# Retroreflective sensor
RLK31-54-B043/25/31/115b

- Cost-optimized series for standard tasks
- Large construction with small housing
- Relay output
- Version with relay's Common terminal tied to +UB

Retroreflective sensor with polarization filter, plastic housing, 9 m detection range, red light, light on, DC version, relay contact output, no control elements, single-ended male cordset with right-angle V11 connector

CE UK CA

Dimensions
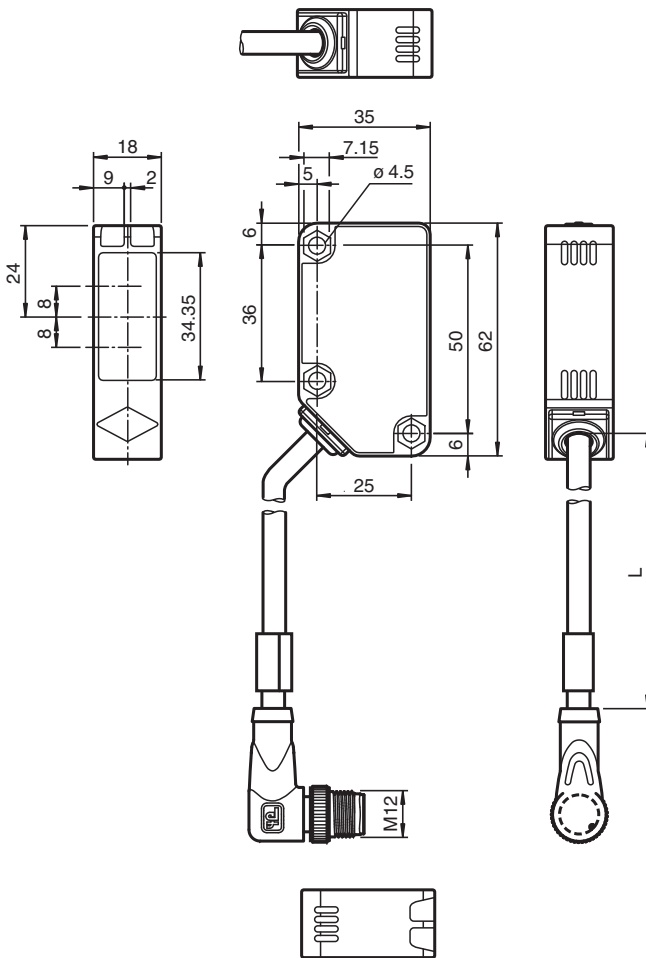
Technical Data

General specifications

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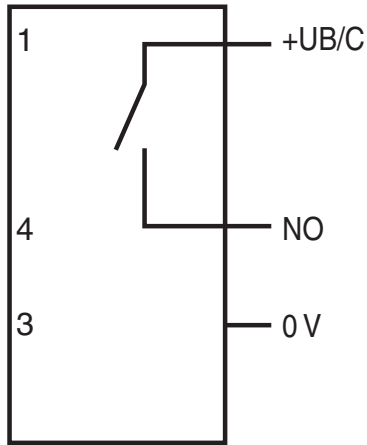Singapore: +65 6779 9091
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Technical Data

Effective detection range		0 ... 9000 mm
Reflector distance		20 ... 9000 mm
Threshold detection range		12 m
Reference target		reflector C110-2
Light source		LED
Light type		modulated visible red light , 630 nm
Polarization filter		yes
Diameter of the light spot		approx. 200 mm at a distance of 6 m
Opening angle		3 °
Ambient light limit		50000 Lux
Functional safety related parameters		
$MTTF_d$		790 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: power on
Function indicator		LED yellow: 1. LED lit constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point
Electrical specifications		
Operating voltage	U_B	12 ... 30 V DC
No-load supply current	I_0	≤ 40 mA
Power consumption	P_0	≤ 2 VA
Output		
Switching type		light-on
Signal output		relay, 1 NO
Switching voltage		max. 30 V DC
Switching current		max. 3 A
Switching power		DC: max. 150 W
Switching frequency	f	20 Hz
Response time		≤ 25 ms
Conformity		
Product standard		EN 60947-5-2
Ambient conditions		
Ambient temperature		-25 ... 55 °C (-13 ... 131 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Housing width		18 mm
Housing height		62 mm
Housing depth		35 mm
Degree of protection		IP67
Connection		Single-ended male cordset, right-angled, M12, 3-pin
Material		
Housing		Polycarbonate
Optical face		PMMA
Cable		
Length	L	3 m
Mass		225 g

