



Thru-beam sensor (pair)

OBE2000-R2-SE2-0,2M-V3-P-Y



- Ultra-small housing design
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Long sensor range with high power mode

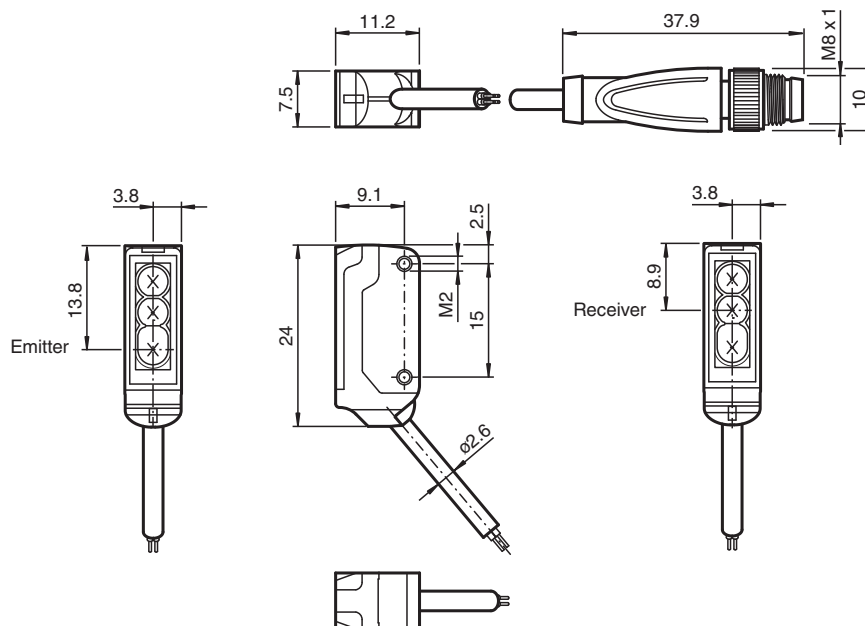
Thru-beam sensor for standard applications, miniature design, 2000 mm detection range, red light, dark on, PNP output, 200 mm fixed cable with plug M8, 3-pin



Function

The nano sensor has been developed for a broad range of applications. It offers excellent durability and is exceptionally easy to install. The housing is compact and, with its 45° cable outlet, can be installed in the smallest spaces. New functional principles and functionality open up a range of new options.

Dimensions



Technical Data

System components

Emitter	OBE2000-R2-S-0,2M-V3-P-Y
Receiver	OBE2000-R2-E2-0,2M-V3-P

General specifications

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 70141997_eng.pdf

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

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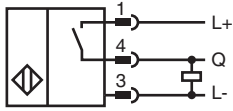
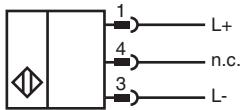
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Technical Data

Effective detection range		0 ... 2 m
Threshold detection range		2.5 m
Light source		LED
Light type		modulated visible red light , 630 nm
Angle deviation		approx. 2 °
Diameter of the light spot		150 mm at a distance of 2000 mm
Opening angle		approx. 2 °
Optical face		frontal
Ambient light limit		EN 60947-5-2 : 30000 Lux
Functional safety related parameters		
MTTF _d		806 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz)
Function indicator		Receiver: LED yellow, lights up when light beam is free, flashes when falling short of the operating reserve ; OFF when light beam is interrupted
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC , class 2
No-load supply current	I ₀	Emitter: ≤ 11 mA Receiver: ≤ 8 mA
Output		
Switching type		NO contact / dark-on
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 50 mA
Voltage drop	U _d	≤ 1.5 V DC
Switching frequency	f	approx. 800 Hz
Response time		600 μs
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
UL approval		cULus Recognized, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 60 °C (-13 ... 140 °F)
Storage temperature		-30 ... 70 °C (-22 ... 158 °F)
Mechanical specifications		
Housing width		7.5 mm
Housing height		24 mm
Housing depth		11.2 mm
Degree of protection		IP67
Connection		fixed cable with 3-pin M8 x 1 connector
Material		
Housing		PC/ABS and TPU
Optical face		PC
Cable		PUR
Installation		Fixing screws , 2 x M2 allen head screws included with delivery
Mass		approx. 20 g per sensor
Cable length		200 mm

