



**Model Number**

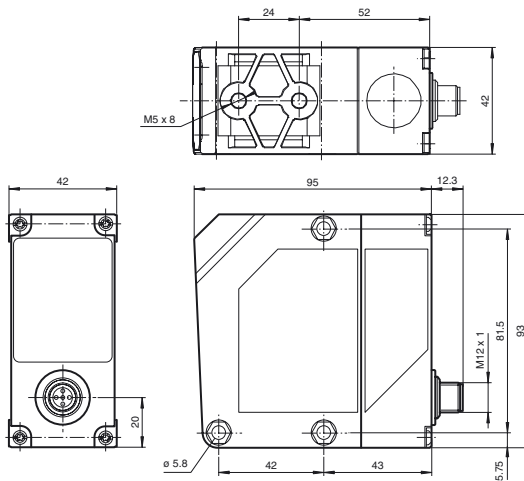
**VDM35-6-L/20/105/122**

Distance sensor  
with 5-pin, M12 x 1 connector

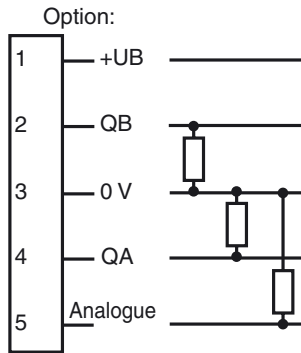
**Features**

- Can be aligned using an integrated pilot laser
- Adjustable switch outputs
- Not sensitive to ambient light
- Analog output 4 mA ... 20 mA

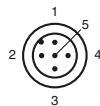
**Dimensions**



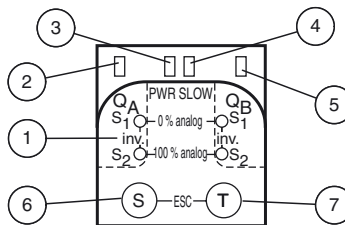
**Electrical connection**



**Pinout**



**Indicators/operating means**



1	LED Menue	red
2	LED Q <sub>A</sub>	yellow
3	LED Fast	orange
4	LED Power	green
5	LED Q <sub>B</sub>	yellow
6	Button Set	
7	Button Toggle	

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

Measurement range	0.2 ... 6 m
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	Time of flight measurement
Diameter of the light spot	4 mm x 12 mm at a distance of 6 m
Ambient light limit	5000 Lux
Temperature influence	typ. $\leq$ 1.2 mm/K

**Indicators/operating means**

Operation indicator	LED green
Function indicator	LED yellow: switching state (2x) , LED orange : Operating mode
Control elements	Control panel : Adjuster for switch point , Operating mode , Analog output ( S - Set , T - Toggle )
Parameterization indicator	LED red (4x)

**Electrical specifications**

Operating voltage	$U_B$	18 ... 30 V DC , class 2
Ripple		10 % within the supply tolerance
No-load supply current	$I_0$	$\leq$ 125 mA / 24 V DC
Time delay before availability	$t_v$	$\leq$ 300 ms

**Output**

Switching type	light/dark on, switchable	
Signal output	2 PNP, short-circuit protected	
Switching current	max. 100 mA	
Measurement output	1 analog output 4 ... 20 mA, short-circuit/overload protected , $R_{max} = 500 \text{ Ohm}$	
Voltage drop	$U_d$	$\leq$ 2.4 V
Deviation of the characteristic curve		typ. $\leq$ $\pm$ 40 mm
Switching frequency	$f$	Fast: 40 Hz / Slow: 16 Hz
Response time		Fast: 13 ms / Slow: 80 ms
Repeat accuracy	$R$	Fast: $\leq$ $\pm$ 15 mm / Slow: $\leq$ $\pm$ 10 mm

**Ambient conditions**

Ambient temperature	-20 ... 50 °C (-4 ... 122 °F)
Storage temperature	-40 ... 80 °C (-40 ... 176 °F)

**Mechanical specifications**

Degree of protection	IP67
Connection	5-pin, M12 x 1 connector
<b>Material</b>	
Housing	ABS
Optical face	PMMA
Mass	200 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

**Approvals and certificates**

Approvals	CE, cULus
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**Laserlabel****Accessories****OMH-VDM35**

