



Model Number

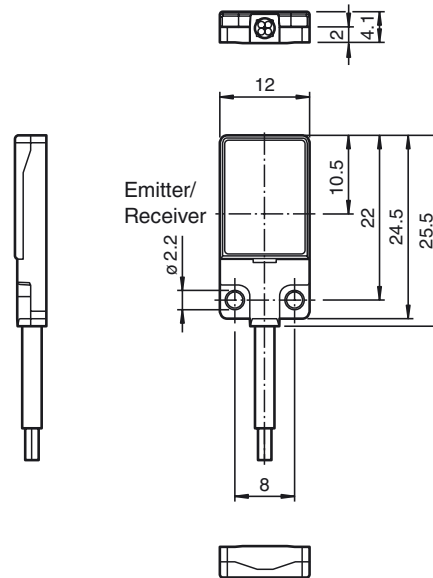
OBE500-R2F-SE2-0,2M-V31

Thru-beam sensor (pair)
with 0.2 m fixed cable and M8 plug, 4-pin

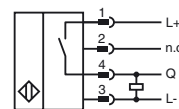
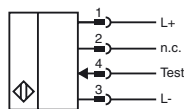
Features

- Very flat design for direct mounting without mounting bracket
- Very bright, highly visible light spot

Dimensions



Electrical connection



Pinout



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Technical data

System components

Emitter	OBE500-R2F-S-0,2M-V31
Receiver	OBE500-R2F-E2-0,2M-V31

General specifications

Effective detection range	0 ... 500 mm
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Threshold detection range	700 mm
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Light source	LED
Light type	modulated visible red light , 630 nm
LED risk group labelling	exempt group
Angle deviation	approx. 2 °
Object size	typ. starts from 1.5 mm
Diameter of the light spot	approx. 60 mm at a distance of 500 mm
Angle of divergence	approx. 5 °
Optical face	frontal
Ambient light limit	EN 60947-5-2 : 25000 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
No-load supply current	I ₀	Emitter: ≤ 11 mA Receiver: ≤ 8 mA
Protection class		III

Input

Test input	Test of switching function at 0 V
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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. 1 kHz
Response time	500 µs	

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 60947-5-2:2007 EN 60947-5-2/A1:2012

Standard conformity

Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 EN 62471:2008 UL 60947-5-2: 2014
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Ambient conditions

Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)

Mechanical specifications

Degree of protection	IP67
Connection	200 mm fixed cable with 4-pin, M8x1 connector
Material	
Housing	PC (Polycarbonate) and Stainless steel
Optical face	PMMA
Cable	PUR
Mass	approx. 10 g Per sensor
Tightening torque, fastening screws	0.25 Nm
Cable length	200 mm

Approvals and certificates

UL approval	E87056 , cULus Recognized, Class 2 Power Source
CCC approval	CCC approval / marking not required for products rated ≤36 V

Accessories

V31-GM-2M-PUR

Female cordset, M8, 4-pin, PUR cable

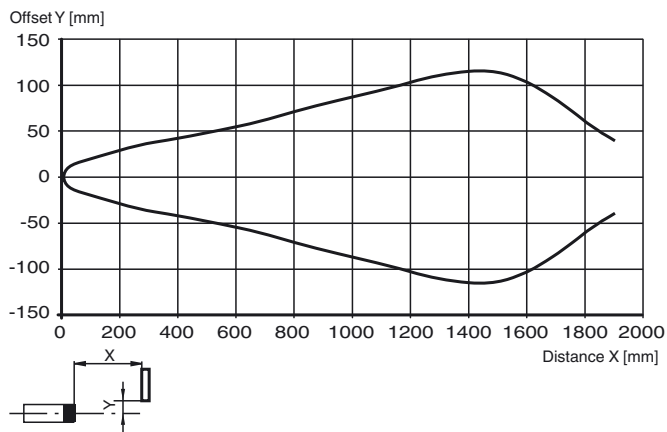
V31-WM-2M-PUR

Female cordset, M8, 4-pin, PUR cable

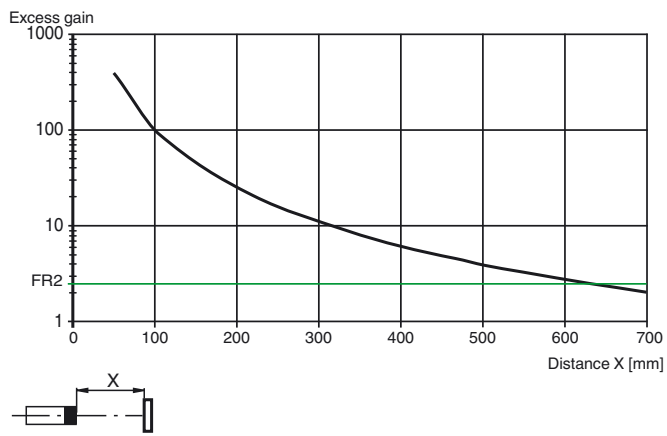
Other suitable accessories can be found at www.pepperl-fuchs.com

Curves/Diagrams

Characteristic response curve



Relative received light strength



Light spot diameter

