



Model Number

OBT15-R2-E0-1T

Background evaluation sensor
with 2 m fixed cable

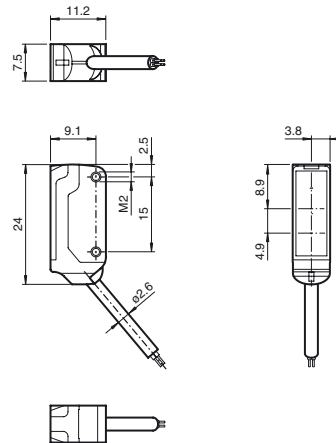
Features

- High-performance miniature photoelectric sensors
- 45° cable outlet for maximum mounting freedom under extremely tight space constraints
- Improvement in machine availability with abrasion-resistant, antistatic glass front
- Detection of flat objects in front of a close background
- Extremely small light spot for very high switching point accuracy
- Highly visible light spot, even on dark materials

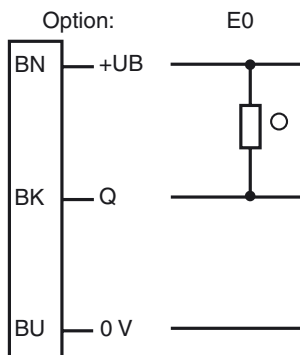
Product information

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

Dimensions

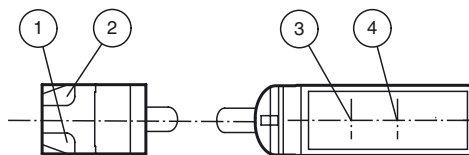


Electrical connection



- = Light on
- = Dark on

Indicators/operating means



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

Technical data**General specifications**

Detection range	0 ... 15 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light , 630 nm
Black/White difference (6%/90%)	< 5 % at 15 mm
Angle deviation	approx. 2 °
Diameter of the light spot	approx. 2 mm at a distance of 15 mm
Angle of divergence	approx. 2 °
Optical face	frontal
Ambient light limit	EN 60947-5-2 : 30000 Lux

Functional safety related parameters

MTTF _d	800 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operating display	LED green: Power on flashing: Short circuit/overload indication
Function display	LED yellow ON: sensor detects background

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC , class 2
No-load supply current	I ₀	< 10 mA

Output

Switching type	NO 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. 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

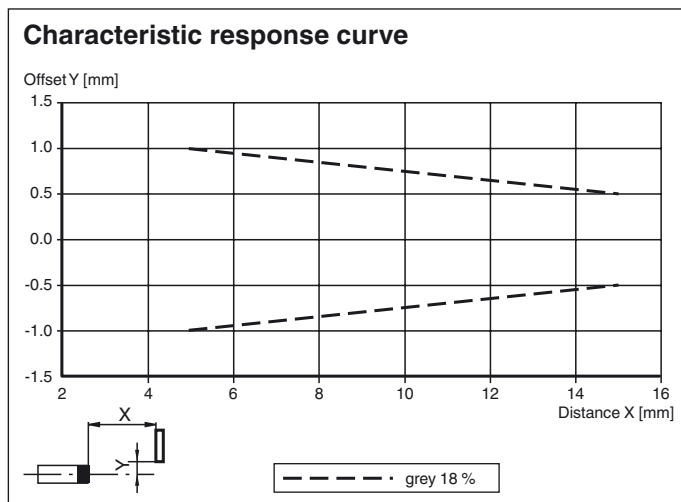
Protection degree	IP67
Connection	2 m fixed cable
Material	
Housing	PC/ABS and PBT
Optical face	glass
Cable	PUR
Installation	Fixing screws , 2 x M2 allen head screws included with delivery
Mass	approx. 20 g

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007

Approvals and certificates

UL approval	cULus Recognized, Class 2 Power Source
CCC approval	CCC approval / marking not required for products rated ≤36 V

Curves/Diagrams**Accessories**

MH-R2-01
Mounting bracket

MH-R2-02
Mounting bracket

MH-R2-03
Mounting bracket

MH-R2-04
Mounting bracket

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

