Model Number

OBE2000-R3-SE1-Y302635
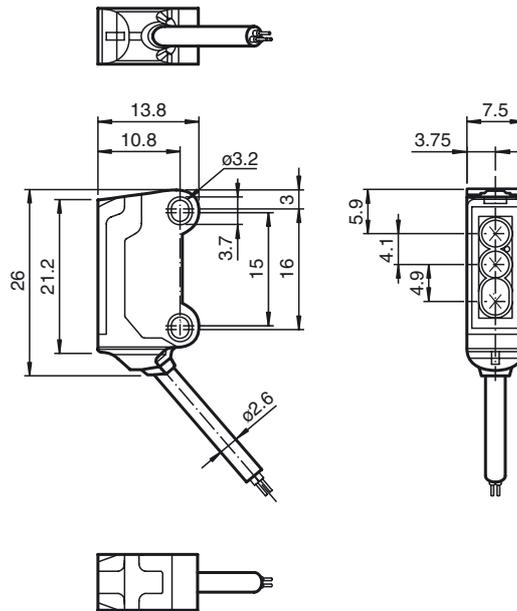
Thru-beam sensor

with 2 m fixed cable

Features

- 45° cable outlet for maximum mounting freedom under extremely tight space constraints

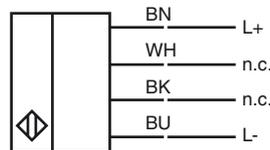- Extremely large detection range in Long Range Mode

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.
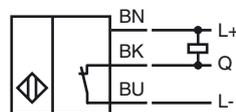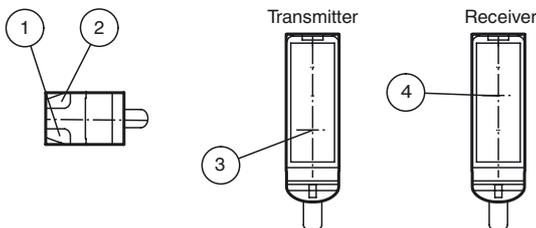
Dimensions

Electrical connection emitter

BN	L+
WH	n.c.
BK	n.c.
BU	L-

Electrical connection receiver

BN	L+
BK	Q
BU	L-

Indicators/operating means

Transmitter　　　Receiver

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

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

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Technical data

Other suitable accessories can be found at www.pepperl-fuchs.com

System components

Emitter	OBE2000-R3-Y302637
Receiver	OBE2000-R3-E1-Y302636

General specifications

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	approx. 150 mm at a distance of 2000 mm
Angle of divergence	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 stability control ; 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		NC contact
Signal output		1 NPN output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 50 mA , resistive load
Voltage drop	U_d	≤ 1.5 V DC
Switching frequency	f	approx. 100 Hz
Response time		5 ms

Conformity

Product standard	EN 60947-5-2

Ambient conditions

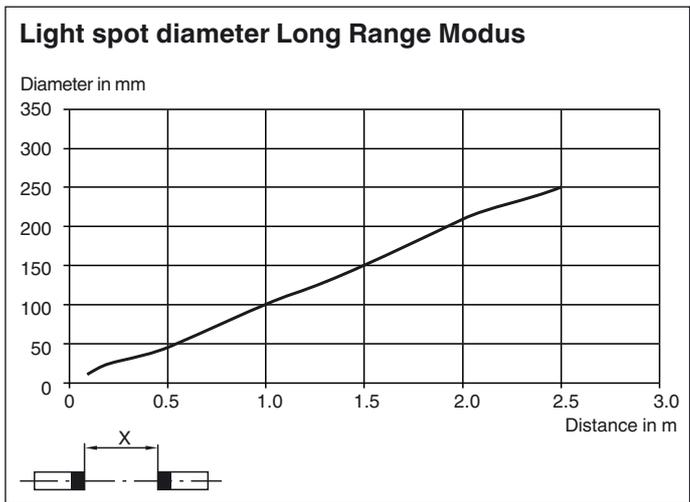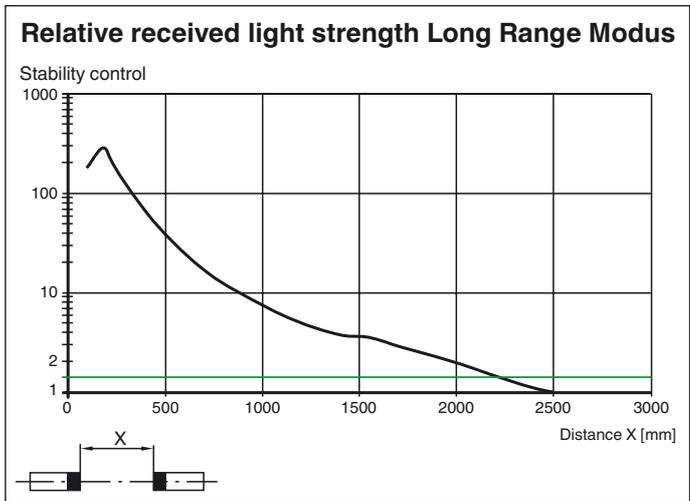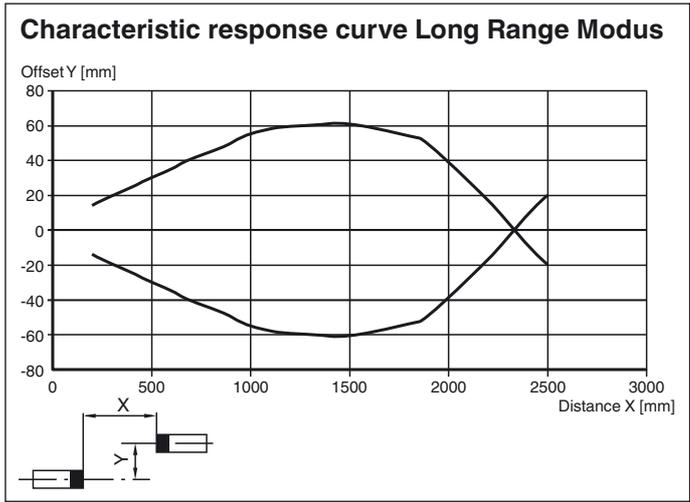|	
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)

Mechanical specifications

Housing width	7.5 mm
Housing height	26 mm
Housing depth	13.8 mm
Degree of protection	IP67
Connection	2 m fixed cable
Material	
Housing	PC/ABS and TPU
Optical face	Polycarbonate
Cable	PUR
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: 2020-03-06 02:10   Date of issue: 2020-03-06   302635_eng.xml

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

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Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
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fa-info@sg.pepperl-fuchs.com

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Curves/Diagrams

Characteristic response curve Long Range Modus

Offset Y [mm]

Distance X [mm]

Relative received light strength Long Range Modus

Stability control

Distance X [mm]

Light spot diameter Long Range Modus

Diameter in mm

Distance in m

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