



**Model Number**

**OMD6000-R2100-B16-2V15**

2-D LiDAR Sensor  
with two M12 x 1 connectors

**Features**

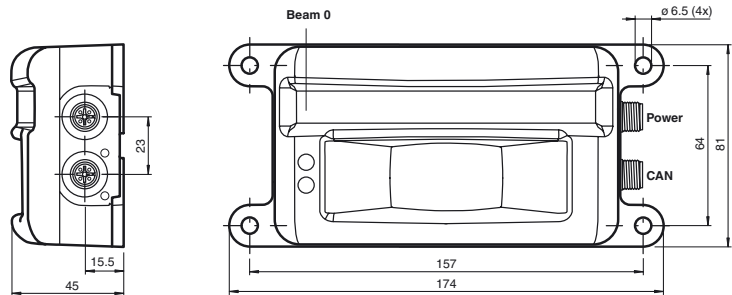
- Distance measurement using object
- Two-dimensional measurement with no moving parts
- Measurement using eye-safe LED technology
- 88° scanning angle
- CANopen interface
- Measuring method PRT (Pulse Ranging Technology)

**Product information**

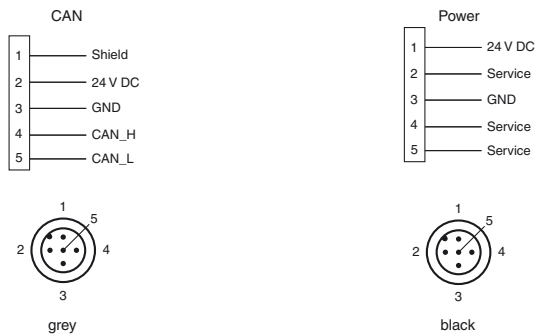
The new 2-dimensional multi-ray LED scanner uses tried-and-tested Pulse Ranging Technology and boasts a wide range of user-friendly features. The eye-safe LED technology in the sensor allows it to be used by personnel in all working areas without posing a danger. The 11 emitter elements arranged side by side span a scanning range of 88 degrees, while the emitter LEDs set themselves apart through their large light spot. Measuring on a surface rather than on a point makes it easier to measure inhomogeneous surfaces. A further highlight is the absence of any moving parts such as a motor or bearings, which makes the device less complex in its design and more resistant to mechanical stress.

Release date: 2017-09-18 14:47 Date of issue: 2017-09-29 276582\_eng.xml

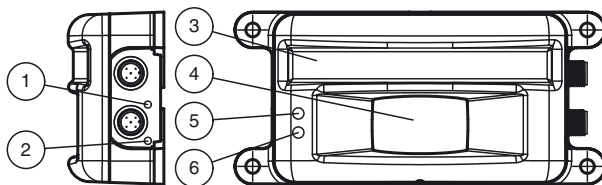
**Dimensions**



**Electrical connection**



**Indicators/operating means**



1	CAN ERROR	red
2	CAN RUN	green
3	Emitter	
4	Receiver	
5	Operating indicator	green
6	Function indicator	yellow

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

Measurement range	0.2 ... 6 m (wh 90%)
Light source	IRED
Light type	modulated infrared light , 850 nm
Measuring method	Pulse Ranging Technology (PRT)
Scan rate	50 s <sup>-1</sup> (1 scan = 11 measurements)
Scanning angle	88°
Diameter of the light spot	550 mm at 4 m (orthogonal)
Ambient light limit	> 80000 Lux
Resolution	1 mm

**Functional safety related parameters**

MTTF <sub>d</sub>	123 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Operation indicator	LED green
Data flow indicator	LED red: CAN Error LED green: CAN Run
Function indicator	LED yellow

**Electrical specifications**

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		10 % within the supply tolerance
No-load supply current	I <sub>0</sub>	≤ 120 mA / 24 V DC
Protection class		III
Time delay before availability	t <sub>v</sub>	< 3 s

**Interface**

Interface type	CAN
Protocol	CANopen, 500 kbit/s

**Measurement accuracy**

Measured value noise	20 mm (1 sigma, 4 m on white, orthogonal)
Angle resolution	8 °
Absolute accuracy	+/- 50 mm (orthogonal)

**Ambient conditions**

Ambient temperature	-30 ... 60 °C (-22 ... 140 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)
Relative humidity	95 % , no moisture condensation

**Mechanical specifications**

Housing width	81 mm
Housing height	45 mm
Degree of protection	IP67
Connection	5-pin, M12x1 connector, standard (supply; color black) 5-pin, M12x1 connector, standard (CANopen; color grey)
Material	
Housing	plastic
Optical face	Lexan (PC)
Mass	approx. 250 g

**Compliance with standards and directives**

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007
Standards	EN 62471:2008

**Approvals and certificates**

UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

**Accessories****V1-G-2M-PUR**

Female cordset, M12, 4-pin, PUR cable

**V1-W-2M-PUR**

Female cordset, M12, 4-pin, PUR cable

**V15-G-5M-PUR-ABG**

Female cordset, M12, 5-pin, shielded, PUR cable

**V15-G-2M-PUR-CAN**

DeviceNet/CANopen bus cable, M12, PUR cable, 5-pin

**V1-G-BK5M-PUR-U**

Female cordset, M12, 4-pin, PUR cable

**V1-W-BK5M-PUR-U**

Female cordset, M12, 4-pin, PUR cable

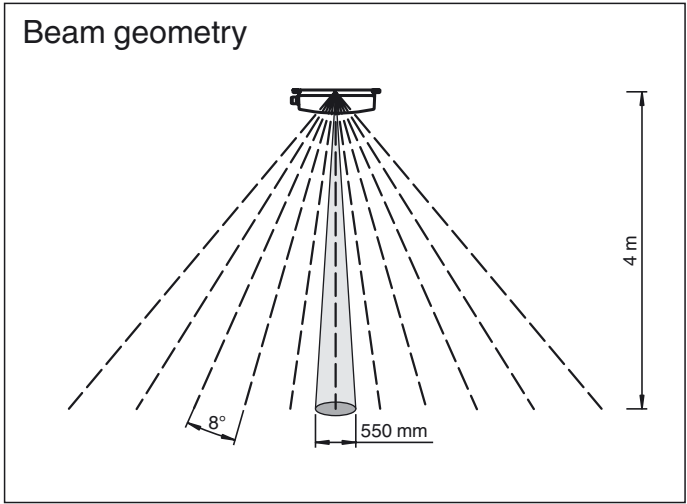
**V15-G-BK5M-PUR-U/ABG**

Female cordset, M12, 5-pin, shielded, PUR cable

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



Curves/Diagrams



Release date: 2017-09-18 14:47 Date of issue: 2017-09-29 276582\_eng.xml

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 4411  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com