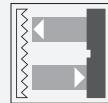




## Retroreflective sensor RL31-54-B043/25/31/115b

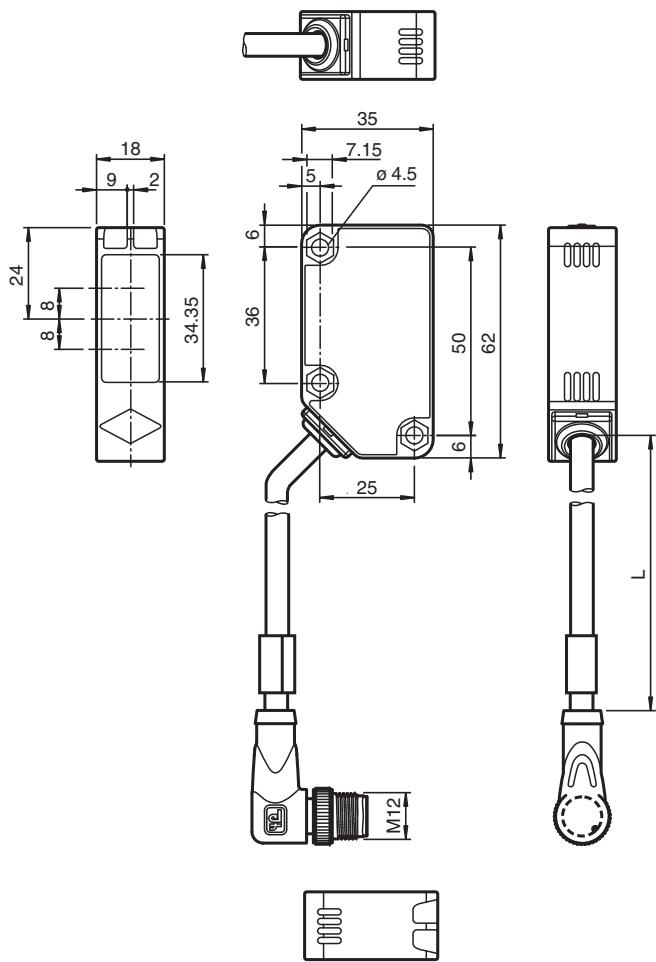


- Cost-optimized series for standard tasks
- Large construction with small housing
- Relay output

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



### Dimensions



### Technical Data

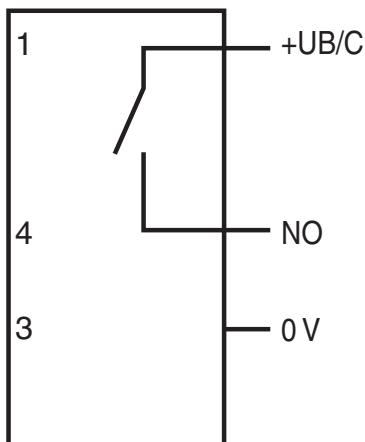
#### General specifications

## Technical Data

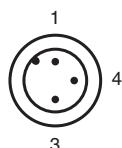
Effective detection range	0 ... 9000 mm	
Reflector distance	20 ... 9000 mm	
Threshold detection range	12 m	
Reference target	reflector C110-2	
Light source	LED	
Light type	modulated visible red light , 630 nm	
Polarization filter	yes	
Diameter of the light spot	approx. 200 mm at a distance of 6 m	
Opening angle	3 °	
Ambient light limit	50000 Lux	
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>	790 a	
Mission Time (T <sub>M</sub> )	20 a	
Diagnostic Coverage (DC)	0 %	
<b>Indicators/operating means</b>		
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	
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	12 ... 30 V DC
No-load supply current	I <sub>0</sub>	≤ 40 mA
Power consumption	P <sub>0</sub>	≤ 1 W
<b>Output</b>		
Switching type	light-on	
Signal output	relay, 1 NO	
Switching voltage	max. 30 V DC	
Switching current	max. 3 A	
Switching power	DC: max. 90 W	
Switching frequency	f	20 Hz
Response time	≤ 25 ms	
<b>Conformity</b>		
Product standard	IEC / EN 60947-5-2	
<b>Approvals and certificates</b>		
UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure	
<b>Ambient conditions</b>		
Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)	
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)	
<b>Mechanical specifications</b>		
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	

## Connection

Option:



## Connection Assignment

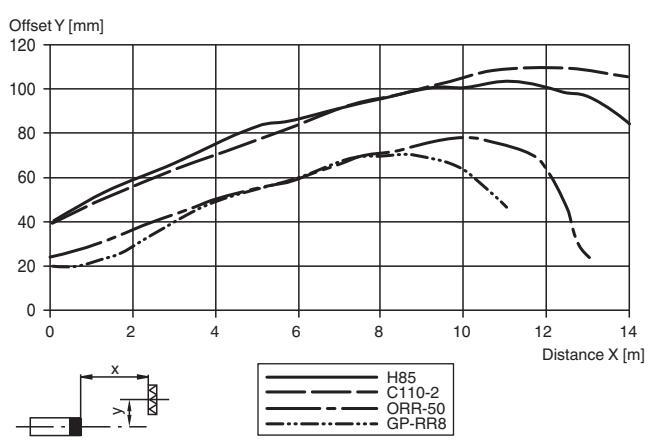


Wire colors in accordance with EN 60947-5-2

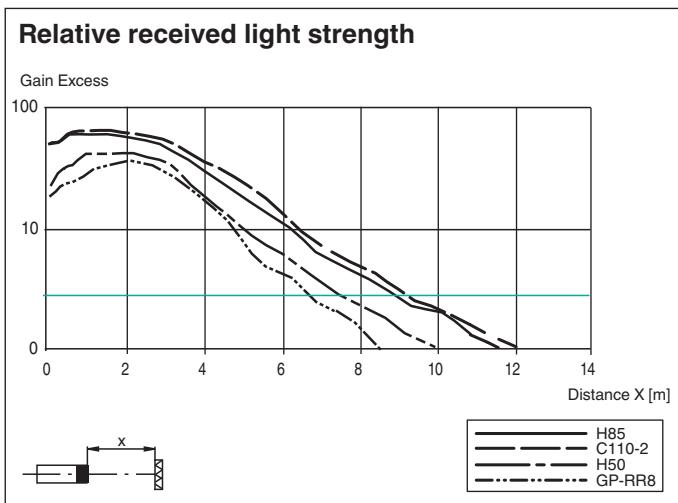
1	BN	(brown)
3	BU	(blue)
4	BK	(black)

## Characteristic Curve

### Characteristic response curve



## Characteristic Curve



## Accessories

	<b>REF-C110-2</b>	Reflector, round ø 84 mm, central mounting hole
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