Mounting bracket

**OMH-VDM35-01**

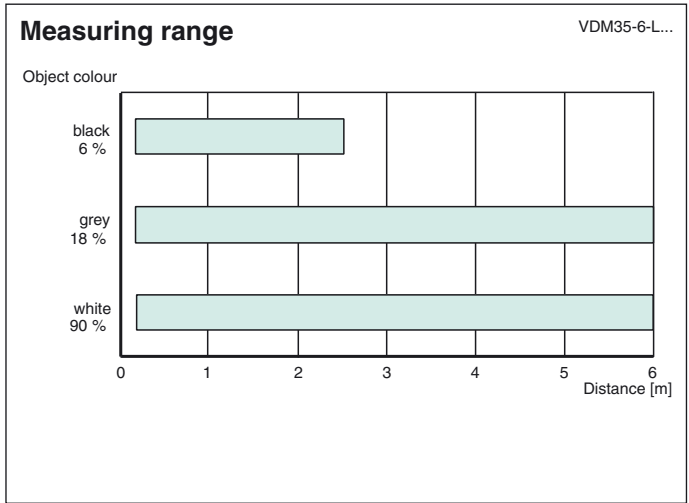
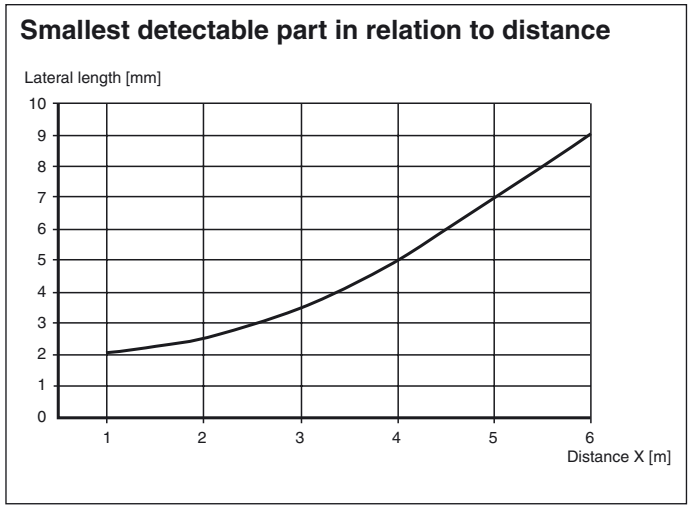
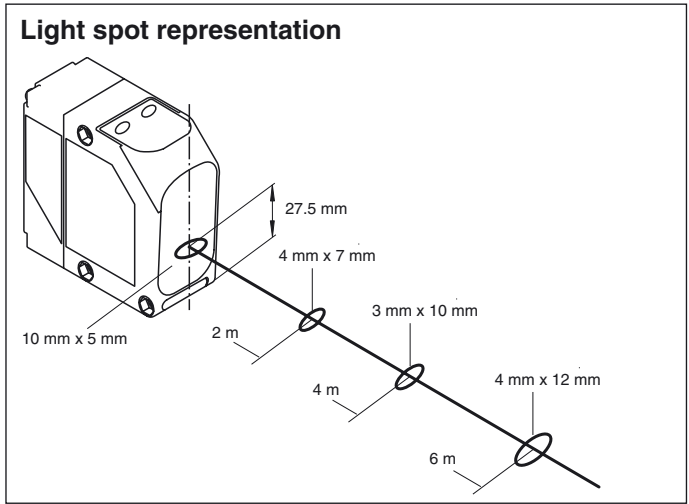
Adjustment set series VDM35

**VDM35-AR**

Alignment aid for VDM35 and VDM70 series

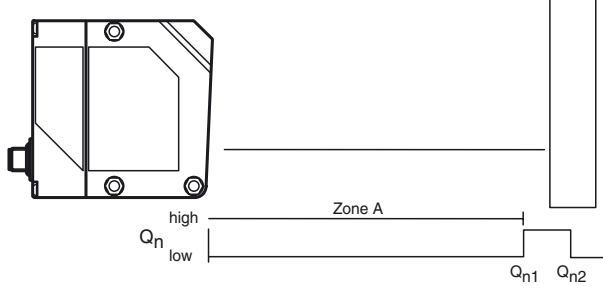
Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Curves/Diagrams**



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

**Automatic reflector mode**

With this mode, a scanning zone is set for a signal output so that the detected surface of the background object (automatic reflector) is approx. midway between switch points  $Q_n$ . 1 and  $Q_n$ . 2. The background object can also be moved (e.g. a conveyor belt). The device now virtually operates like a retro-reflective sensor. All objects are detected in zone A (regardless of their degree of reflection or possible reflective surfaces, exception: transparent objects).



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