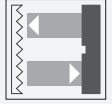




# Retroreflective sensor

## RL81-54/25/31/115

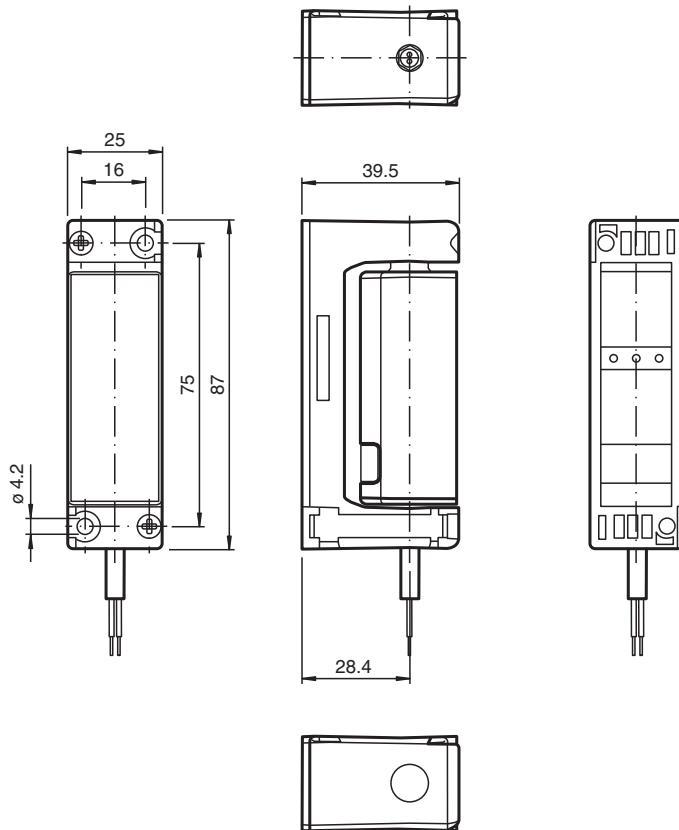


- Retroreflective sensor with polarization filter and foreground suppression for suppressing reflective objects
- Relay output

Retroreflective sensor with polarization filter



### Dimensions



### Technical Data

General specifications	
Effective detection range	REF-H88x25 0 ... 6 m REF-H88x50 0 ... 12 m
Reflector distance	REF-H88x25 2.6 ... 10 m REF-H88x50 2.5 ... 15.5 m

Release date: 2023-07-17 Date of issue: 2023-07-17 Filename: 303375\_eng.pdf

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

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## Technical Data

Threshold detection range		REF-H88x25 10 m REF-H88x50 15.5 m
Reference target		REF-H88x25
Light source		LED
Light type		modulated visible red light , 640 nm
Diameter of the light spot		approx. 200 mm at a distance of 6 m
Opening angle		3 °
Ambient light limit		EN 60947-5-2 10000 Lux
<b>Functional safety related parameters</b>		
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
Function indicator		LED yellow
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	12 ... 24 V AC/DC
Ripple		10 %
No-load supply current	I <sub>0</sub>	≤ 50 mA
Time delay before availability	t <sub>v</sub>	< 300 ms
<b>Output</b>		
Switching type		light-on
Signal output		Relay, 1 alternator Relay energized: Light beam is not interrupted
Switching voltage		max. 50 V AC ; 60 V DC
Switching current		max. 1 A
Switching power		max: 30 W ; 60 VA
Response time		Light beam unobstructed to light beam interrupted: 10 ms Light beam interrupted to light beam unobstructed: 80 ms
<b>Conformity</b>		
Product standard		EN 60947-5-2
<b>Approvals and certificates</b>		
CCC approval		CCC approval / marking not required for products rated ≤36 V
<b>Ambient conditions</b>		
Ambient temperature		-30 ... 60 °C (-22 ... 140 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP65
Connection		2-meter PVC cable
Material		
Housing		Polycarbonate
Optical face		PMMA
Mass		approx. 155 g

