

**GN**IIS CE

## **Model Number**

## OBR1000-R3-E2-0,2M-V3

Retroreflective sensor with polarization filter

With fixed cable and M8 device plug, 3-pin

### **Features**

- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Improvement in machine availability with abrasion-resistant, antistatic glass front
- Integrated polarization filter allows the detection of reflective objects
- Extremely long detection range paves ٠ the way for new applications

### **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.

13.8 10.8 3.7 <u>ø3.2</u> 3.7 21.2 5 9 26



## **Electrical connection**



**Dimensions** 

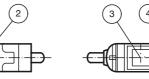
## **Pinout**

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Wire colors in accordance with EN 60947-5-2 (brown (blue) (black) BN BU BK

# Indicators/operating means



1	Operating display green	
2	Signal display	yellow
3	Emitter	
4	Receiver 1	
5	Receiver 2	

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# Technical data

Technical data				
General specifications				
Effective detection range		0 1 m		
Reflector distance		40 1000 mm		
Threshold detection range		1.4 m		
Reference target		H40 reflector		
Light source		LED		
Light type		modulated visible red light , 630 nm		
Polarization filter		yes		
Angle deviation		approx. 2 °		
Diameter of the light spot		approx. 60 mm at a distance of 800 mm		
Angle of divergence		approx. 2 °		
Optical face		frontal		
Ambient light limit		EN 60947-5-2 : 30000 Lux		
Functional safety related parame	ters			
MTTFd		800 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 flas-		
		hing (approx. 4 Hz)		
Function indicator		LED yellow: lights up when receiving the light beam ; flashes when falling short of the stability control; OFF when light beam is interrupted		
Electrical specifications				
Operating voltage	UB	10 30 V DC , class 2		
No-load supply current	I <sub>O</sub>	< 10 mA		
Output				
Switching type		NO contact / dark on		
Signal output		$1\ \text{PNP}$ 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 <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				
Housing width		7.5 mm		
Housing height		26 mm		
Housing depth		13.8 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		
Mass		approx. 20 g		
Cable length		200 mm		
Compliance with standards and ves	directi-			
Directive conformity				
EMC Directive 2004/108/EC		EN 60947-5-2:2007		
Approvals and cortificates				
Approvals and certificates		cULus Recognized, Class 2 Power Source		
UL approval				
CCC approval		CCC approval / marking not required for products rated $\leq$ 36 V		

Accessories

#### MH-R3-01

Mounting aid for sensors from the R3 series, mounting bracket

MH-R3-02 Mounting aid for sensors from the R3 series, mounting bracket

### MH-R3-03

Mounting aid for sensors from the R3 series, mounting bracket

### MH-R3-04

Mounting aid for sensors from the R3 series, mounting bracket

### V3-WM-2M-PUR

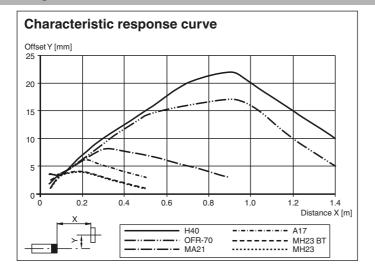
Cable socket, M8, 3-pin, PUR cable

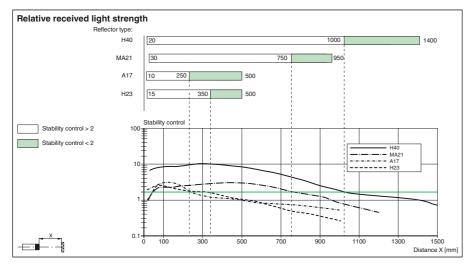
Other suitable accessories can be found at www.pepperl-fuchs.com

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## **Curves/Diagrams**





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

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