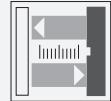




Distance sensor VDM18-300/21/122/151

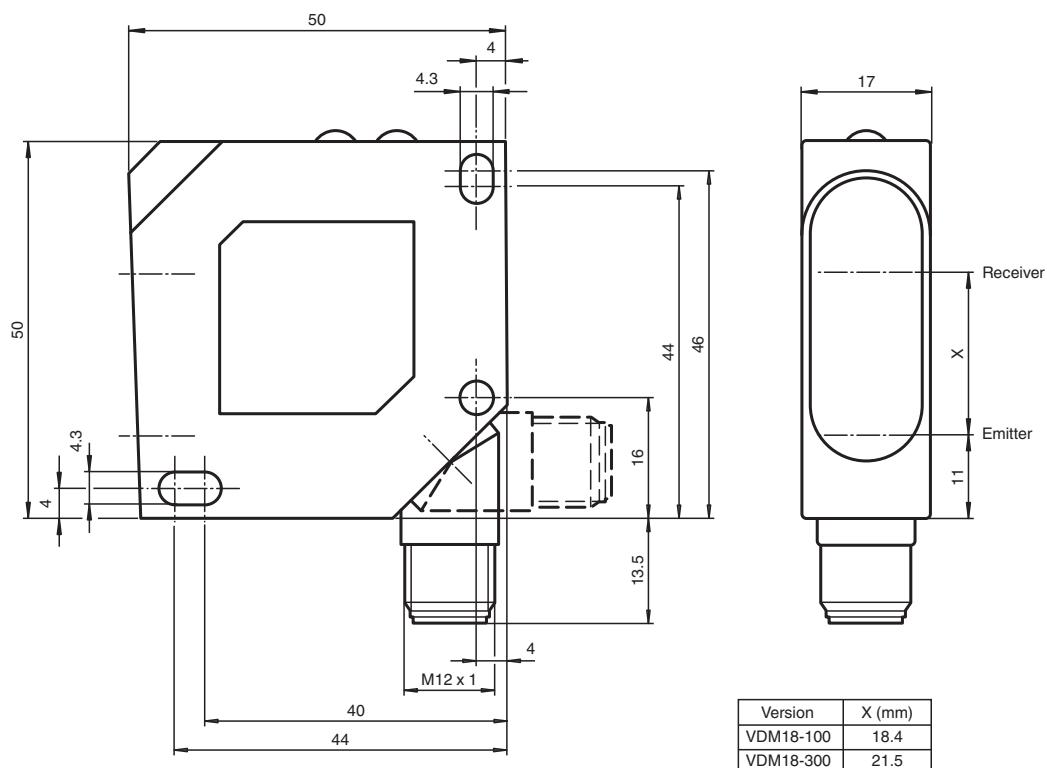


- Analog output 4 mA ... 20 mA
- High resolution
- Very fast response characteristic, suitable for rapid scanning process

Universal distance sensor, measurement to object, 300 mm detection range, red laser light, laser class 2, 2 x NPN outputs, analog output, M12 plug



Dimensions



Technical Data

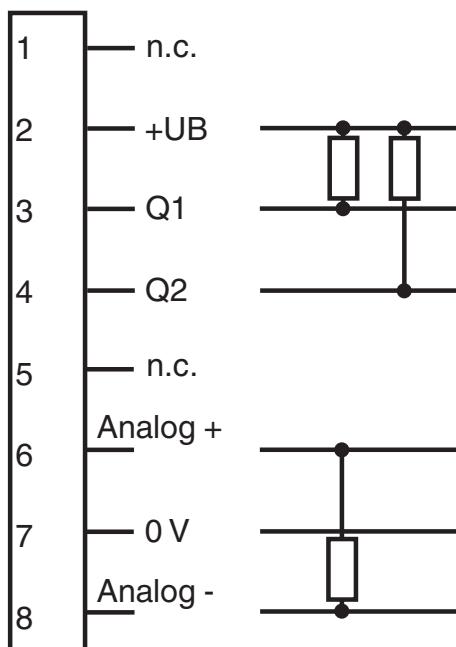
General specifications

Measurement range	80 ... 300 mm
Light source	laser diode typ. service life 50,000 h at $T_a = +40^\circ\text{C}$
Light type	modulated visible red light

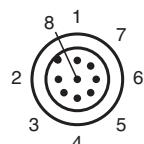
Technical Data

Laser nominal ratings		
Note	LASER LIGHT , DO NOT STARE INTO BEAM	
Laser class	2	
Wave length	650 nm	
Light spot representation	approx. 2 mm x 4.5 mm at 300 mm	
Measuring method	Laser triangulation	
Ambient light limit	≤ 5000 Lux	
Nominal ratings		
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	
Indicators/operating means		
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	
Electrical specifications		
Operating voltage	U _B	18 ... 30 V DC
No-load supply current	I ₀	≤ 40 mA at 24 V DC
Protection class	II , rated voltage ≤ 50 V DC	
Time delay before availability	t _v	≤ 300 ms
Output		
Signal output	2 NPN outputs, independent	
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	
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC	EN 60947-5-2	
Standard conformity		
Laser class	DIN EN 60825-1:2008, IEC 60825-1:2007	
Approvals and certificates		
UL approval	cULus Listed	
Ambient conditions		
Ambient temperature	-10 ... 60 °C (14 ... 140 °F)	
Storage temperature	-20 ... 80 °C (-4 ... 176 °F)	
Mechanical specifications		
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	

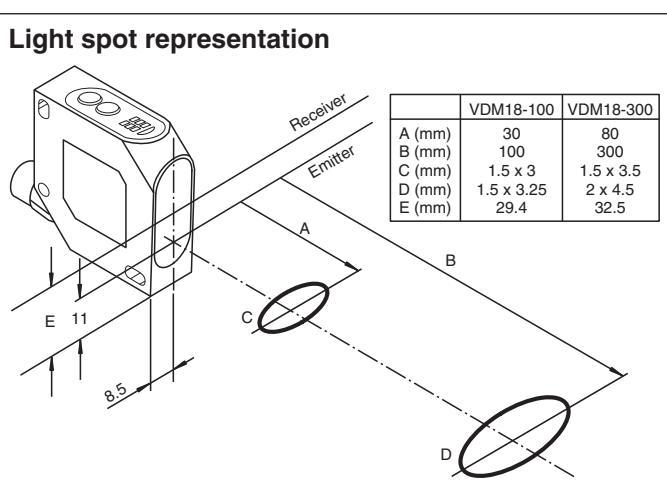
Connection Assignment



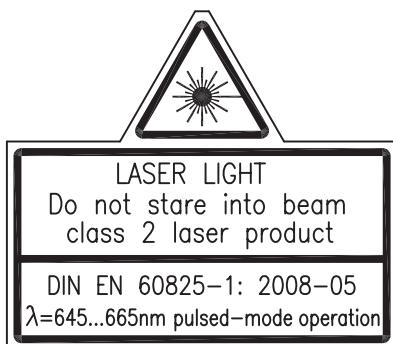
Connection Assignment



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

	OMH-VDM18-01	Mounting accessory, distance measuring devices Series VDM18
	OMH-VDM18-02	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**

