



Retroreflective sensor OBR10M-R202-E2-V1-4R



- Degree of protection IP67
- Mounting on full metal sockets
- Highly visible LEDs for Power ON and switching state
- Medium design with versatile mounting options
- Easy to use
- Clearly visible LEDs for Power ON, switching state and weak signal indication
- Very bright, highly visible light spot
- Image is generic for this device type and may deviate from the specific variant

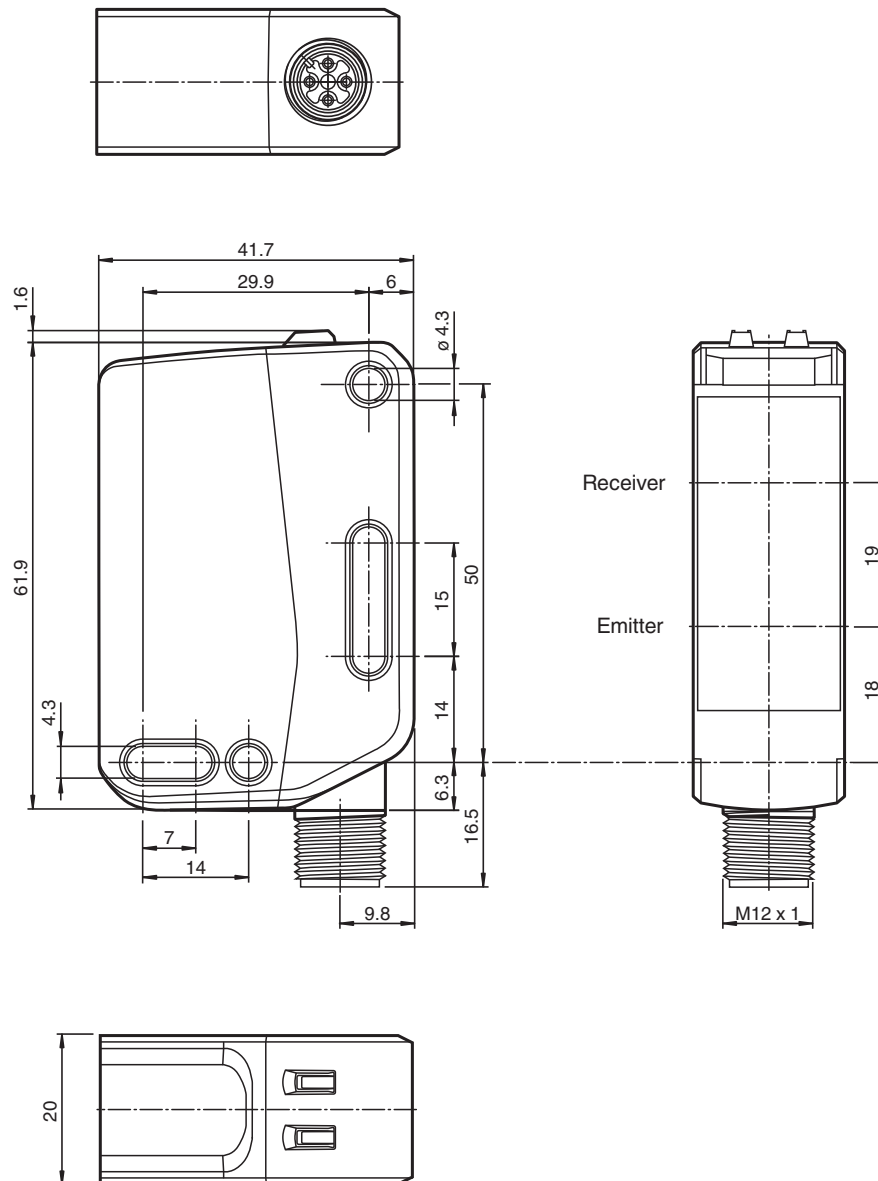
Retroreflective sensor with polarization filter



Function

The optical sensors of this series for applications in standard automation have a modern housing design. The sensors are characterized by the many mounting options, easy handling and highly visible LED status indicators. The integrated full metal bushings ensure long-term secure and dimensionally stable mounting.

Dimensions



Technical Data

General specifications

Effective detection range	0.3 ... 10 m
Reflector distance	0.02 ... 10 m
Threshold detection range	10 m
Reference target	H85-2 reflector
Light source	LED
Light type	modulated visible red light
LED risk group labelling	exempt group

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

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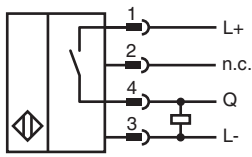
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Technical Data

Polarization filter		yes
Diameter of the light spot		approx. 500 mm at a distance of 17 m
Opening angle		2 °
Ambient light limit		EN 60947-5-2 : 30000 Lux
Functional safety related parameters		
MTTF _d		876 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green: on - power on flashing (4 Hz) - short circuit
Function indicator		Yellow LED: Permanently lit - light path clear Permanently off - object detected Flashing (4 Hz) - insufficient operating reserve Flashing (8 Hz) - fault detected, the outputs maintain the status
Control elements		
Control elements		
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	< 30 mA at 24 V Operating voltage
Protection class		III
Output		
Switching type		Q - Pin4: PNP normally open / dark-on
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 100 mA , resistive load
Usage category		DC-12 and DC-13
Voltage drop	U _d	≤ 1.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
UL approval		E87056 , cULus Listed , class 2 power supply , type rating 1
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-30 ... 60 °C (-22 ... 140 °F) , fixed cable -20 ... 60 °C (-4 ... 140 °F) , movable cable not appropriate for conveyor chains
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Housing width		20 mm
Housing height		62 mm
Housing depth		42 mm
Degree of protection		IP67
Connection		4-pin, M12 x 1 connector
Material		
Housing		PC (Polycarbonate)
Optical face		PMMA

