



# Distance sensor

## VDM18-100/32/105/122

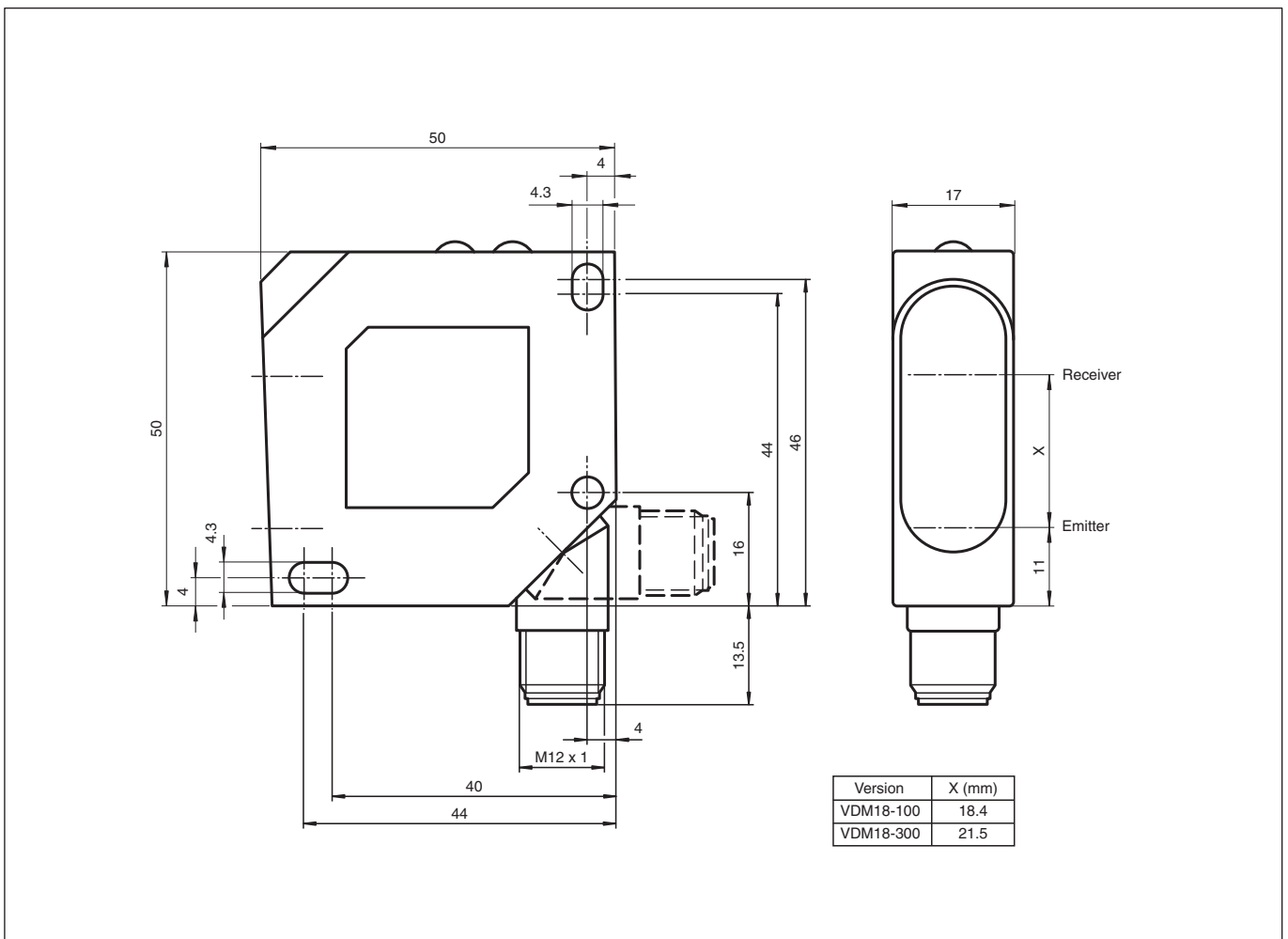


- Analog output 4 mA ... 20 mA
- High resolution
- Very fast response characteristic, suitable for rapid scanning process

Universal distance sensor, measurement to object, 100 mm detection range, red laser light, laser class 2, PNP output, analog output, control input, M12 plug



