



Model Number

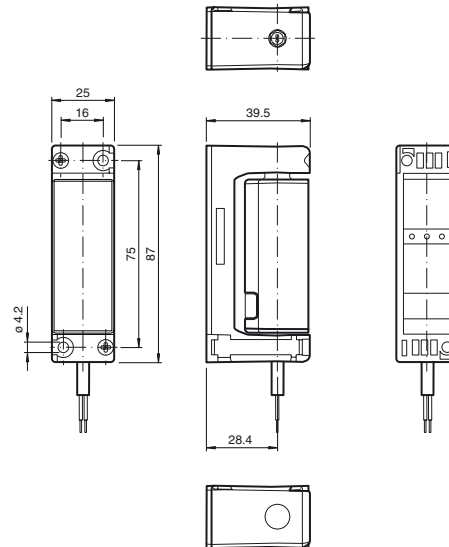
RL81-54/25/31/76b/115

Retroreflective sensor
with 2 m fixed cable

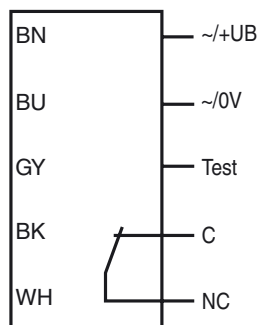
Features

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

Dimensions



Electrical connection



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
Angle of divergence	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
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Electrical specifications

Operating voltage	U_B	12 ... 24 V AC/DC
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Ripple		10 %
No-load supply current	I_0	$\leq 40 \text{ mA}$
Time delay before availability	t_v	$< 300 \text{ ms}$

Input

Test input	emitter deactivation at 0 V and if test input is left unconnected
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Output

Switching type	light on
Signal output	Relay output NC contact 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

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 60947-5-2:2007 EN 60947-5-2/A1:2012

Standard conformity

Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
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Ambient conditions

Ambient temperature	-30 ... 60 °C (-22 ... 140 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

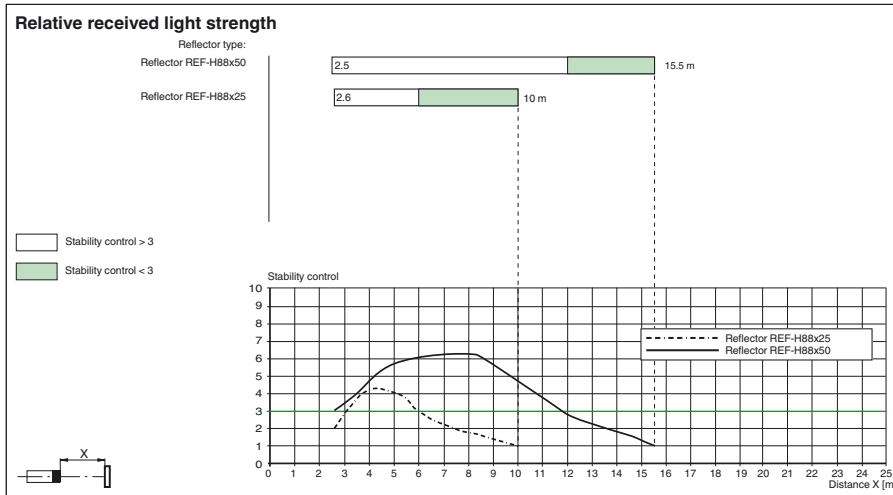
Degree of protection	IP65
Connection	2-meter PVC cable
Material	
Housing	Polycarbonate
Optical face	PMMA
Mass	approx. 155 g

Approvals and certificates

CCC approval	CCC approval / marking not required for products rated ≤36 V
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Other suitable accessories can be found at
www.pepperl-fuchs.com

Curves/Diagrams



Function display

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