

Retroreflective sensor

RL39-54/32/40a/73c/82a

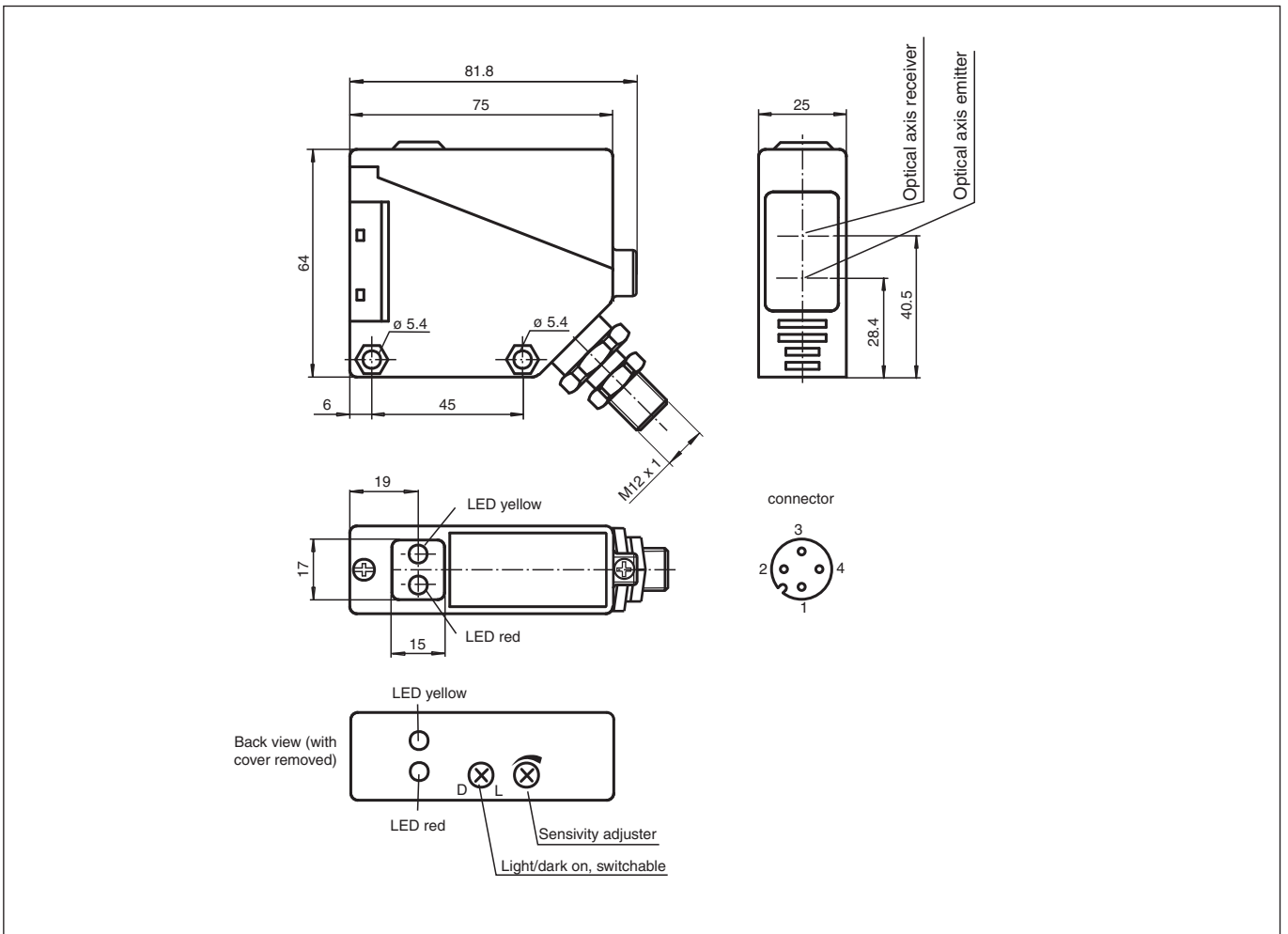


- Glare protected with polarization filter
- Visible red light
- Light-on/dark-on, switchable
- Degree of protection IP67