### Dimensions



### Technical Data

General specifications	
Measurement range	30 ... 100 mm

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

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## Technical Data

Light source		laser diode typ. service life 50,000 h at Ta = +40 °C
Light type		modulated visible red light
Laser nominal ratings		
Note		LASER LIGHT , DO NOT STARE INTO BEAM
Laser class		2
Wave length		650 nm
Light spot representation		approx. 1.5 mm x 3.25 mm at 100 mm
Measuring method		Laser triangulation
Ambient light limit		≤ 5000 Lux
<b>Nominal ratings</b>		
Linearity error		0.25 % of the measuring range
Repeat accuracy	R	< 0.25 % of the measured value
Resolution		< 0.1 % of the measuring range
Temperature drift		< 0.02 % / °C
<b>Indicators/operating means</b>		
Operation indicator		LED green
Function indicator		2 yellow LEDs: Switching status (each output) , 4 green LEDs: Operating mode
Control elements		Control panel : Adjuster for switch point , Operating mode , Analog output ( S - Set , T - Toggle )
Parameterization indicator		LED red
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	18 ... 30 V DC
No-load supply current	I <sub>0</sub>	≤ 40 mA at 24 V DC
Protection class		II , rated voltage ≤ 50 V DC
Time delay before availability	t <sub>v</sub>	≤ 300 ms
<b>Input</b>		
Control input		Laser off (HIGH +UB) , Keypad lock (LOW 0 V)
<b>Output</b>		
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching current		max. 100 mA
Measurement output		1 analog output 4 ... 20 mA, short-circuit/overload protected , R <sub>max</sub> = 500 Ohm
Switching frequency	f	≤ 1 kHz
Response time		0.4 ms
<b>Compliance with standards and directives</b>		
Directive conformity		
EMC Directive 2004/108/EC		EN 60947-5-2
Standard conformity		
Laser class		DIN EN 60825-1:2008, IEC 60825-1:2007
<b>Approvals and certificates</b>		
UL approval		cULus Listed
Approvals		CE, cULus
<b>Ambient conditions</b>		
Ambient temperature		-10 ... 60 °C (14 ... 140 °F)
Storage temperature		-20 ... 80 °C (-4 ... 176 °F)
<b>Mechanical specifications</b>		
Housing width		17 mm
Housing height		50 mm
Housing depth		50 mm
Degree of protection		IP67
Connection		5-pin, M12 x 1 plastic connector
Material		
Housing		ABS , impact resistant
Optical face		PMMA

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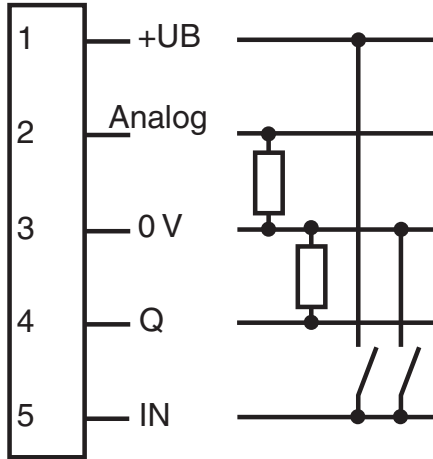
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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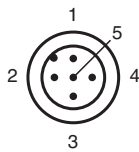
**Technical Data**

Mass	approx. 43 g
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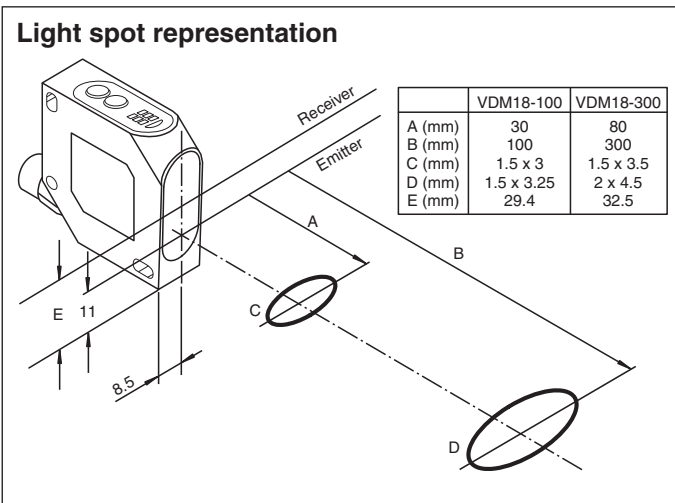
**Connection Assignment**



**Connection Assignment**



**Characteristic Curve**



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## Safety Information



## Safety Information

### Laser Class 2 Information

The irradiation can lead to irritation especially in a dark environment. Do not point at people!



Caution: Do not look into the beam!

Maintenance and repairs should only be carried out by authorized service personnel!

Attach the device so that the warning is clearly visible and readable.

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

## Accessories

	<b>OMH-VDM18-01</b>	Mounting accessory, distance measuring devices Series VDM18
	<b>OMH-VDM18-02</b>	Mounting accessory, distance measuring devices Series VDM18