



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



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

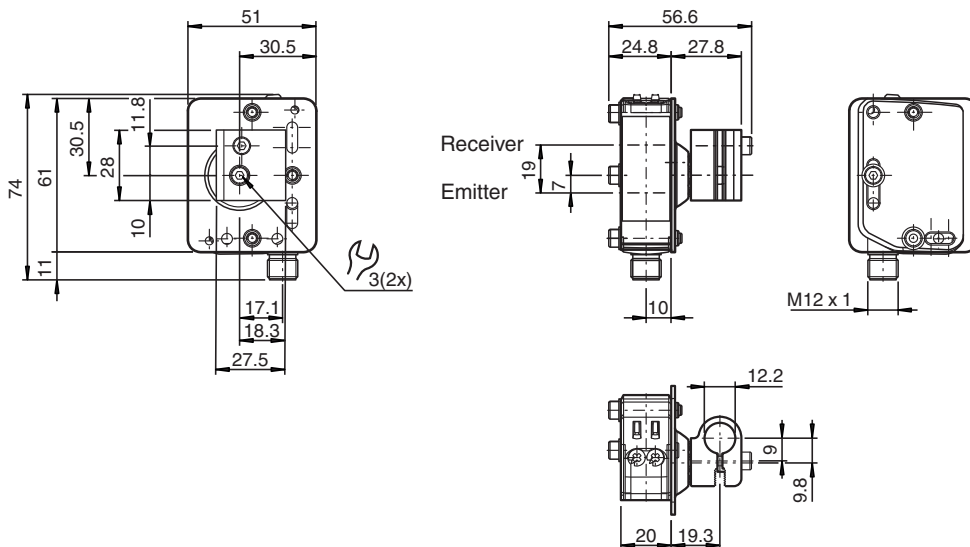
Retroreflective sensor with polarization filter and angle bracket



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

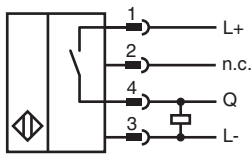
General specifications

Effective detection range	0 ... 10 m
Reflector distance	0.05 ... 10 m
Threshold detection range	12 m
Reference target	H85-2 reflector
Light source	LED
Light type	modulated visible red light
LED risk group labelling	exempt group
Polarization filter	yes

Technical Data

Diameter of the light spot	approx. 300 mm at a distance of 10 m	
Opening angle	2 °	
Ambient light limit	EN 60947-5-2 : 60000 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)	
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)	
Mechanical specifications		
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



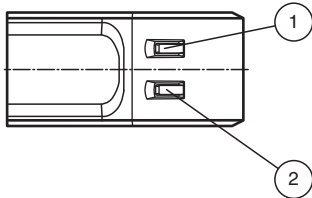
Connection Assignment



Wire colors in accordance with EN 60947-5-2

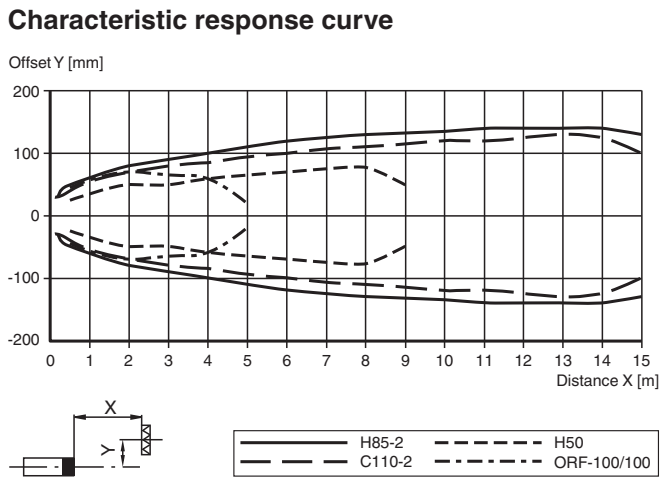
- 1 | BN (brown)
- 2 | WH (white)
- 3 | BU (blue)
- 4 | BK (black)