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Connection



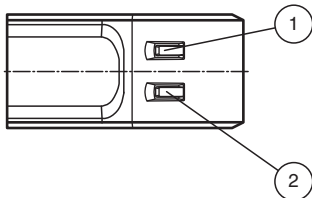
Connection Assignment



Wire colors in accordance with EN 60947-5-2

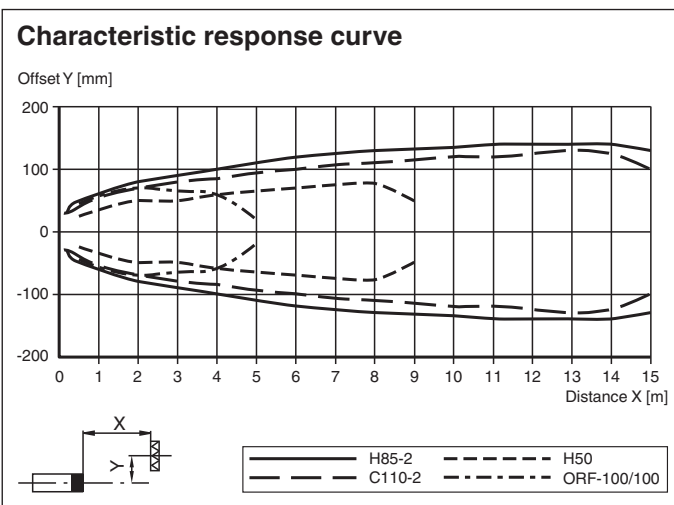
- 1 | BN (brown)
- 2 | WH (white)
- 3 | BU (blue)
- 4 | BK (black)

Assembly



1	Function indicator	YE
2	Operation indicator	GN

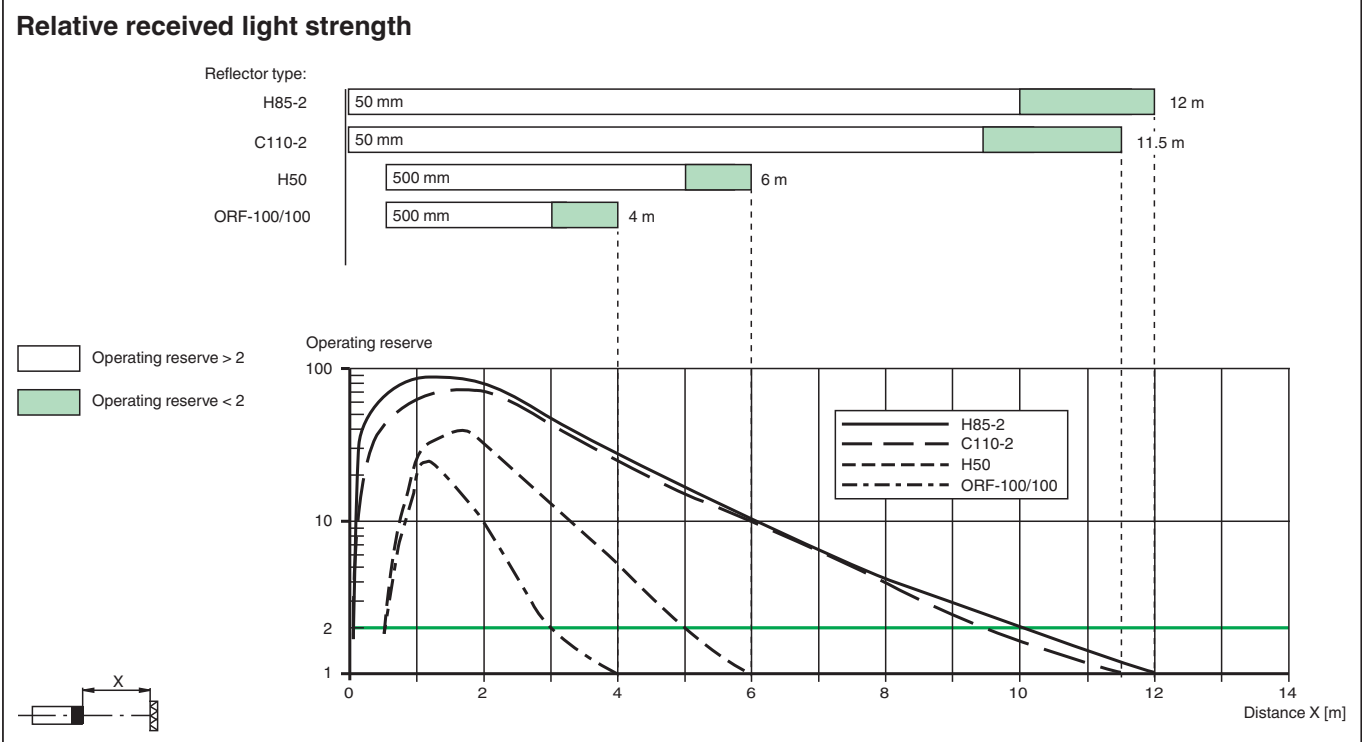
Characteristic Curve



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