GNIIS CE

Model Number

OBE2000-R2-SE2

Thru-beam sensor with 2 m fixed cable

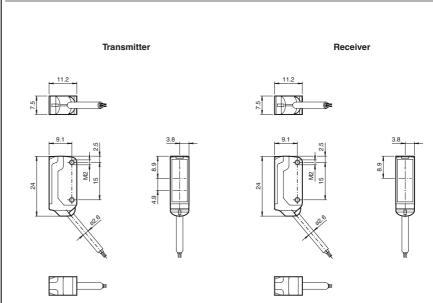
Features

- Ultra-small housing design ٠
- 45° cable outlet for maximum ٠ mounting freedom under extremely tight space constraints
- Improvement in machine availability ٠ with abrasion-resistant, antistatic glass front
- Extremely large detection range in ٠ Long Range Mode
- Option of switching to high precision mode for greater switching accuracy

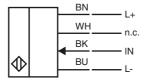
Product information

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

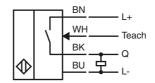
Dimensions



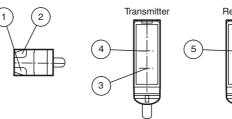
Electrical connection emitter



Electrical connection receiver



Indicators/operating means



Receiver	

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

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information" Pepperl+Fuchs Group www.pepperl-fuchs.com

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SystemUse and the second of the	 MH-R2-01 Mounting aid for R2 series, Mounting bracket MH-R2-02 Mounting aid for R2 series, Mounting
Receiver OBE2000-R2-E2 General specifications Effective detection range Long range mode: 0 20 mm Threshold detection range Long range mode: 2.5 m High precision mode: 300 mm Light source LED LED Light source LED Cong range mode: 150 mm at a distance of 2000 mm High precision mode: 0.5 mm at a distance of 50 mm Angle of divergence approx. 2 * Optical face frontal Angle of divergence approx. 2 * Optical face frontal Ambient light limit EN 60947-5-2 : 30000 Lux Functional safety related parameters MTTFq MTTFq 806 a Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0 % Indicators/operating means LED green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz) Function indicator LED green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz) Function indicator Leb green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz) Function indicator Leb green, statically lit Power on , short-circuit : LED green flashing (approx. 4 Hz) Function indicator Leb green, statically lit flow up when light beam is interrupted Electrical specifications operatiny obtage Operatiny obtage	Mounting aid for R2 series, Mounting bracket MH-R2-02 Mounting aid for R2 series, Mounting
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Material Housing PC/ABS and TPU Optical face glass	
Housing PC/ABS and TPU Optical face glass	
Optical face glass	
Cable PUR	
Installation Fixing screws, 2 x M2 allen head screws included with deliver	1
Mass approx. 20 g Per sensor	
Cable length 2 m	
Approvals and certificates	
UL approval cULus Recognized, Class 2 Power Source	
CCC approval CCC approval / marking not required for products rated ≤36 V	

Release date: 2019-10-30 01:56 Date of issue: 2019-10-30 225909_eng.xml

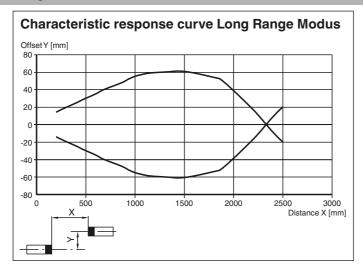
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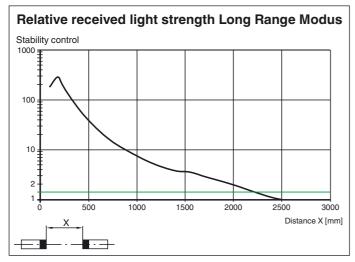
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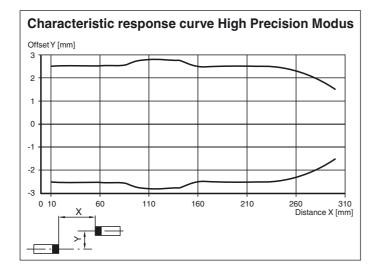
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Curves/Diagrams



