



**Model Number**

**OMD10M-R2000-B23-V1V1D**

2D-laser scanner  
with three M12 x 1 connectors

**Features**

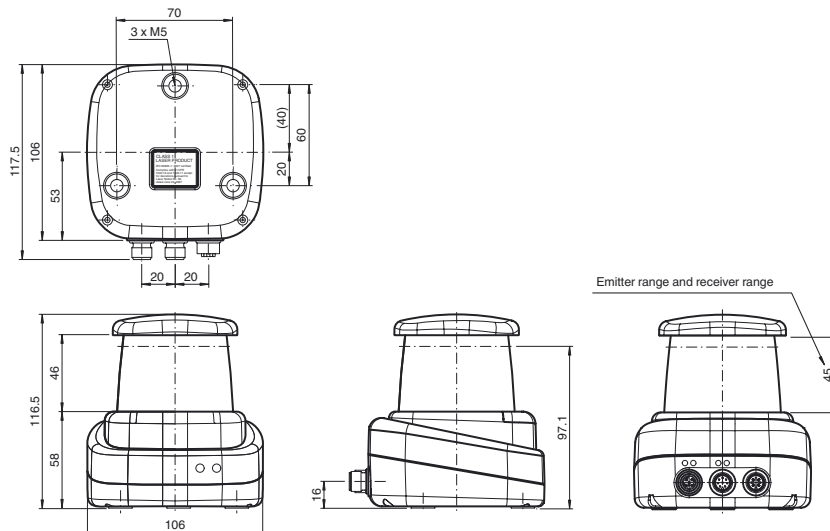
- Very high angle resolution
- 360°-angle of measurement
- Red laser as the light emitter
- Measuring method PRT (Pulse Ranging Technology)

**Product information**

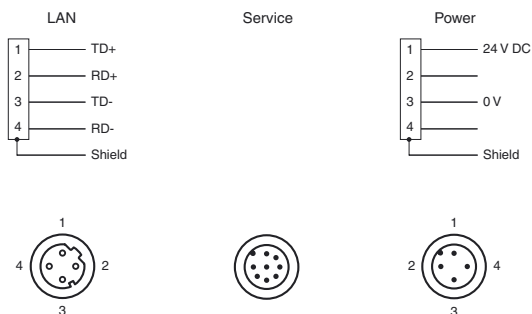
The two-dimensional laser scanner operates using tried-and-tested Pulse Ranging Technology and offers a range of unique features. As a result of this technology, the device has a large detection range for small light spot widths.

With its laser class 1 classification, the device can be used in all workspaces, without posing a health hazard to people. The device has a measuring angle of 360° and provides a measuring frequency of up to 250,000 individual measurements per second. Combined with a scanning frequency of up to 50 Hz, the device is extremely well suited to high-speed applications. Another feature is the display integrated in the lens aperture.

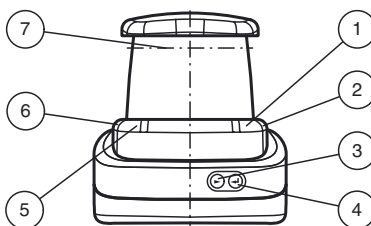
**Dimensions**



**Electrical connection**



**Indicators/operating means**



1	Operating status	green
2	Fault indication	red
3	Menu button	
4	Menu button	
5	Q2 signal indicator	yellow
6	Q1 signal indicator	yellow
7	Laser outlet	

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

Measurement range	0.2 ... 3 m (bw 10%) 0.2 to 10 m (wb 90%) 0.2 to 60 m (reflector)
Light source	laser diode
Light type	modulated visible red light
Laser nominal ratings	
Note	LASER LIGHT , DO NOT STARE INTO BEAM
Laser class	1
Wave length	660 nm
Beam divergence	1 mrad
Pulse length	5 ns
Repetition rate	250 kHz
max. pulse energy	< 4 nJ
Measuring method	Pulse Ranging Technology (PRT)
Scan rate	10 ... 50 s <sup>-1</sup>
Scanning angle	360°
Diameter of the light spot	< 20 mm at 10 m
Ambient light limit	> 80000 Lux
Resolution	1 mm

