



### Model Number

**OBE200-R2-SE2-0,2M-V3**

Thru-beam sensor  
with fixed cable and 3-pin, M8 connector

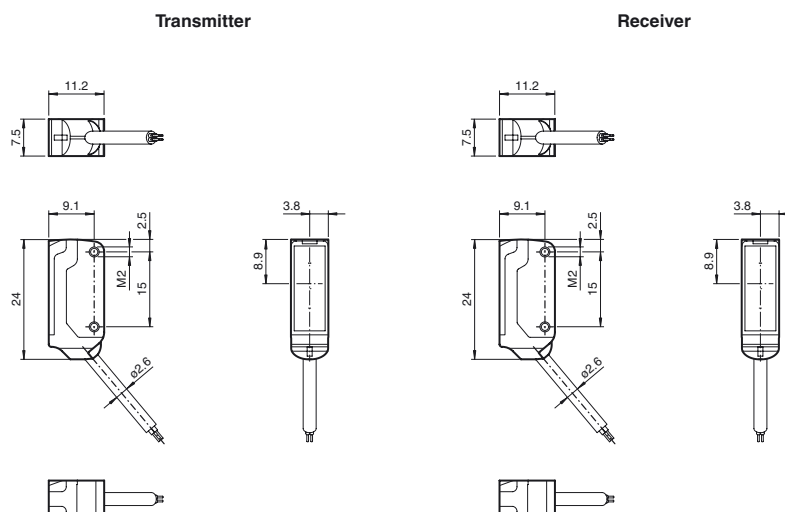
### Features

- Ultra-small housing design
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Improvement in machine availability with abrasion-resistant, antistatic glass front
- Small, sharp light spot

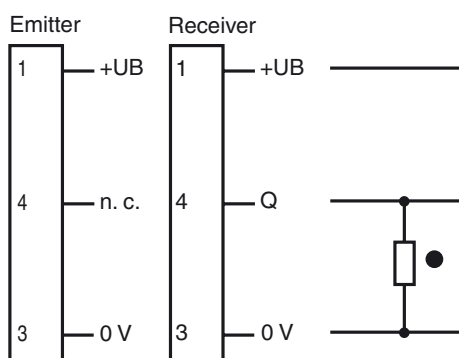
### Product information

The R2 series 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. The abrasion-resistant lens allows long operating times close to the moving object.

### Dimensions



### Electrical connection



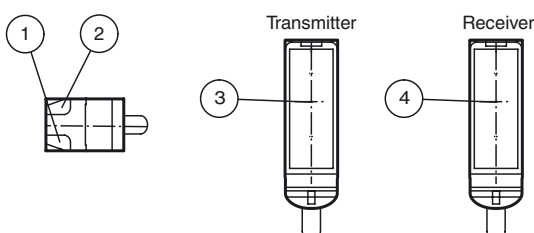
○ = Light on

● = Dark on

### Pinout



### Indicators/operating means



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

## Technical data

### System components

Emitter	OBE200-R2-0,2M-V3
Receiver	OBE2000-R2-E2-0,2M-V3

### General specifications

Effective detection range	0 ... 0.2 m
Threshold detection range	0.3 m
Light source	LED
Light type	modulated visible red light , 630 nm
Angle deviation	approx. 2 °
Diameter of the light spot	0.5 mm at a distance of 50 mm
Angle of divergence	approx. 2 °
Optical face	frontal
Ambient light limit	EN 60947-5-2 : 30000 Lux

### Functional safety related parameters

MTTF <sub>d</sub>	806 a
Mission Time (T <sub>M</sub> )	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 stability control ; OFF when light beam is interrupted

### Electrical specifications

Operating voltage	U <sub>B</sub>	10 ... 30 V DC , class 2
No-load supply current	I <sub>0</sub>	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 <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	approx. 800 Hz
Response time	600 μs	

### Ambient conditions

Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)

### Mechanical specifications

Degree of protection	IP67
Connection	200 mm fixed cable with 3-pin, M8 x 1 connector
Material	
Housing	PC/ABS and PBT
Optical face	glass
Cable	PUR
Installation	Fixing screws , 2 x M2 allen head screws included with delivery
Mass	approx. 20 g Per sensor
Cable length	200 mm

### Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007

### Approvals and certificates

UL approval	cULus Recognized, Class 2 Power Source
CCC approval	CCC approval / marking not required for products rated ≤36 V

## Accessories

### MH-R2-01

Mounting bracket

### MH-R2-02

Mounting bracket

### MH-R2-03

Mounting bracket

### MH-R2-04

Mounting bracket

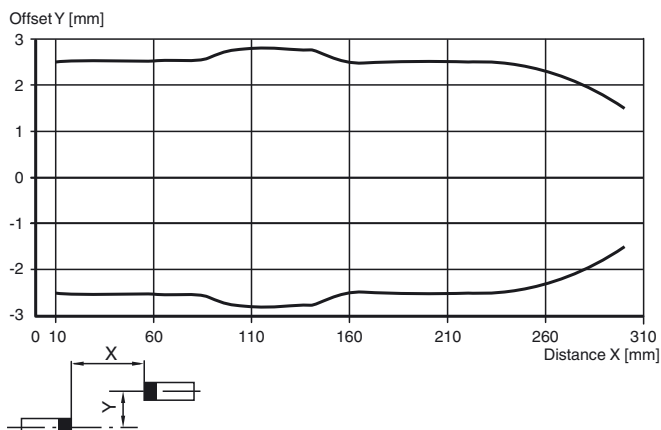
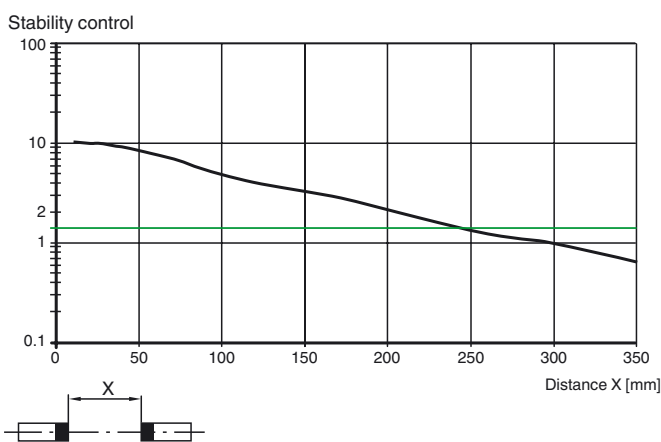
### V3-GM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

### V3-WM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Characteristic response curve High Precision Modus****Relative received light strength High Precision Modus****Light spot diameter High Precision Modus**