



**Model Number**

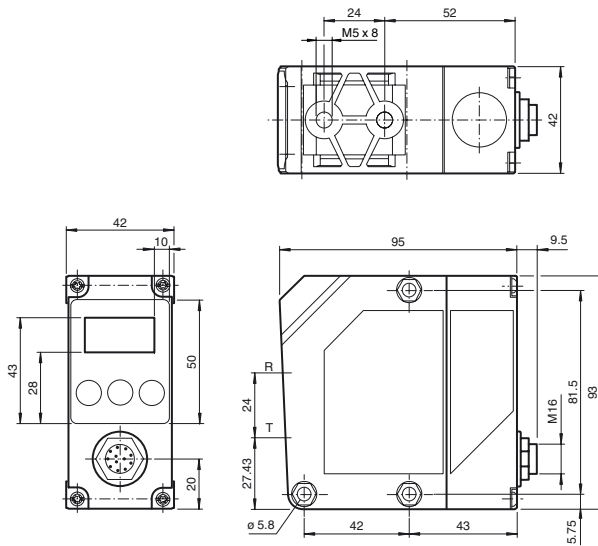
**VDM70-10-L/87/122/160**

Distance measurement device  
12-pin M16 connector

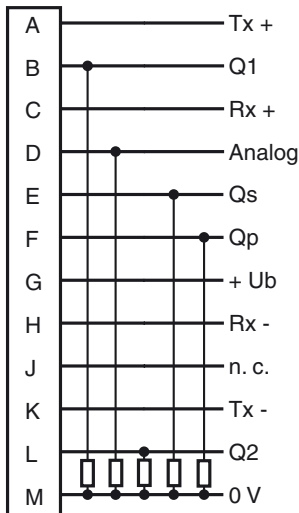
**Features**

- Distance measurement using object
- Measuring method PRT (Pulse Ranging Technology)
- Can be aligned using an integrated pilot laser
- SSI interface
- Adjustable switch outputs
- Not sensitive to ambient light
- Analog output 4 mA ... 20 mA

**Dimensions**



**Electrical connection**



Release date: 2013-01-23 16:18 Date of issue: 2013-01-23 197452\_eng.xml

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

Measurement range	0.5 ... 10 m by 90 % reflection (white)
Reference target	Kodak white (90%)
Light source	laser diode
Light type	modulated visible red light modulated infrared light
<b>Laser nominal ratings</b>	
Note	VISIBLE AND INVISIBLE LASER RADIATION , DO NOT STARE INTO BEAM
Laser class	Measurement laser: 1 Alignment laser: 2
Wave length	Measurement laser: 905 nm Alignment laser: 650 nm
Beam divergence	Measurement laser: 2 mrad Alignment laser: 1 mrad
Pulse length	Measurement laser: 6 ns Alignment laser: 0.25 $\mu$ s
Repetition rate	Measurement laser: 40 kHz Alignment laser: 1 kHz
Maximum optical power output	Measurement laser: 1.8 W Alignment laser: 3 mW
Measuring method	Pulse Ranging Technology (PRT)
Linearity error	+/- 8 mm
Absolute accuracy	$\pm$ 12 mm
Diameter of the light spot	3 mm x 10 mm at a distance of 4 m
Resolution	0.1 mm or 0.125 mm
Hysteresis	H min. 10 mm (adjustable)
Temperature influence	< $\pm$ 5 mm absolute

**Functional safety related parameters**

MTTF <sub>d</sub>	230 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Operating display	LED green
Function display	LED yellow: switching state , LED orange : error message
Controls	Keypad (3 membrane keys) for parameter settings on the LCD display

**Electrical specifications**

Operating voltage	U <sub>B</sub>	18 ... 30 V DC
Ripple		10 % within the supply tolerance
No-load supply current	I <sub>0</sub>	190 mA

**Interface**

Interface type	RS 422, SSI
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**Output**

Interfaces	RS 422, SSI
Signal output	2 PNP, short-circuit protected, reverse polarity protected
Switching current	100 mA
Measurement output	1 analog output 4 ... 20 mA, short-circuit/overload protected
Response time	12 ms
Repeat accuracy	R $\pm$ 4 mm
Other outputs	Service output, plausibility output, PNP, short-circuit protected 50 mA

**Ambient conditions**

Ambient temperature	-10 ... 50 °C (14 ... 122 °F)
Storage temperature	-30 ... 75 °C (-22 ... 167 °F)

**Mechanical specifications**

Protection degree	IP67
Connection	12-pin M16 connector
Material	
Housing	ABS
Optical face	PMMA
Mass	230 g

**Compliance with standards and directives**

<b>Directive conformity</b>	
EMC Directive 2004/108/EC	EN 60947-5-2
<b>Standard conformity</b>	
Laser class	IEC 60825-1:2007 EN 60825-1:2007

**Approvals and certificates**

Protection class	II
UL approval	cULus

**Accessories****OMH-VDM35-01**

Adjustment set series VDM35

**VDM35-AR**

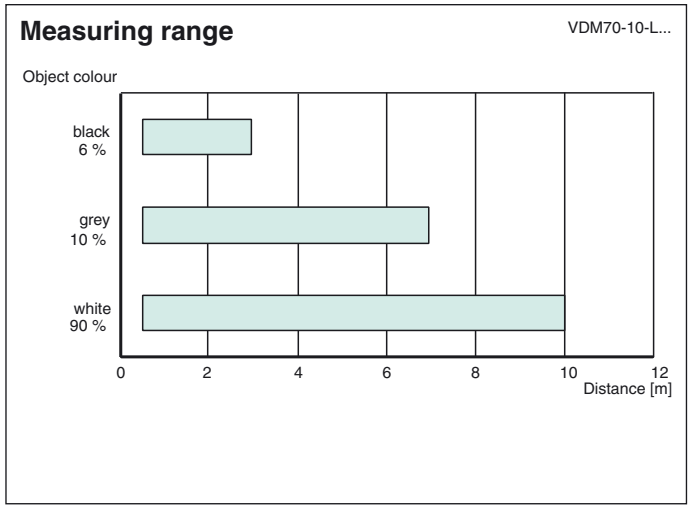
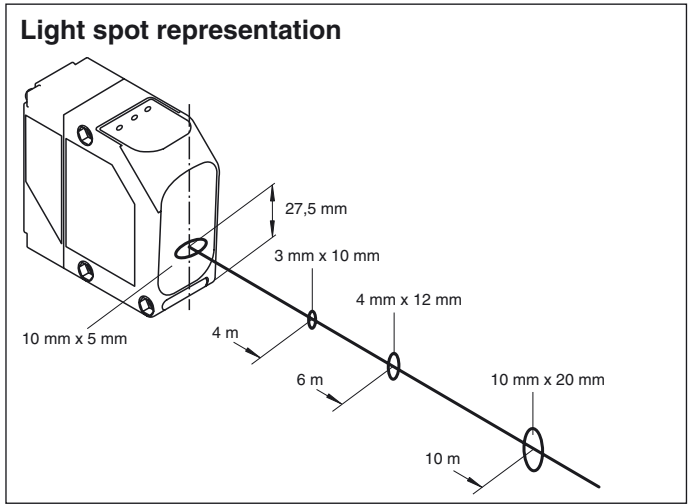
Alignment aid for VDM35 and VDM70 series

**OMH-VDM35**

Mounting bracket

**42312B**Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Curves/Diagrams**



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