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

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Connection

Option:

Pin	Signal
1	+UB/C
4	NO
3	0 V

Connection Assignment
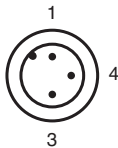
Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
3	BU	(blue)
4	BK	(black)

Characteristic Curve
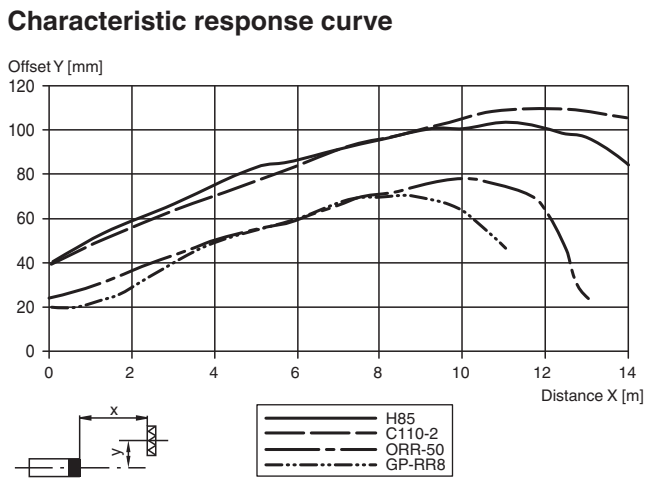
Characteristic response curve

Offset Y [mm]

Distance X [m]

- H85
- C110-2
- ORR-50
- GP-RR8

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

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Characteristic Curve

Relative received light strength

Gain Excess

Distance X [m]

———————	H85
– – – – –	C110-2
–·–·–·–	H50
··–··–··–	GP-RR8
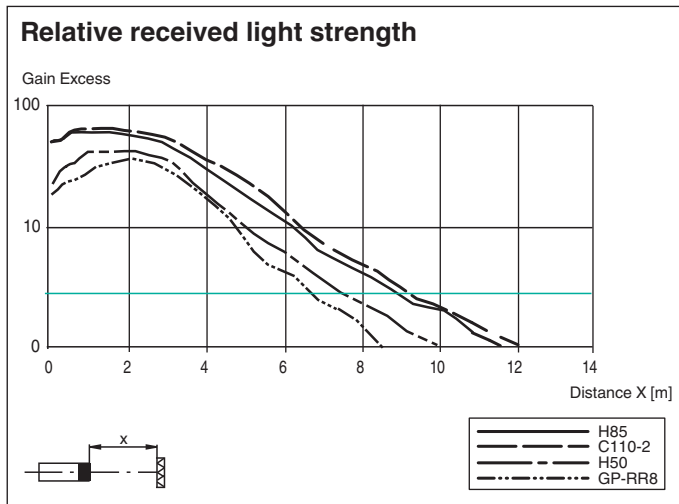
Accessories

	OMH-RL31-01	Mounting bracket
	OMH-RL31-02	Mounting bracket narrow
	OMH-RL31-03	Mounting bracket narrow
	OMH-RL31-04	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
	OMH-RL31-05	Mounting bracket for mounting on flat surfaces with 2 M4 screws
	OMH-RL31-06	Stainless steel mounting bracket with adjustable half clamp on the side

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