



**FARTHER THAN YOU CAN SEE...**

**OPTICAL DISTANCE  
MEASUREMENT  
WITH VDM100**



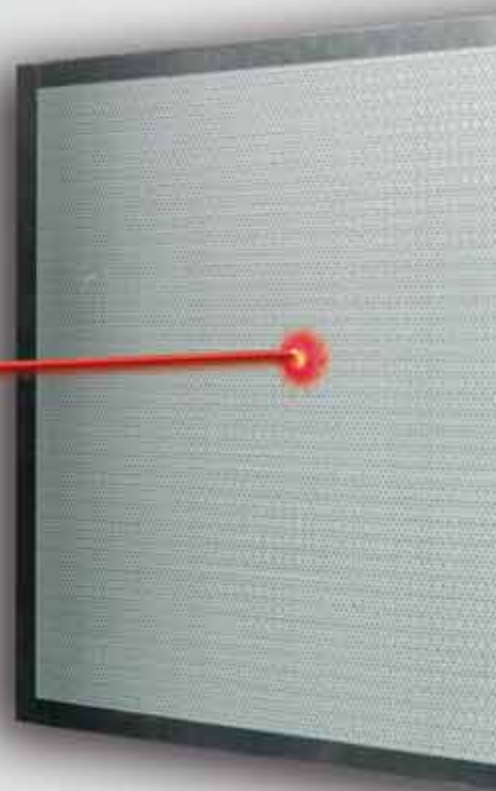
**Farther than you can see ... Indeed!** The new VDM100 works perfectly in distances up to 300 m. With modulated IR beams in the range of nanoseconds, it achieves sampling rates of 1,000 readings per second.

Non-contact and eye-safe, this modern, robust sensor is ideal for positioning tasks requiring speed and precision.

**“The best solutions  
from a far-sighted  
specialist.”**

With an indexing speed of up to 15 m/s, the principle of Pulse Ranging Technology (PRT) shows its strength.

The perfect addition to the VDM100 is the optical data coupler LS611 that is already established on the market – a strong team meeting your requirements for a fully scalable solution for automation tasks.



## HIGHLIGHTS

- Non-contact precision measurement from 0.3 m to 300 m
- Active dynamics control
- High sampling rate ensures continuous measurement
- Ultra-fast data acquisition
- Flexible use with various interfaces: SSI, PROFIBUS, INTERBUS





## HIGHLIGHTS

- Measuring method: Safe, precise Pulse Ranging Technology (PRT)
- High ambient light limit
- High reliability in difficult environments
- Guaranteed accuracy over a wide temperature range up to  $-30\text{ }^{\circ}\text{C}$







**“With an emphasis on the extreme –  
extremely resistant,  
extremely responsive,  
extremely precise.”**

## VDM100 – MODERN DESIGN



■ Perfect duo: Distance measurement device VDM100 and optical data coupler LS611



## HIGHLIGHTS

- Modern, lightweight, and robust construction
- Clearly visible illuminated display
- Simple 4 pushbutton programming

**“Innovative  
yet uncomplicated –  
the world’s nicest  
long distance relationship”**





## HIGHLIGHTS

- Eye-safe measuring method
- Class 1 infrared laser for measurement






A woman with long, wavy brown hair is shown in profile, looking towards the left. A thin red horizontal line is visible on the white wall in front of her, positioned at eye level. She is wearing a dark, sleeveless top with a subtle herringbone pattern. The background is a plain, light-colored wall.

**“Eye-safe  
keeps the target in focus!”**

## HIGHLIGHTS

- Quick and economical installation options
- Add-on visible laser for easy alignment
- M12 plug-in connector

A woman with brown hair, wearing a black top, is smiling and holding a black VDM100 device in her right hand. The device is a rectangular, black unit with a small display screen and several buttons on top. It has a white side panel and a black base with a connector. The background is a plain, light-colored wall.

**“Rather elementary –  
handy and easy to install.”**

## MOUNTING AIDS

- Simple installation due to innovative quick-action clamp
- Precise alignment of the measuring laser with horizontal and vertical adjustment screw



Quick clamp mounting system OMH-LS610-01



Quick clamp mounting system with deflecting mirror (Deflection of 90°)  
OMH-VDM100-01

## ADDITIONAL ACCESSORIES

- Direct installation kit OMH-LS610-02
- Grounding kit
- M12 protective cap kit



## REFLECTORS

### Reflector for ranges up to 300 m:

- Dimensions 500 x 500 mm Reflector VDMo1

### Enlargement reflector for applications with vibrations:

- Dimensions 500 x 250 mm Reflector VDMo2 (use only together with Reflector VDMo1)

### Standard reflectors:

- Dimensions 500 x 500 mm Reflector 500 x 500 mm
- Dimensions 1000 x 1000 mm Reflector 1000 x 1000 mm

## CONNECTION ACCESSORIES

### Operating voltage:

- V1-G M12, 4 pin, straight
- V1-W M12, 4 pin, right-angled
- V15-G-PG9 coupling

### SSI interface:

- V15-B-G jack M12, 5 pin, B coded

### PROFIBUS interface:

- V15-B-G jack M12, 5 pin, B coded
- V15-SB-G connector M12, 5 pin, B coded

### PROFIBUS termination:

- ICZ-TR-V15B



# VDM100 – TECHNICAL DATA

<b>Measuring method</b>	PRT (Pulse Ranging Technology)
<b>Measuring range</b>	0.3 m ... 50 m / 150 m / 300 m
<b>Light source</b>	Laser diode
<b>Light spot representation</b>	< 35 cm at 150 m / < 70 cm at 300 m
<b>Repeat accuracy</b>	< 0.5 mm
<b>Absolute accuracy</b>	± 2.5 mm (> 3 m) / ± 3.5 mm (0.3 m ... 3 m)
<b>Resolution</b>	0,1 mm, adjustable
<b>Laser class</b>	I (in the measurement operating mode)
<b>Read out rate</b>	4000 s <sup>-1</sup> by clock pulse frequency 1 MHz
<b>Max. Motion velocity</b>	15 m/s
<b>Alignment aid</b>	integrated laserpointer, flashes after the beam has been broken
<b>Reference target</b>	reflector 500 mm x 500 mm
<b>Light type</b>	infrared light 905 nm
<b>Beam divergence</b>	≤ 2 mrad
<b>Angle of divergence</b>	receiver 20 mrad
<b>Operating voltage</b>	18 V DC ... 30 V DC , electrically isolated
<b>Protection class</b>	III (operating voltage 50 V)
<b>Ripple</b>	10 %
<b>No-load supply current</b>	0,3 A
<b>Interface types</b>	SSI, PROFIBUS, Interbus
<b>Ambient temperature</b>	-10 °C ... 50 °C / -30 °C ... 50 °C
<b>Storage temperature</b>	-20 °C ... 70 °C
<b>Protection degree</b>	IP65 according to EN 40050



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