



Retroreflective sensor

RL81-54/25/76b/103/115

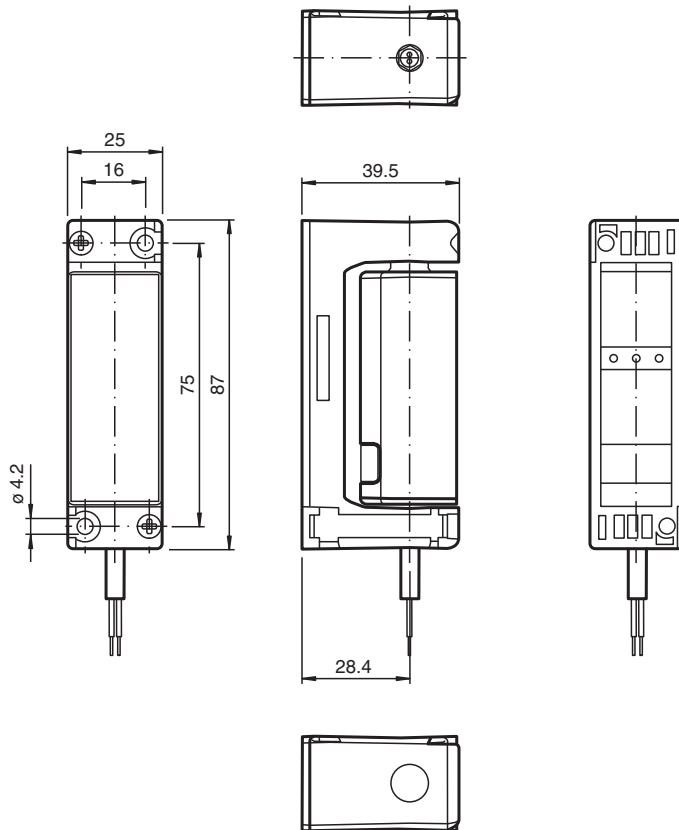


- Retroreflective sensor with polarization filter and foreground suppression for suppressing reflective objects
- PNP version
- Test input

Retroreflective sensor with polarization filter



Dimensions



Release date: 2023-04-05 Date of issue: 2023-04-05 Filename: 303377_eng.pdf

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

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

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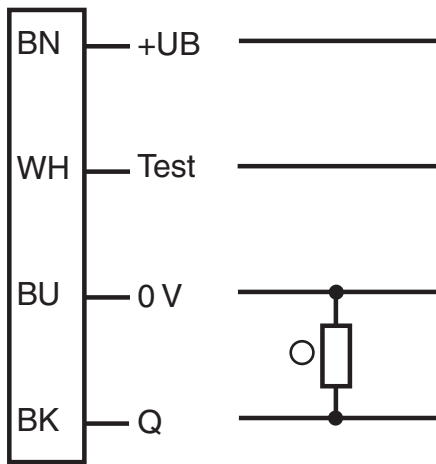
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Technical Data

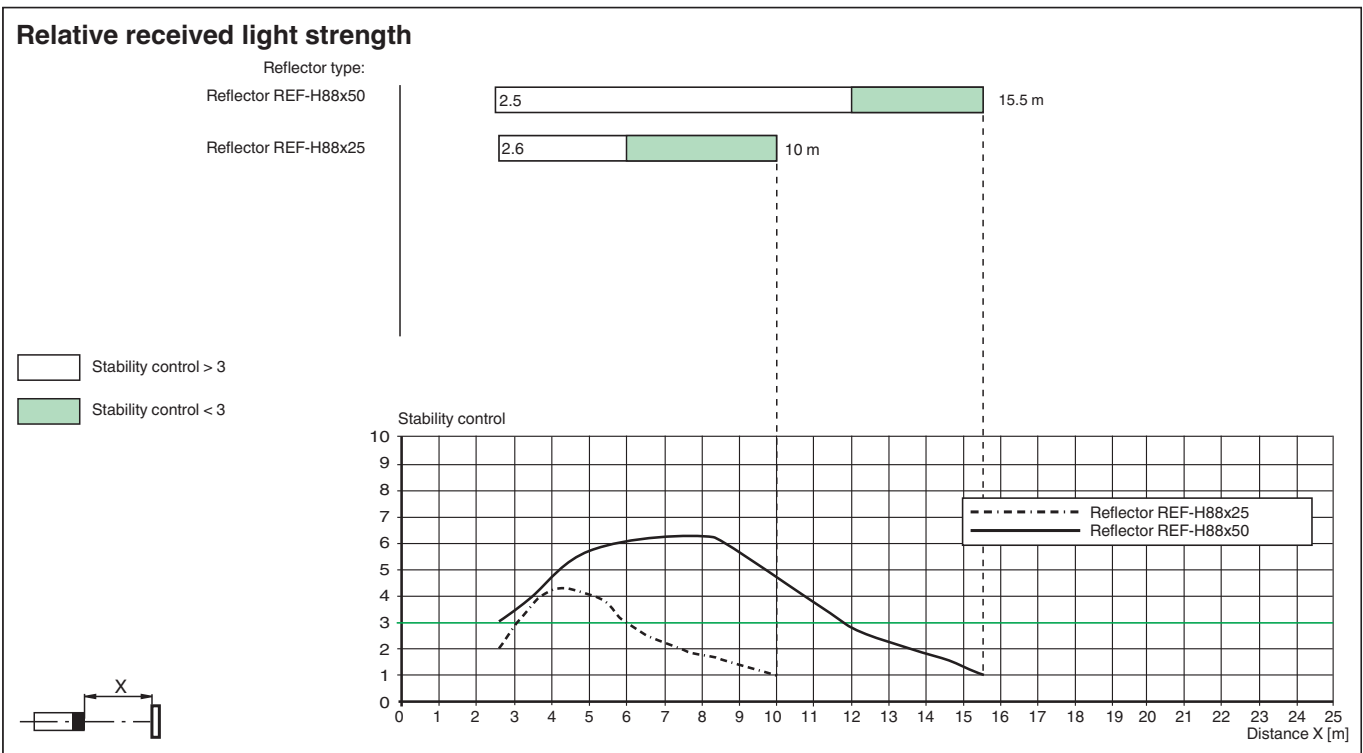
Threshold detection range		REF-H88x25 10 m REF-H88x50 15.5 m
Reference target		REF-H88x25
Light source		LED
Light type		modulated visible red light , 640 nm
Diameter of the light spot		approx. 200 mm at a distance of 6 m
Opening angle		3 °
Ambient light limit		EN 60947-5-2 10000 Lux
Functional safety related parameters		
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Function indicator		LED yellow
Electrical specifications		
Operating voltage	U _B	10 ... 30 V
Ripple		10 %
No-load supply current	I ₀	≤ 10 mA
Time delay before availability	t _v	< 300 ms
Input		
Test input		emitter deactivation at 0 V and if test input is left unconnected
Output		
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 _d	≤ 1.5 V
Response time		Light beam unobstructed to light beam interrupted: 10 ms Light beam interrupted to light beam unobstructed: 80 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
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		
Degree of protection		IP65
Connection		2-meter PVC cable
Material		
Housing		Polycarbonate
Optical face		PMMA
Mass		approx. 155 g

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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