



**Model Number**

**OMD10M-R2000-B23-V1V1D**

2D-laser scanner  
with three M12 x 1 connectors

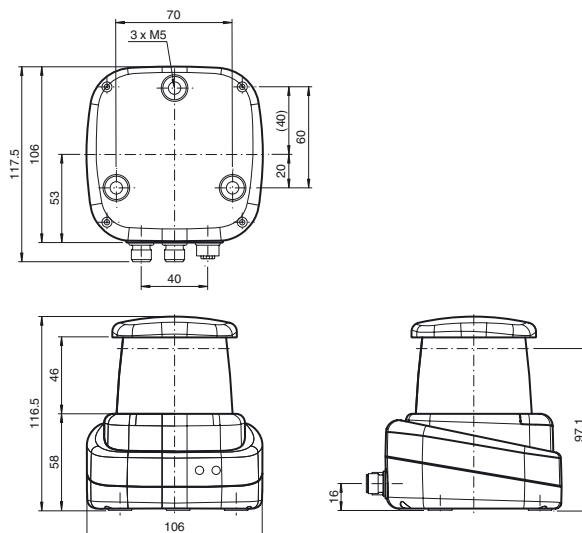
**Features**

- 360°-angle of measurement
- Measuring method PRT (Pulse Ranging Technology)
- Non-contact precision measurement
- Red laser as the light emitter

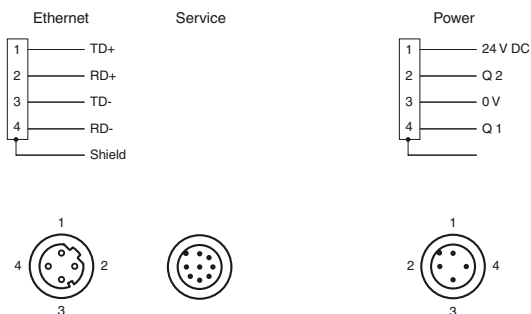
**Product information**

The new 2-dimensional sensor operates using tried-and-tested Pulse Ranging Technology and boasts a range of unique features. For example, the device features a laser emitter with a visible red light. Users can see where the scanning level is and can align the device accordingly. Thanks to its classification in laser class 1, the device can be used in all workspaces, without posing a health hazard to people. The device has a measuring angle of 360° and boasts 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**



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

Measurement range	0.2 ... 10 m
Reference target	Kodak white (90%)
Light source	laser diode
Light type	modulated visible red light
<b>Laser nominal ratings</b>	
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	> 100000 Lux
Resolution	1 mm

**Functional safety related parameters**

MTTF <sub>d</sub>	37.5 a
Mission Time (T <sub>M</sub> )	10 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Operating display	LED green
Data flow display	LED yellow: active ethernet LED green: Ethernet link
Function display	LED red: fault LED yellow: Q1 + Q2
Controls	2 Button
Parameterization display	24 x 360 Pixel , red

**Electrical specifications**

Operating voltage	U <sub>B</sub>	10 ... 30 V
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	TCP/IP and UDP/IP HTTP

**Measurement accuracy**

Measuring speed	250000 measurements per second
Measured value noise	± 9 mm (1 sigma)
Angle resolution	< 0.08 °
Absolute accuracy	± 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**

Protection degree	IP65
Connection	4-pin, M12x1 connector, standard (supply) , M12x1 connector, 8-pin, A-coded (Service) , M12x1 socket, 4-pin, D-coded (LAN)
<b>Material</b>	
Housing	ABS + PC + aluminum
Optical face	PMMA
Mass	approx. 0.8 kg

**Compliance with standards and directives**

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 61326-1:2006
Laser class	IEC 60825-1:2007

**Approvals and certificates**

Protection class	III
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**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!
- Attach the device so that the warning is clearly visible and readable.

**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

Suitable reflectors and cable sockets can be found in the Internet



- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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