Retroreflective sensor for standard applications, polarization filter, detection range 12 m, red light, sensitivity adjuster, light/dark on, prefault output, PNP output, M12 plug



Dimensions



Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 088821_eng.pdf

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

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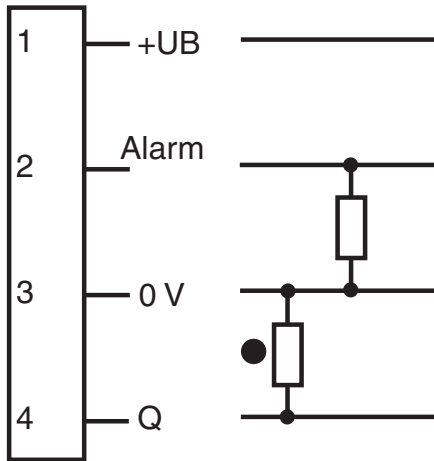
Technical Data

General specifications			
Effective detection range			0 ... 5 m
Reflector distance			0.1 ... 5 m
Threshold detection range			6 m
Reference target			H50 reflector
Light source			LED red
Light type			modulated visible red light
Polarization filter			yes
Ambient light limit			IEC / EN 60947-5-2 , 10000 Lux
Functional safety related parameters			
MTTF _d			800 a
Mission Time (T _M)			20 a
Diagnostic Coverage (DC)			0 %
Indicators/operating means			
Function indicator			LED yellow: switching state LED red: pre-fault indication
Control elements			Sensing range adjuster, light-on/dark-on changeover switch
Electrical specifications			
Operating voltage	U _B		10 ... 30 V DC
Ripple			10 %
No-load supply current	I ₀		≤ 20 mA
Time delay before availability	t _v		≤ 300 ms
Output			
Stability alarm output			1 PNP, active when falling short of the stability control
Switching type			light/dark on
Signal output			1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage			max. 30 V DC
Switching current			max. 200 mA , resistive load
Voltage drop	U _d		≤ 3 V
Switching frequency	f		≤ 300 Hz
Response time			≤ 1.5 ms
Conformity			
Product standard			EN 60947-5-2
Approvals and certificates			
CCC approval			CCC approval / marking not required for products rated ≤36 V
Approvals			CE
Ambient conditions			
Ambient temperature			-25 ... 55 °C (-13 ... 131 °F)
Storage temperature			-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications			
Housing width			25 mm
Housing height			64 mm
Housing depth			75 mm
Degree of protection			IP67
Connection			4-pin, M12 x 1 connector
Material			
Housing			PBT
Optical face			PMMA
Mass			approx. 100 g
General information			
Scope of delivery			Mounting aid , Reflector

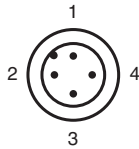
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Connection Assignment

Option:



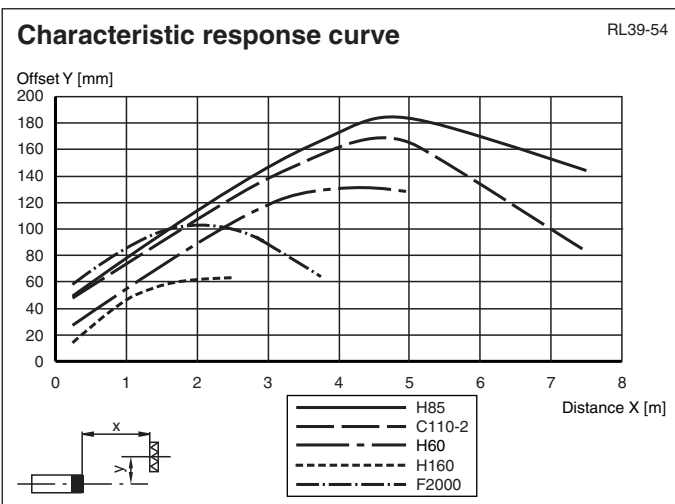
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

