



# Retroreflective sensor

## RL80-54/25/76b/103/115

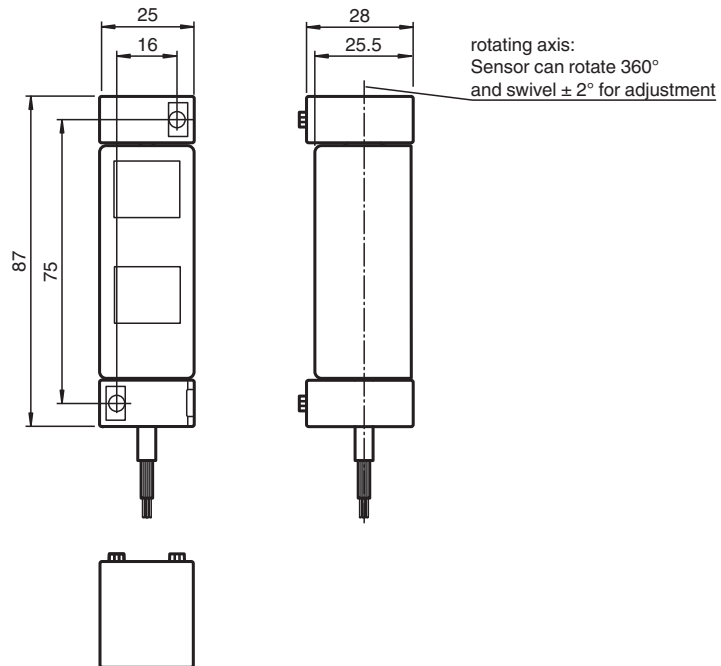


- Retroreflective sensor with polarization filter and foreground suppression for suppressing reflective objects
- PNP version
- Test input

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
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

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

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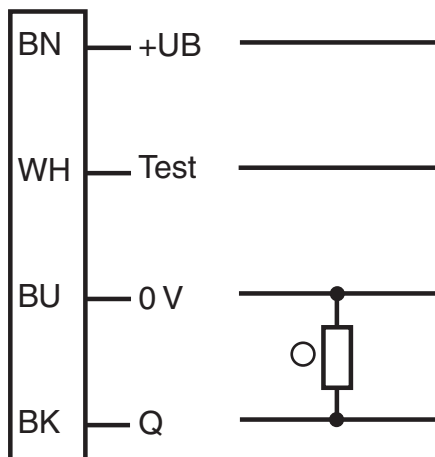
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## Technical Data

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>	10 ... 30 V
Ripple		10 %
No-load supply current	I <sub>0</sub>	≤ 10 mA
Time delay before availability	t <sub>v</sub>	< 300 ms
<b>Input</b>		
Test input		emitter deactivation at 0 V and if test input is left unconnected
<b>Output</b>		
Switching type		light-on
Signal output		1 PNP, short-circuit protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Voltage drop	U <sub>d</sub>	≤ 1.5 V
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
<b>Material</b>		
Housing		Polycarbonate
Optical face		PMMA
Mass		approx. 155 g

## Connection Assignment



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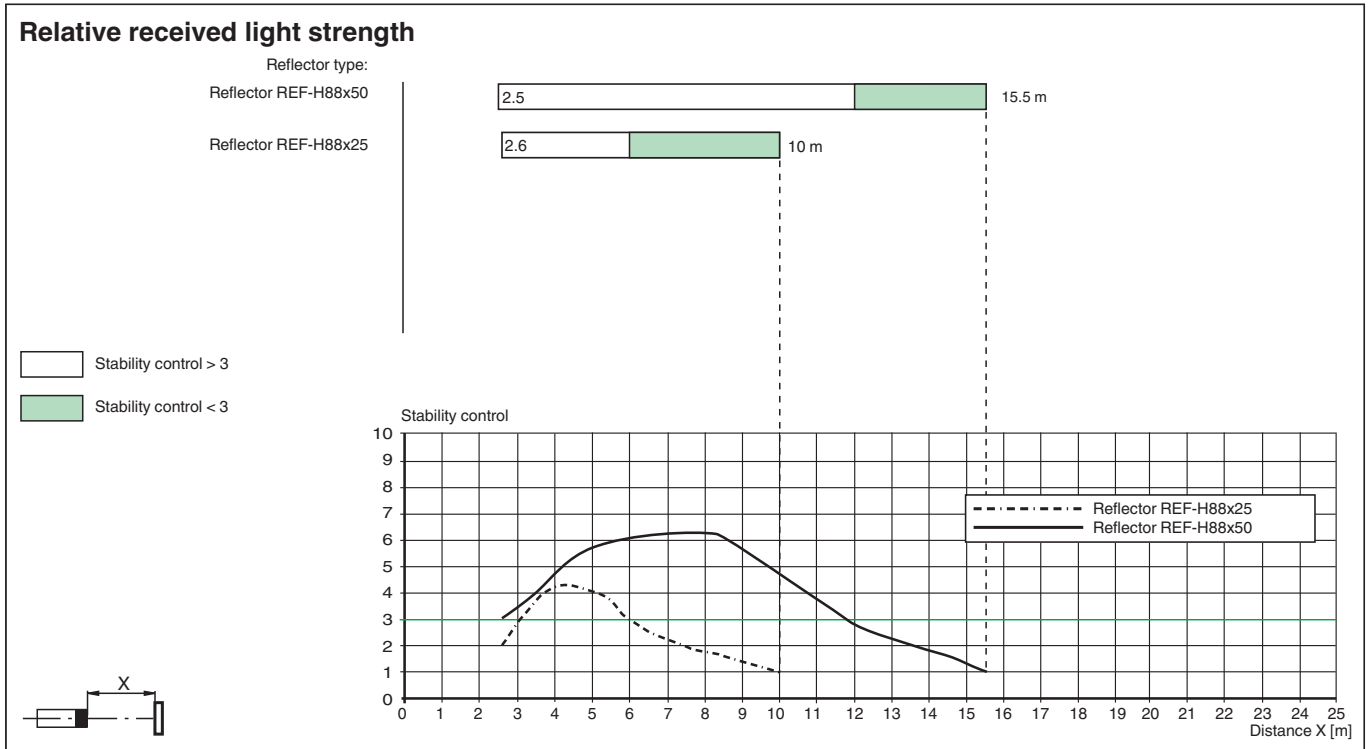
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## Indication

LED yellow	Operating reserve (OR)	Description
<b>&lt; 15 min after power up (set-up)</b>		
OFF	OR > 3	Light beam free, sensor ideal aligned or positioned for longest operating time
flashes 2 Hz	1 < OR < 3	Sensor not properly aligned, sensor or reflector dirty
ON	OR < 1	Sensor misaligned or light beam interrupted
<b>&gt; 15 min after power up (operating)</b>		
OFF	OR > 1.5	Light beam free
flashes 4 Hz	1 < OR < 1.5	Sensor or reflector dirty
ON	OR < 1	Light beam interrupted

## Characteristic Curve



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