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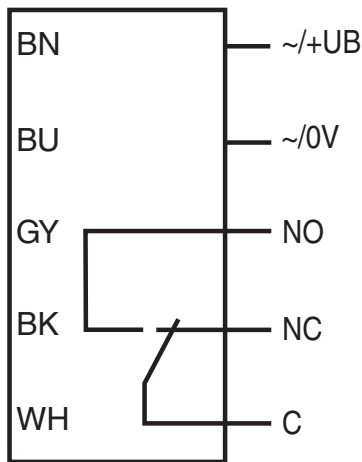
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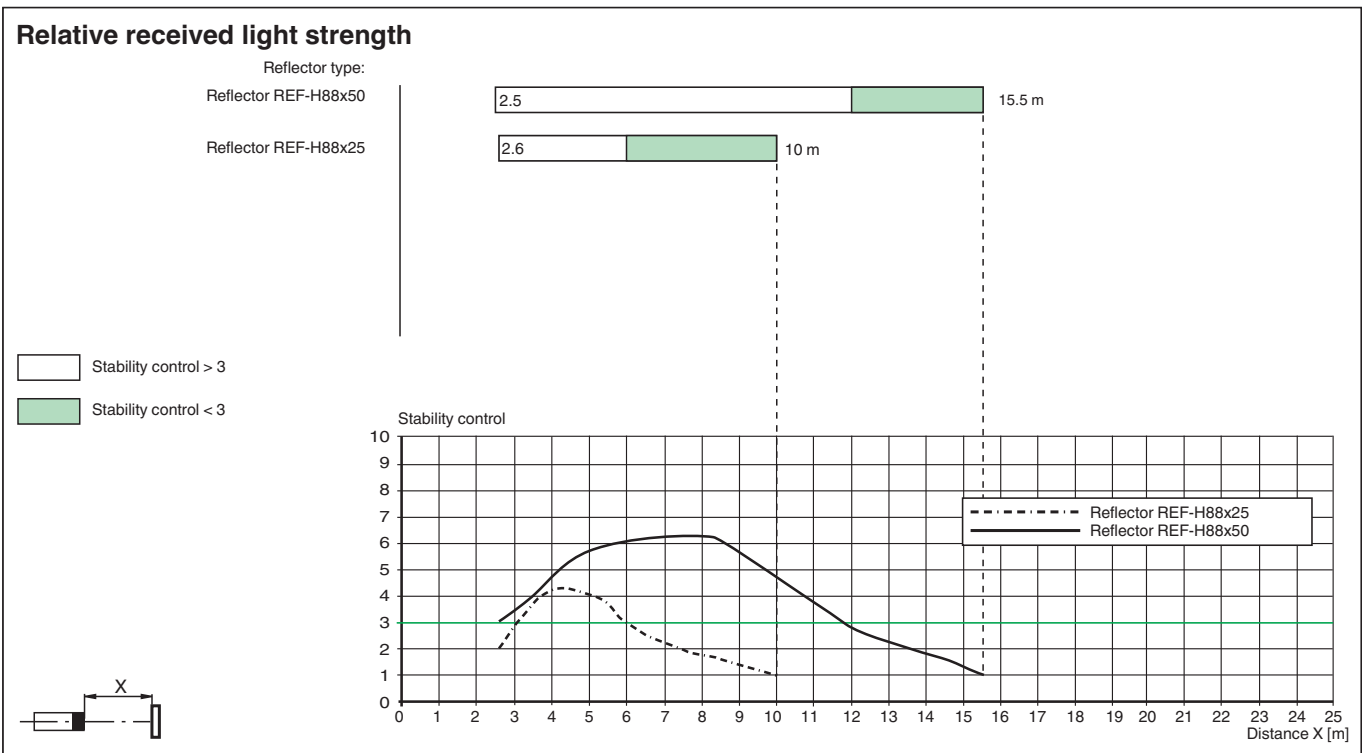
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 **PEPPERL+FUCHS**

**Connection Assignment**



**Characteristic Curve**



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## Indication

LED yellow	Stability control	Description
< 15 min after power up (set-up)		
off	SC > 3	light beam free, sensor ideal aligned or positioned for longest operating time
flashes 2 Hz	1 < SC < 3	sensor not properly aligned, sensor or reflector dirty
on	SC < 1	sensor misaligned or light beam interrupted
> 15 min after power up (operating)		
off	SC > 1,5	light beam free
flashes 4 Hz	1 < SC < 1,5	sensor or reflector dirty
on	SC < 1	light beam interrupted