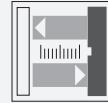




Distance sensor  
VDM18-100/20/88/122/151

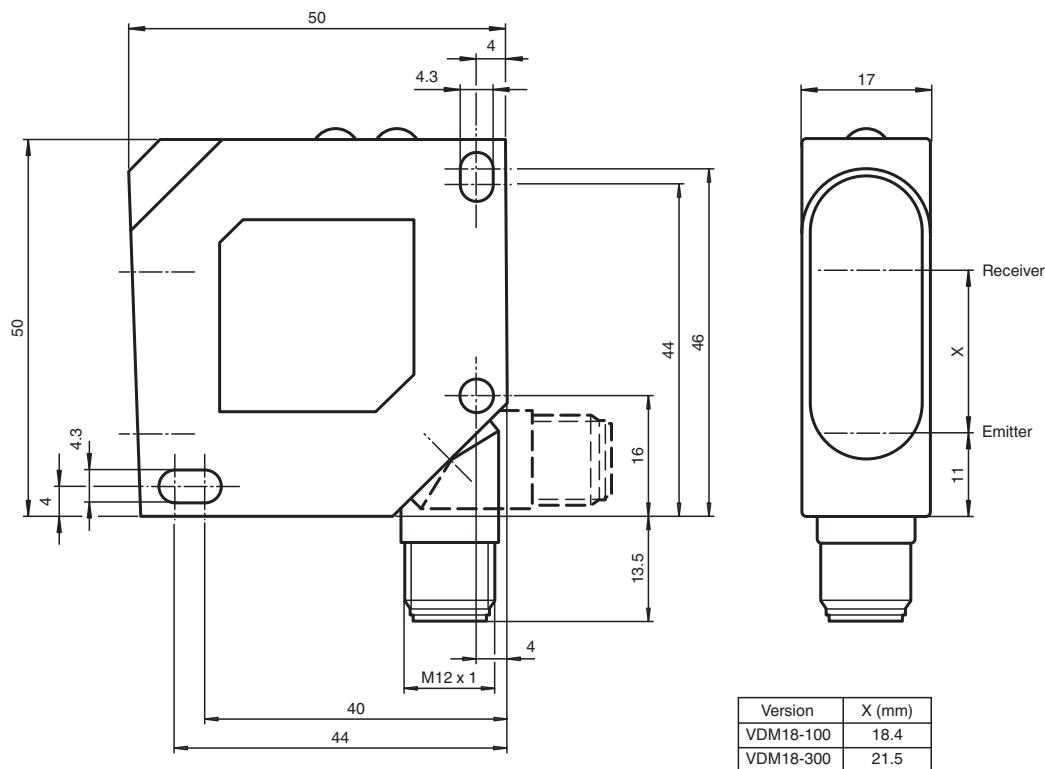


- Analog output 4 mA ... 20 mA
- High resolution
- Very fast response characteristic, suitable for rapid scanning process
- Interface RS 485

Universal distance sensor, measurement to object, 100 mm detection range, red laser light, laser class 2, RS485 interface, 2 x PNP outputs, analog output, M12 plug



## Dimensions



## Technical Data

## General specifications

Measurement range	30 ... 100 mm
Light source	laser diode typ. service life 50,000 h at $T_a = +40^\circ\text{C}$
Light type	modulated visible red light

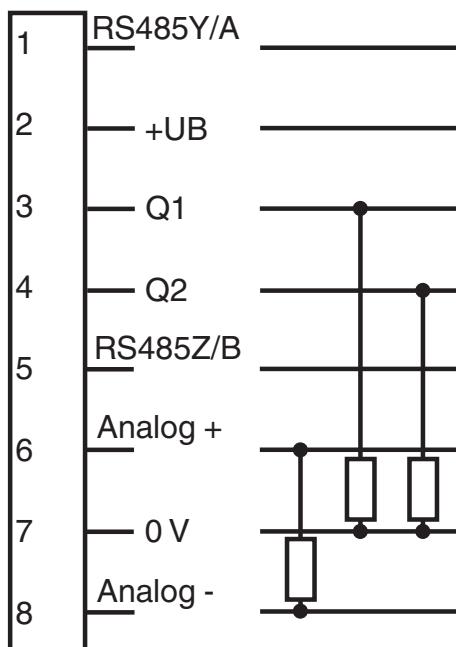
Release date: 2023-09-05 Date of issue: 2023-09-05 Filename: 193921\_eng.pdf

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

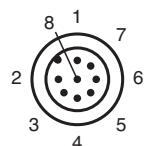
## Technical Data

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 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>Interface</b>		
Interface type	RS-485	
<b>Output</b>		
Interfaces	RS-485	
Signal output	2 PNP outputs, independent , short-circuit protected, reverse polarity protected	
Switching current	max. 100 mA	
Measurement output	1 analog output 4 ... 20 mA, short-circuit/overload protected , Rmax = 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	M12 connector, 8-pin	
Material		
Housing	ABS , impact resistant	
Optical face	PMMA	
Mass	approx. 43 g	

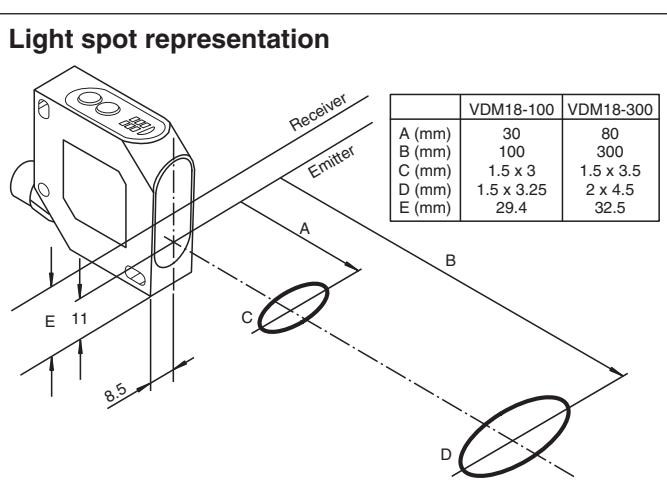
## Connection Assignment



## Connection Assignment



## Characteristic Curve



## 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

## Connection Assignment



**Caution: PIN 1 and PIN 5 must not be connected to the operating voltage.  
Otherwise the device will be destroyed**

