Model Number

VDM35-6-L/20/105/122

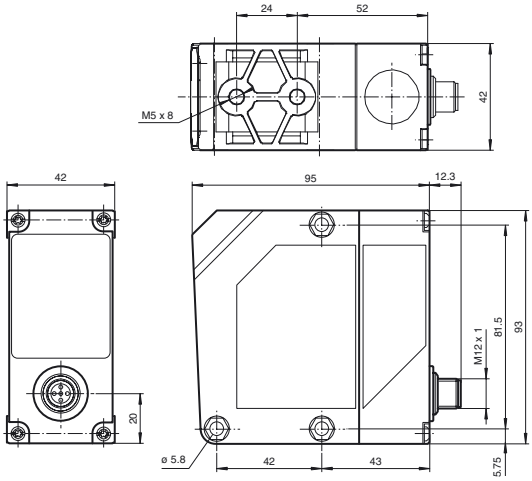
Distance sensor

with 5-pin, M12 x 1 connector

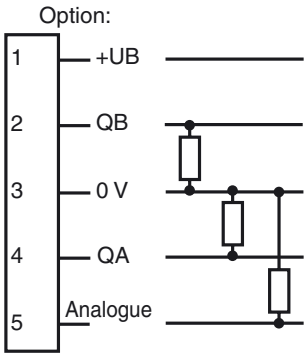
Features

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

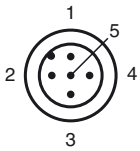
Dimensions



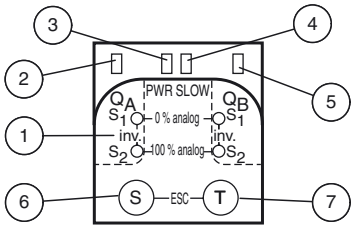
Electrical connection



Pinout



Indicators/operating means



1	LED Menue	red
2	LED Q_A	yellow
3	LED Fast	orange
4	LED Power	green
5	LED Q_B	yellow
6	Button Set	
7	Button Toggle	

Release date: 2013-10-11 12:04 Date of issue: 2013-10-11 186464_eng.xml

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
Laser nominal ratings		
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 µs
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. ≤ 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	≤ 125 mA / 24 V DC
Time delay before availability	t_v	≤ 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 , Rmax = 500 Ohm
Voltage drop	U_d	≤ 2.4 V
Deviation of the characteristic curve		typ. ≤ ± 40 mm
Switching frequency	f	Fast: 40 Hz / Slow: 16 Hz
Response time		Fast: 13 ms / Slow: 80 ms
Repeat accuracy	R	Fast: ≤ ± 15 mm / Slow: ≤ ± 10 mm
Ambient conditions		
Ambient temperature		-20 ... 50 °C (-4 ... 122 °F)
Storage temperature		-40 ... 80 °C (-40 ... 176 °F)
Mechanical specifications		
Protection degree		IP67
Connection		M12 x 1 connector, 5-pin
Material		
Housing		ABS
Optical face		PMMA
Mass		200 g
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 60947-5-2
Standard conformity		
Laser class		IEC 60825-1:2001
Approvals and certificates		
Approvals		CE, cULus

Accessories

OMH-VDM35
Mounting bracket

OMH-VDM35-01
Adjustment set series VDM35

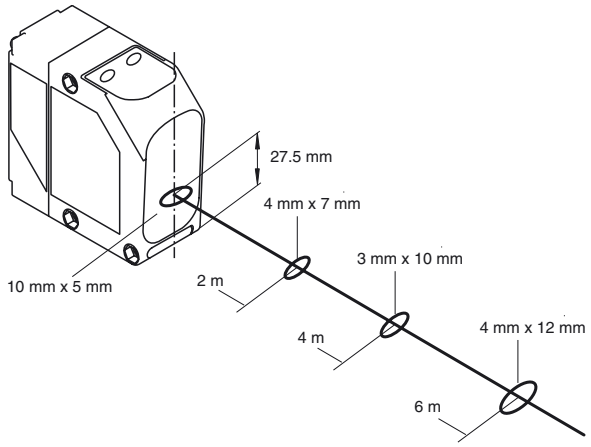
VDM35-AR
Alignment aid for VDM35 and VDM70 series

Other suitable accessories can be found at www.pepperl-fuchs.com

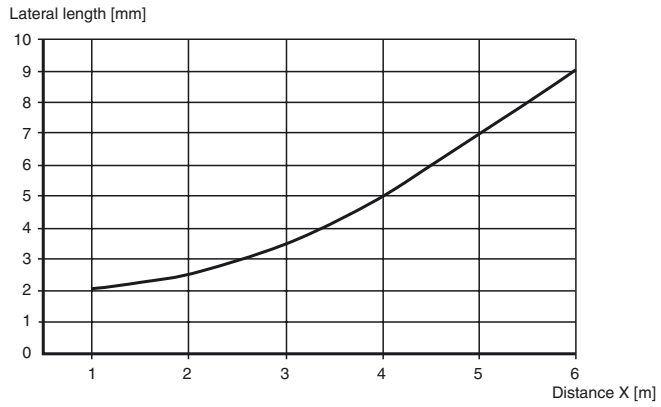
Release date: 2013-10-11 12:04 Date of issue: 2013-10-11 186464_eng.xml

Curves/Diagrams

Light spot representation

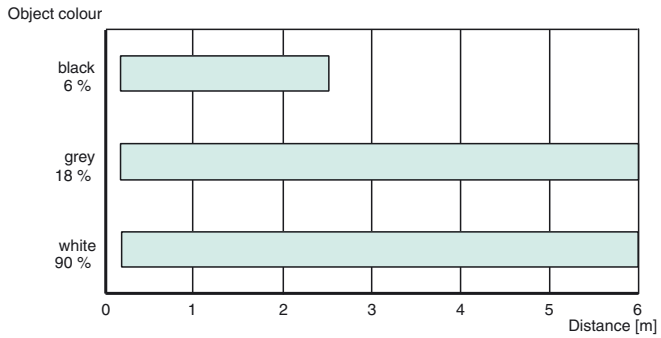


Smallest detectable part in relation to distance



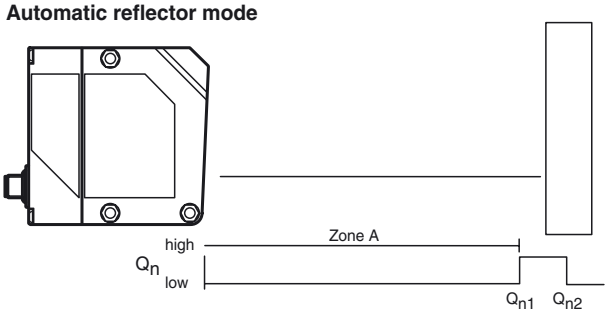
Measuring range

VDM35-6-L...



Release date: 2013-10-11 12:04 Date of issue: 2013-10-11 186464_eng.xml

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 Qn. 1 and Qn. 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).

Release date: 2013-10-11 12:04 Date of issue: 2013-10-11 186464_eng.xml