**Functional safety related parameters**

MTTF <sub>d</sub>	75 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Operation indicator	LED green
Data flow indicator	LED yellow: active ethernet LED green: Ethernet link
Function indicator	LED red: fault LED yellow: Q1 + Q2
Control elements	2 Button
Parameterization indicator	24 x 252 pixels , red

**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>	≤ 400 mA / 24 V DC
Protection class		III (operating voltage 50 V)
Power consumption	P <sub>0</sub>	< 10 W
Time delay before availability	t <sub>v</sub>	< 40 s

**Interface**

Interface type	Fast Ethernet
Protocol	HTTP , TCP/IP and UDP/IP

**Measurement accuracy**

Measuring speed	250000 measurements per second
Measured value noise	± 9 mm (1 sigma, on reflector film)
Angle resolution	0.014 °
Absolute accuracy	typ. ± 35 mm
Repeat accuracy	< 12 mm

**Ambient conditions**

Ambient temperature	-10 ... 50 °C (14 ... 122 °F)
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)
Relative humidity	95 % , no moisture condensation

**Mechanical specifications**

Degree of protection	IP65
Connection	4-pin, M12x1 connector, standard (supply) , 8-pin, M12x1 connector, A-coded (MultiPort) , 4-pin, M12x1 socket, D-coded (LAN)
Material	
Housing	ABS + PC + aluminum
Optical face	PMMA
Mass	approx. 0.8 kg

**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
Laser class	IEC 60825-1:2007 EN 60825-1:2007

**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

**Laserlabel****CLASS 1  
LASER PRODUCT**

IEC 60825-1: 2007 certified.

Complies with 21 CFR  
1040.10 and 1040.11 except  
for deviations pursuant to  
Laser Notice No. 50,  
dated June 24, 2007**Accessories****Schutzkappe LS610 Zubehoer**

M12 protective cap set (connector + socket) for series LS610 / LS611

**Funktionserdung LS610/VDM100 Zubehoer**

Function grounding for LS610 / LS611 / VDM100 series

**V1SD-G-2M-PUR-ABG-V45-G**

Connection cable, M12 to RJ-45, PUR cable 4-pin, CAT5e

**V1SD-G-5M-PUR-ABG-V45-G**

Connection cable, M12 to RJ-45, PUR cable 4-pin, CAT5e

**V1SD-G-ABG-PG9**

Cable connector, M12, 4-pin, D-coded, shielded, non pre-wired

**V1-G-5M-PUR**

Female cordset, M12, 4-pin, PUR cable

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

Female cordset, M12, 4-pin, PUR cable

**MH-R2000**

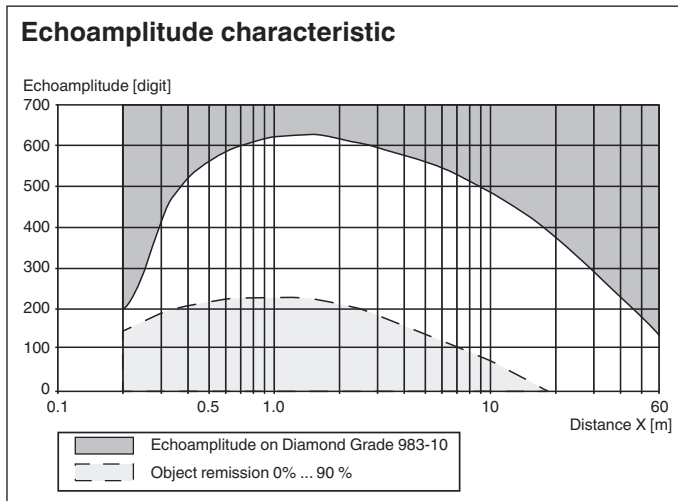
Mounting bracket

**PACTware 4.X**

FDT Framework

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

## Curves/Diagrams



## Laser notice laser class 1

- The irradiation can lead to irritation especially in a dark environment. Do not point at people!
- Maintenance and repairs should only be carried out by authorized service personnel!
- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.