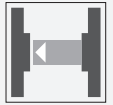




Thru-beam sensor (pair)

OBE1000-R2-SE2-0,2M-V3-P-L



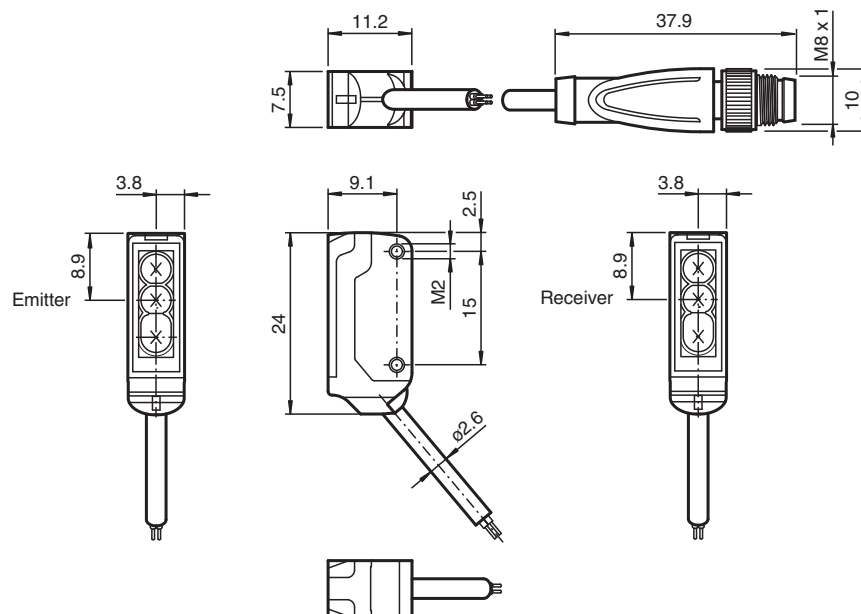
- Ultra-small housing design
- DuraBeam Laser Sensors - durable and employable like an LED
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints

Laser thru-beam sensor, ultra-small design with M2 mounting, 1000 mm detection range, dark on, PNP output, 200 mm fixed cable with plug M8, 3-pin



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 DuraBeam laser sensors are durable and can be used in the same way as a standard sensor.

Dimensions



Technical Data

System components

Emitter	OBE10M-R2-S-0,2M-V3-P-L
Receiver	OBE1000-R2-E2-0,2M-V3-P-L

General specifications

Effective detection range	0 ... 1 m
Threshold detection range	1.5 m
Light source	laser diode

Technical Data

Light type	modulated visible red light , 680 nm	
Laser nominal ratings		
Note	LASER LIGHT , DO NOT STARE INTO BEAM	
Laser class		1
Wave length		680 nm
Beam divergence		> 5 mrad
Pulse length		approx. 2 µs
Repetition rate		approx. 16.6 kHz
max. pulse energy		9.5 nJ
Diameter of the light spot		approx. 3 mm at a distance of 1000 mm
Opening angle		approx. 0.5 °
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	12 ... 24 V
No-load supply current	I ₀	Emitter: ≤ 10 mA Receiver: ≤ 8 mA
Protection class		III
Input		
Test input		Test of switching function at 0 V
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 , resistive load
Voltage drop	U _d	≤ 1.5 V DC
Switching frequency	f	approx. 2 kHz
Response time		250 µs
Conformity		
Product standard		EN 60947-5-2
Laser safety		EN 60825-1:2007
Approvals and certificates		
EAC conformity		TR CU 020/2011
UL approval		E87056 , cULus Recognized, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated ≤36 V
FDA approval		IEC 60825-1:2007 Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 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		200 mm fixed cable with 3-pin, M8 x 1 connector

Release date: 2022-06-03 Date of issue: 2022-06-03 Filename: 70141727_eng.pdf

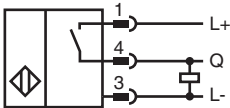
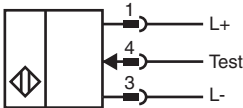
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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 **PEPPERL+FUCHS**

Technical Data

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. 10 g per sensor
Cable length	200 mm

Connection



Accessories

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