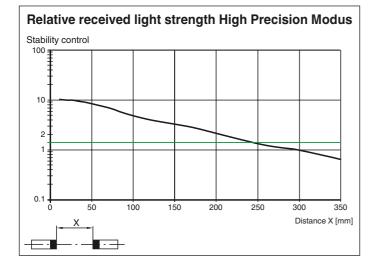


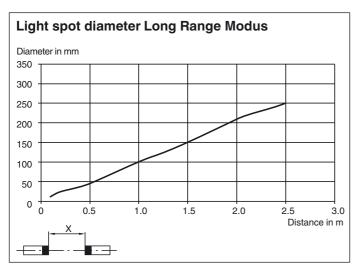


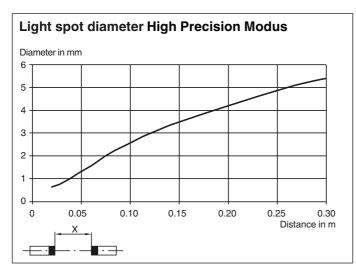
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Teach-In Methods

The thru-beam sensor enables the switching points to be taught in for optimum adaptation to specific applications. This eliminates the need for additional components such as apertures.

Essentially, all Teach-in methods can be used in both "High Precision" and "High Power" operating modes.

The sensitivity of the thru-beam sensor can be adjusted using three Teach-in methods:

Position Teach

When using this Teach-in method, the following settings are made on the thru-beam sensor:

• The gain is set to an optimum value

• The signal threshold is set to a minimum

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Recommended application:

This method enables extremely small differences in contrast to be detected, as well as minuscule particles in the beam path, and provides exceptional positioning accuracy.

The best results are achieved in "High Precision" mode.

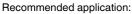
- 1. Make sure that there are no objects in the beam path and that the sensor is connected to the power supply.
- 2. Connect the white cable on the receiver (WH/IN) to the blue cable (BU/0 V) on the receiver.
- The green and yellow LED indicators flash simultaneously at 2.5 Hz
- 3. Disconnect the white cable on the receiver (WH/IN) from the blue cable (BU/0 V) on the receiver. The green and yellow LED indicators flash alternately at 2.5 Hz
- 4. The end of the Teach-in process is indicated when the green LED indicator lights up sold and yellow LED blinks.

Two-Point Teach-In

When using this Teach-in method, the following settings are made on the thru-beam sensor:

- The gain is set to an optimum value
- · The signal threshold is set in the center between the two taught signal values

Signal s	strength	
Max	Teach-in value 1 (avg)	ry 🗍
	Threshold level Contrast levels	
	Teach-in value 2 (avg)	
0 -		
0 -	t	



Enables detection of transparent objects.

The best results are achieved in "High Precision" mode.

- 1. Make sure that there are no objects in the beam path and that the sensor is connected to the power supply.
- 2. Connect the white cable on the receiver (WH/IN) to the blue cable (BU/0 V) on the receiver. The green and yellow LED indicators flash simultaneously at 2.5 Hz
- 3. Position the object in the beam path.
- 4. Disconnect the white cable on the receiver (WH/IN) from the blue cable (BU/0 V) on the receiver. The green and yellow LED indicators flash alternately at 2.5 Hz
- 5. The end of the Teach-in process is indicated when the green LED indicator lights up sold.

Maximum Teach-In

- When using this Teach-in method, the following settings are made on the thru-beam sensor:
- · The gain is set to a maximum
- · The signal threshold is set to a minimum

Signal strength		-
Max		
	Threshold level	'
o ——		L



Recommended application:

Enables an object to be detected with a high excess gain. This can be useful if there is severe environmental contamination or to achieve long operating times.

The best results are achieved in "High Precision" mode.

- 1. Make sure that there are no objects in the beam path and that the sensor is connected to the power supply.
- 2. Cover the receiver or transmitter.
- 3. Connect the white cable on the receiver (WH/IN) to the blue cable (BU/0 V) on the receiver. The green and yellow LED indicators flash simultaneously at 2.5 Hz
- 4 Disconnect the white cable on the receiver (WH/IN) from the blue cable (BU/0 V) on the receiver. The green and yellow LED indicators flash alternately at 2.5 Hz
- 5. The end of the Teach-in process is indicated when the green LED indicator lights up sold.

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