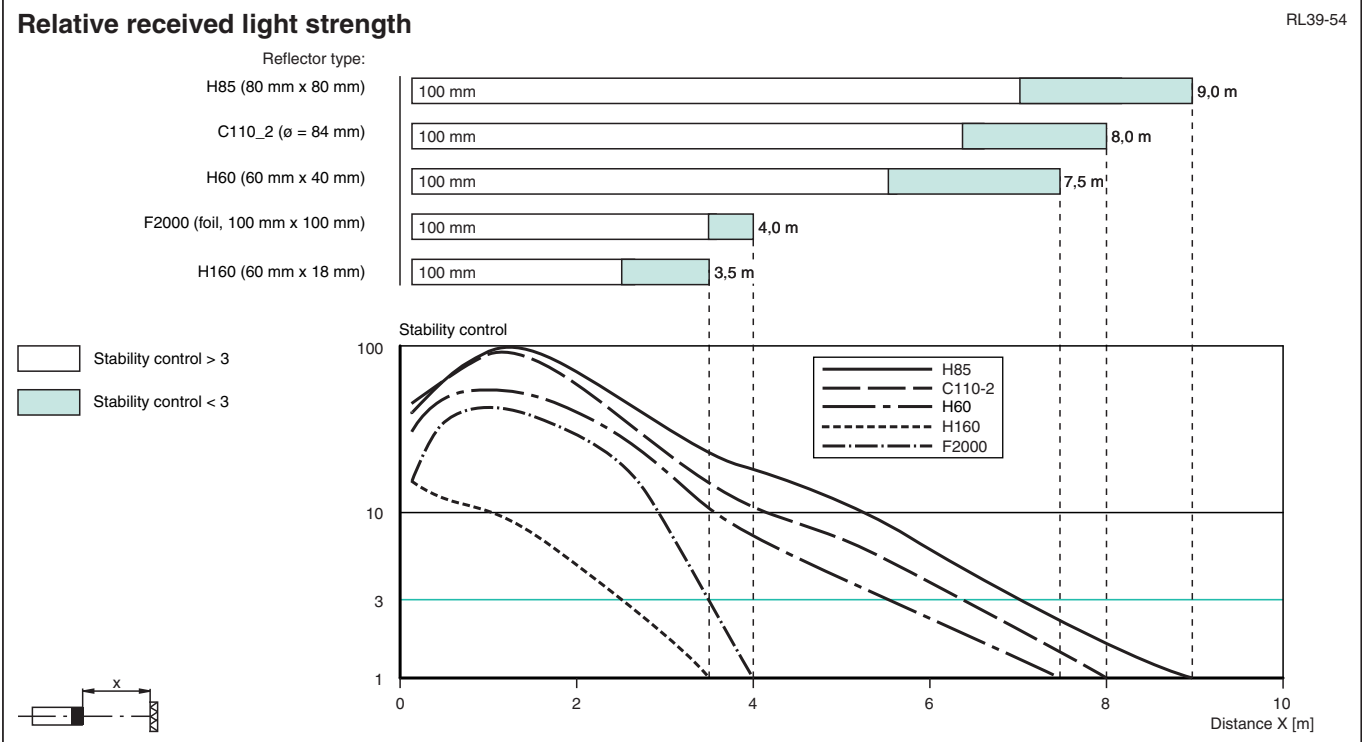
Characteristic Curve



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Additional Information**Conventional use:**

The reflex light beam switch contains the emitter and receiver in a single housing. The light from transmitter is beamed back from a reflector to the receiver. If an object interrupts the light beam the switching function is initiated.

Mounting instructions:

The sensor can be fastened over the through-holes directly or with the included mounting bracket.

The base surface must be flat to avoid distorting the housing during mounting. It is advisable to secure the bolts and screws with washers to prevent misalignment of the sensor.

Instructions for adjustment:

Connect the sensor to operating voltage, the LED green lights up constantly.

Mount suitable reflector opposite light beam switch and align roughly.

The exact adjustment takes by swivelling the sensor horizontally and vertically. With optimum light reception the yellow LED lights up constantly. In case of bad alignment, the red LED lights up.

Object detection check:

Move the object into the light beam. If the object is recorded, the yellow LED goes off. If it isn't going off, reduce the sensitivity with the potentiometer until it goes off. It should light up constantly again when the object is removed.

The red LED lights up if reception deteriorates (e.g. soiled lenses or by maladjustment) and when falling short of the stability control.

Illustration:

We recommend that you clean the optical interfaces and check the plug-in connections and screw connections at regular intervals.