Assembly



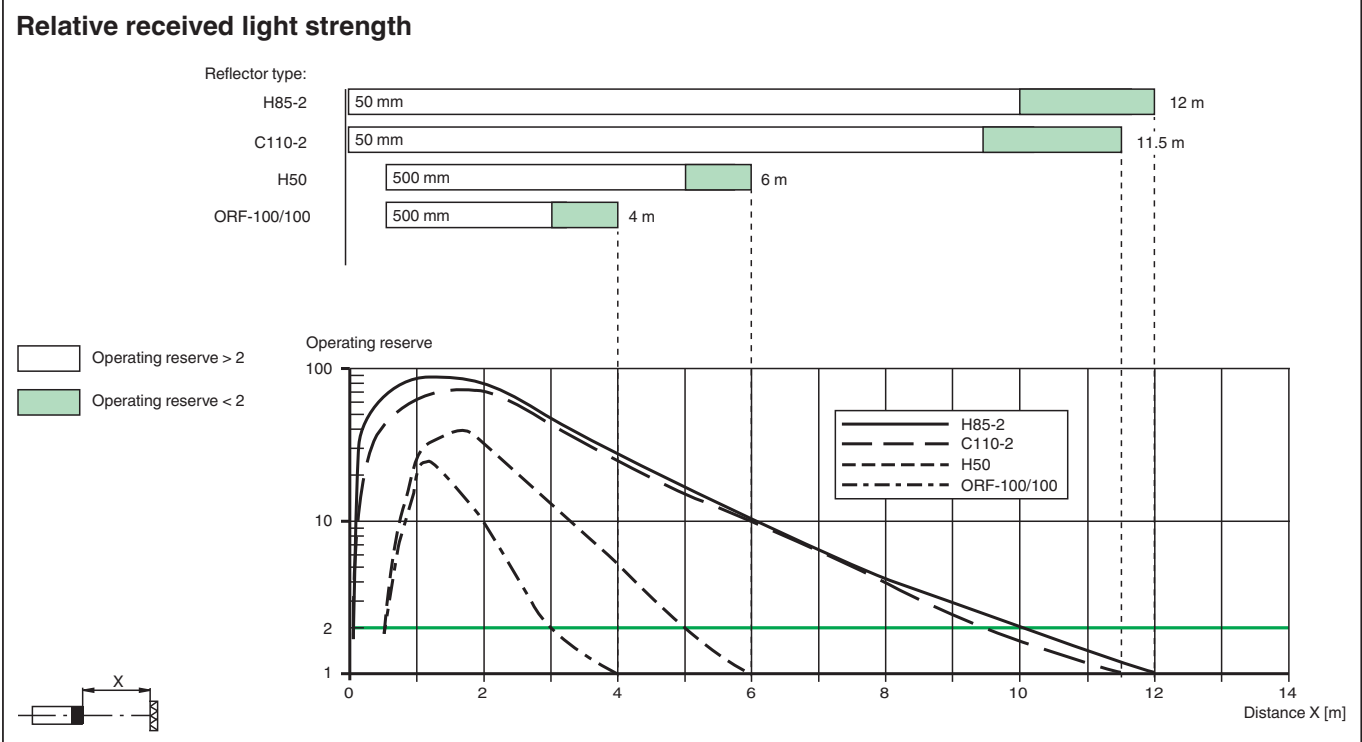
1	Function indicator	YE
2	Operation indicator	GN

Characteristic Curve





Release date: 2025-02-18 Date of issue: 2025-02-18 Filename: 70176442_eng.pdf

Characteristic Curve



Kit component

	OMH-R202-05	Mounting aid for sensors and reflectors for mounting on round rod d=12 mm or sheet 1.5 mm ... 3 mm
	OBR10M-R202-E2-V1-4R	Retroreflective sensor with polarization filter

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