



## Retroreflective sensor OBR17M-R202-E5-V1-Y0036



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



### Function

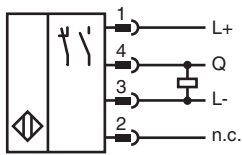
The optical sensors of this series for applications in standard automation have a modern housing design. The sensors are characterized by the many mounting options, easy handling and highly visible LED status indicators. The integrated full metal bushings ensure long-term secure and dimensionally stable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



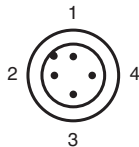
## Technical Data

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 : 60000 Lux
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		876 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
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		Light-on/dark-on changeover switch
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	< 30 mA at 24 V Operating voltage
Protection class		III
<b>Output</b>		
Switching type		The switching type of the sensor is adjustable. The default setting is: Q - Pin4: PNP normally open / dark-on
Signal output		1 PNP, 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 <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms
<b>Conformity</b>		
Product standard		EN 60947-5-2
<b>Approvals and certificates</b>		
UL approval		E87056 , cULus Listed , class 2 power supply , type rating 1
CCC approval		CCC approval / marking not required for products rated ≤36 V
<b>Ambient conditions</b>		
Ambient temperature		-30 ... 60 °C (-22 ... 140 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP67
Connection		4-pin, M12 x 1 connector
Material		
Housing		PC (Polycarbonate)
Optical face		PMMA
Mass		approx. 55 g
Dimensions		
Height		61.9 mm
Width		20 mm
Depth		41.7 mm

## Connection



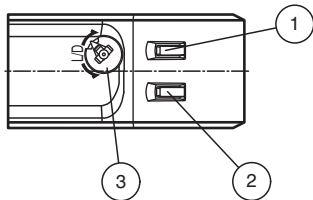
## Connection Assignment



Wire colors in accordance with EN 60947-5-2

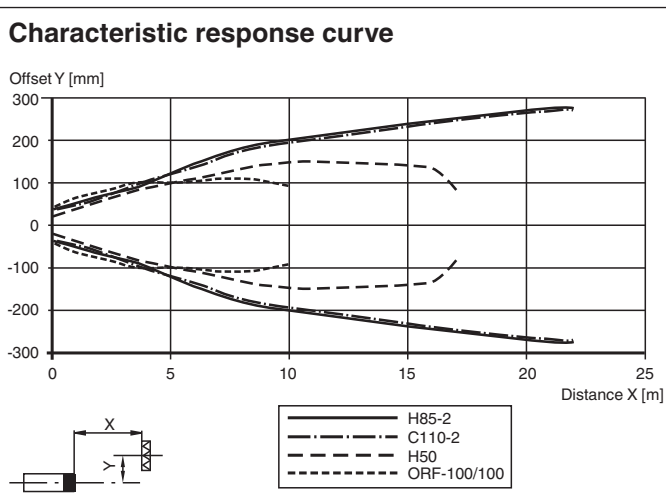
- 1 | BN (brown)
- 2 | WH (white)
- 3 | BU (blue)
- 4 | BK (black)

## Assembly



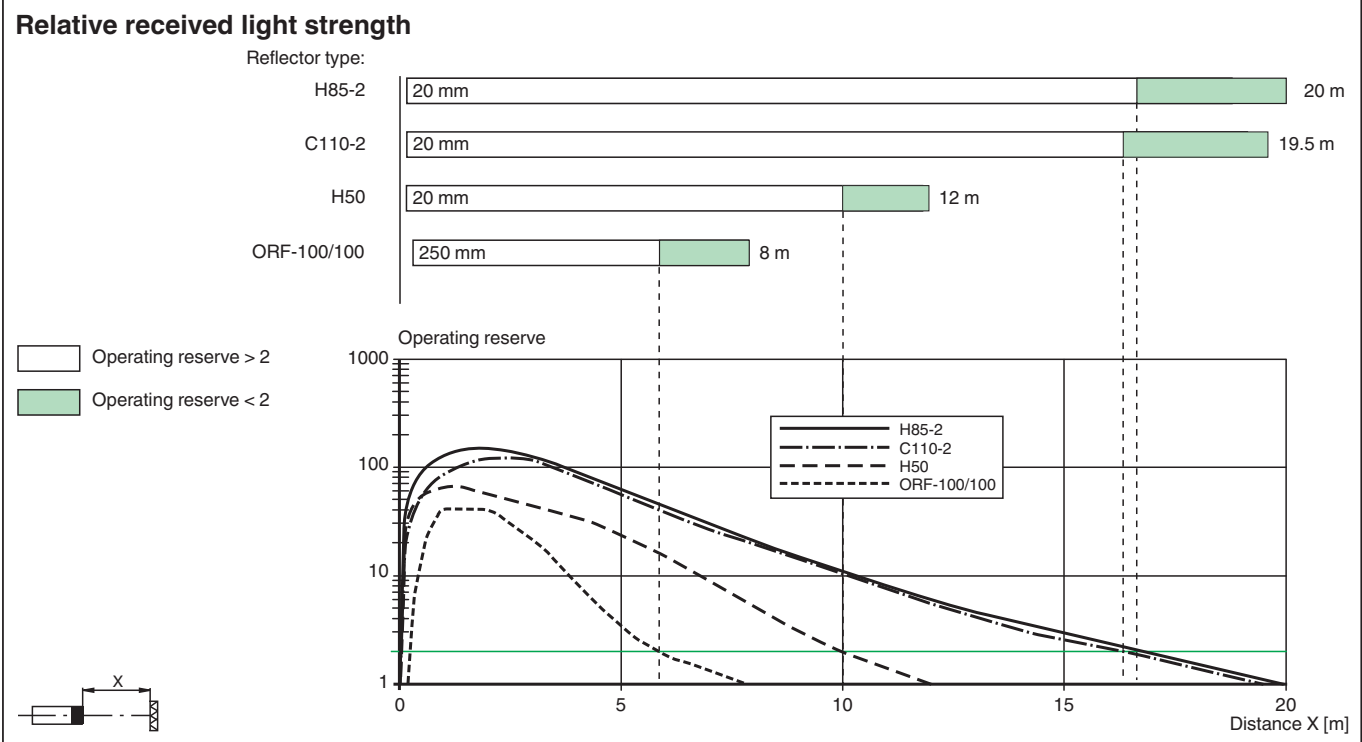
1	Function indicator	YE
2	Operation indicator	GN
3	Light-on / dark-on changeover switch	

## Characteristic Curve



Release date: 2025-02-18 Date of issue: 2025-02-18 Filename: 70128080-100036\_eng.pdf

**Characteristic Curve**



**Commissioning**

**Light-on / Dark-on Configuration**

To set light switching or dark switching, turn the light/dark changeover switch to the end stop:

- clockwise: dark switching
- counterclockwise: light switching

Release date: 2025-02-18 Date of issue: 2025-02-18 Filename: 70128080-100036\_eng.pdf