



**Model Number**

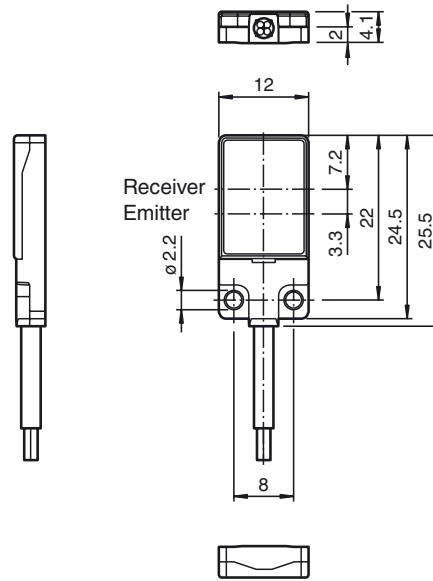
**OBT15-R2F-E2-0,2M-V31**

Triangulation sensor (BGS)  
with 0.2 m fixed cable and M8 plug, 4-pin

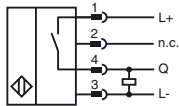
**Features**

- Very flat design for direct mounting without mounting bracket
- Precision object detection, almost irrespective of the color
- Small parts detection from 0.1 mm
- Highly visible light spot, even on dark materials
- High degree of immunity to extraneous light

**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)

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

**Technical data****General specifications**

Detection range	1 ... 15 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light , 630 nm
LED risk group labelling	exempt group
Black/White difference (6 %/90 %)	< 15 % at 15 mm
Angle deviation	approx. 2 °
Object size	typ. starts from 0.1 mm @ 14 mm
Diameter of the light spot	approx. 2.5 mm at a distance of 15 mm
Angle of divergence	approx. 5 °
Optical face	frontal
Ambient light limit	EN 60947-5-2 : 25000 Lux

**Functional safety related parameters**

MTTF <sub>d</sub>	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 flashing (approx. 4 Hz)
Function indicator	LED yellow ON: lights when object is detected

**Electrical specifications**

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
No-load supply current	I <sub>0</sub>	< 15 mA
Protection class		III

**Output**

Switching type	NO contact / light 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 <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	approx. 1 kHz
Response time		500 μs

**Conformity**

Product standard	EN 60947-5-2
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**Ambient conditions**

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

**Mechanical specifications**

Housing width	12 mm
Housing height	25.5 mm
Housing depth	4.1 mm
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
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**

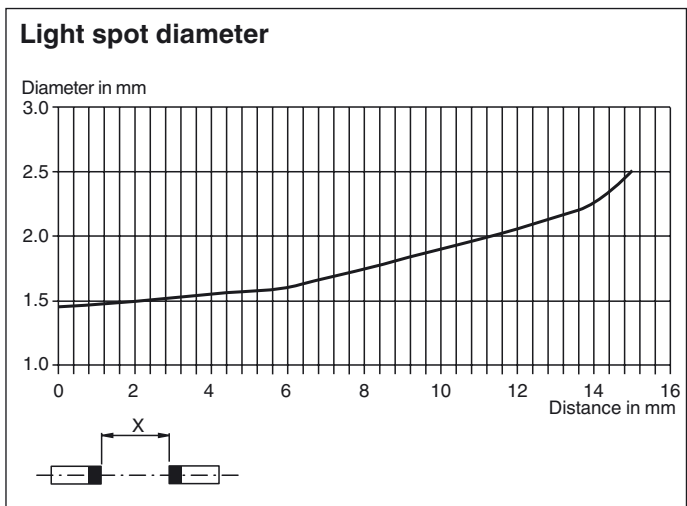
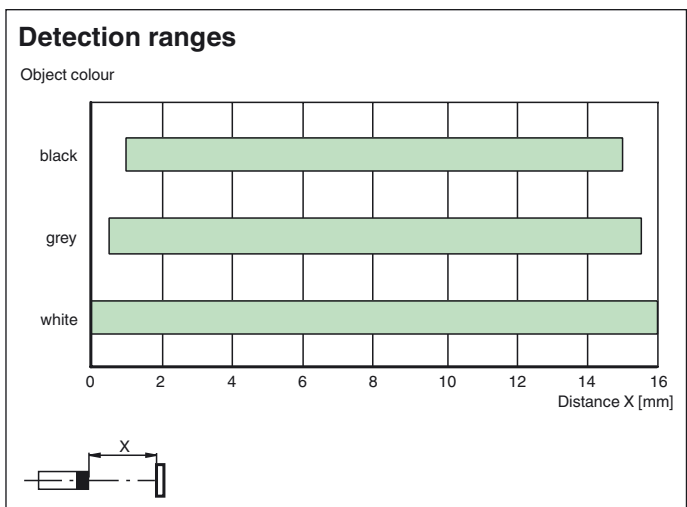
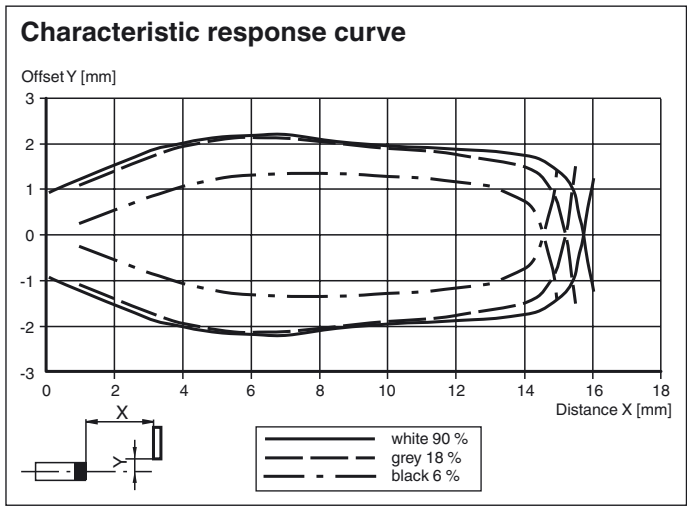
Female cordset single-ended, M8, 4-pin, PUR cable

**V31-WM-2M-PUR**

Female cordset single-ended, M8, 4-pin, PUR cable

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Curves/Diagrams**



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