

Thru-beam sensor (pair) OBE10M-R2-SE2-0,2M-V3-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
- Improvement in machine availability with abrasion-resistant, antistatic glass front

Laser thru-beam sensor, ultra-small design with M2 mounting, very high 10 m detection range, PNP output, 200 mm fixed cable with plug, M8, 3-pin

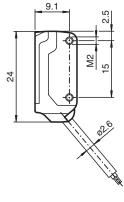


Function

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.

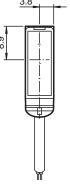
Dimensions

Transmitter

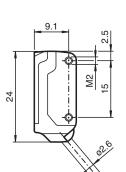


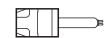


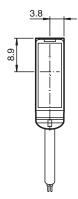
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Receiver







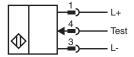
Technical Data

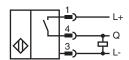
System components		
Emitter		OBE10M-R2-0,2M-V3-L
Receiver		OBE10M-R2-E2-0,2M-V3-L
General specifications		
Effective detection range		0 10 m
Threshold detection range		15 m
Light source		laser diode
Light type		modulated visible red light , 680 nm
Laser nominal ratings		
Note		LASER LIGHT , DO NOT STARE INTO BEAM
Laser class		1
Wave length		680 nm
Beam divergence		> 5 mrad
Pulse length		approx. 3 μs
Repetition rate		approx. 16.6 kHz
max. pulse energy		9.5 nJ
Diameter of the light spot		approx. 20 mm at a distance of 10 m
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
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		22 22 22 (4 442 25)
Ambient temperature		-20 60 °C (-4 140 °F)

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2022-06-27
Release date: 2022-06-27 Date of issue:

Technical Data	
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
Material	
Housing	PC/ABS and TPU
Optical face	glass
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		

2	V3-WM-2M-PUR	Female cordset single-ended M8 angled A-coded, 3-pin, PUR cable grey
W.	MH-R2-01	Mounting aid for R2 series, Mounting bracket
1379	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