Connection



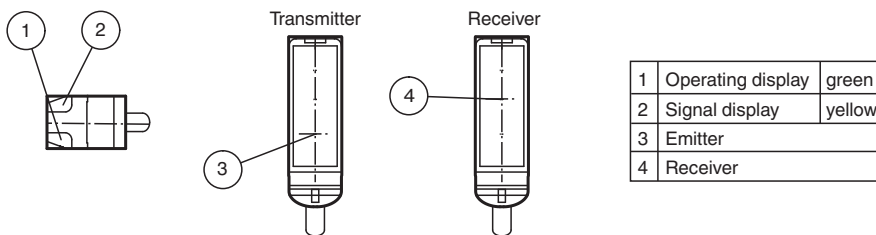
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

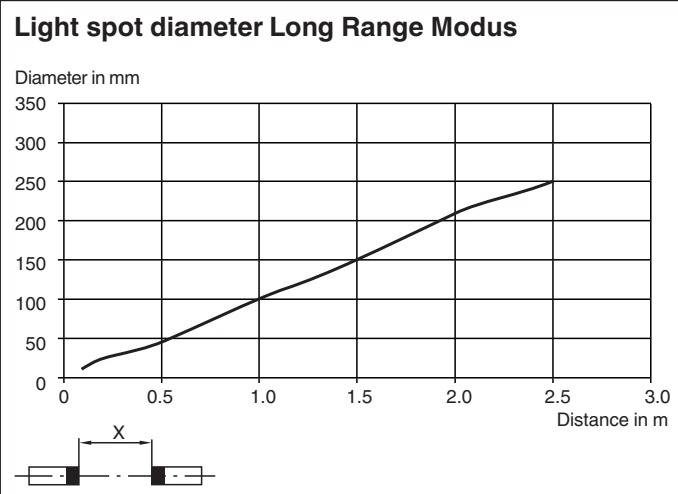
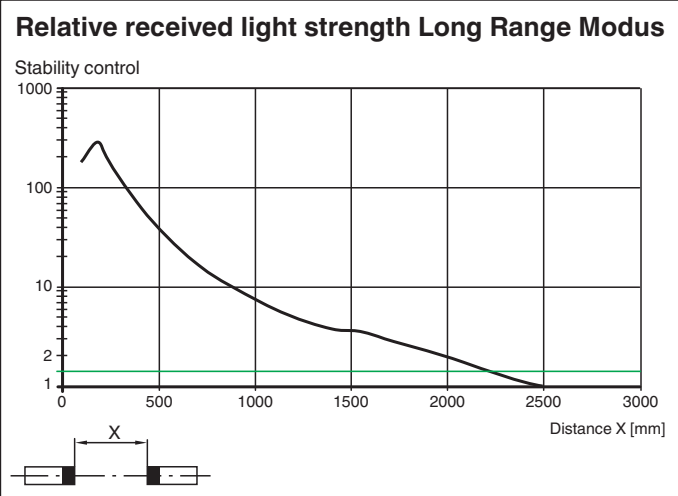
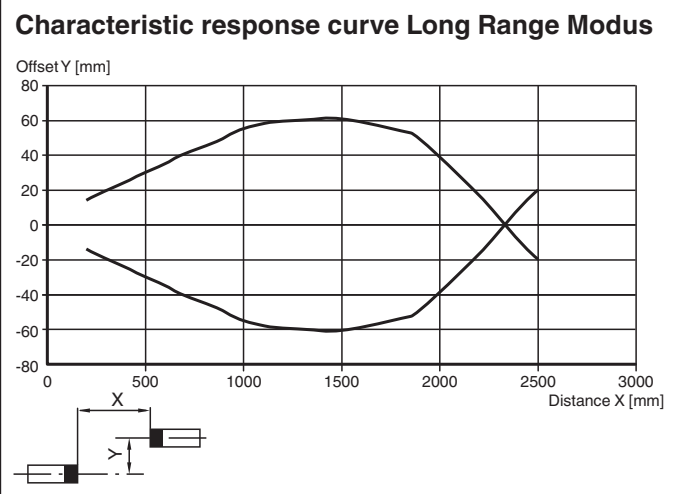
Assembly






1	Operating display	green
2	Signal display	yellow
3	Emitter	
4	Receiver	

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Characteristic Curve





Accessories

	MH-R2-01	Mounting aid for R2 series, Mounting bracket
	MH-R2-02	Mounting aid for R2 series, Mounting bracket
	MH-R2-03	Mounting aid for R2 series, Mounting bracket

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Accessories

	<p>MH-R2-04</p>	<p>Mounting aid for R2 series, Mounting bracket</p>
	<p>V3-WM-2M-PUR</p>	<p>Female cordset single-ended M8 angled A-coded, 3-pin, PUR cable grey</p>

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