



Distance sensor

VDM18-300/32/105/122

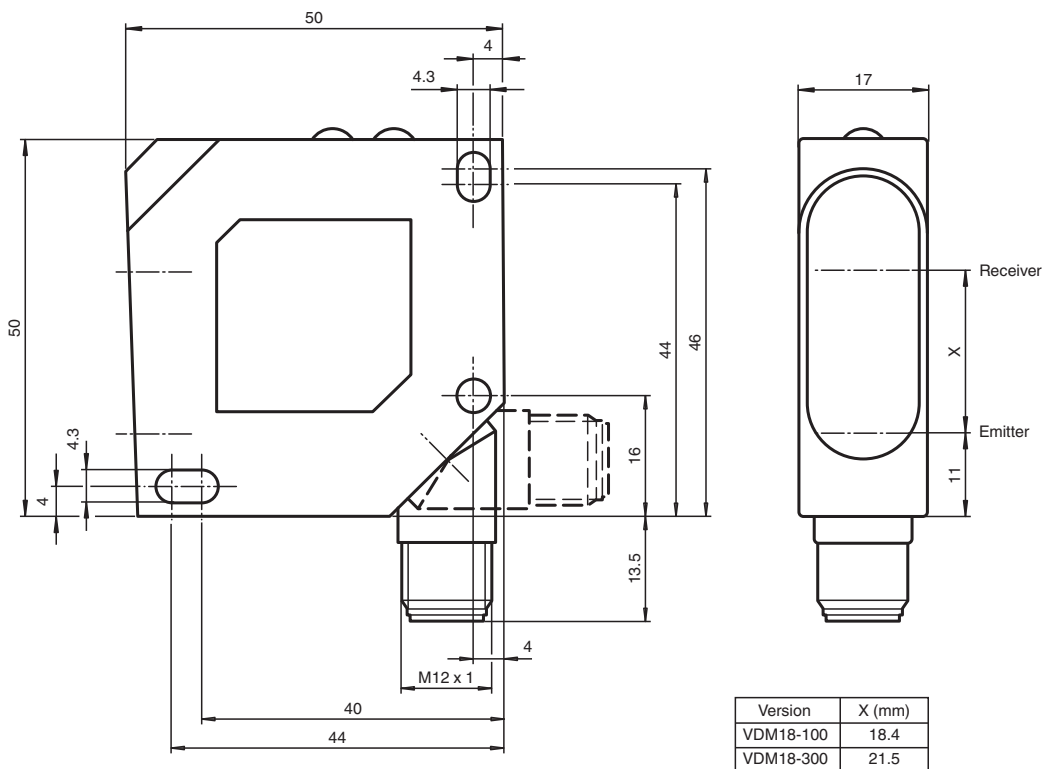


- Analog output 4 mA ... 20 mA
- High resolution
- Very fast response characteristic, suitable for rapid scanning process

Universal distance sensor, measurement to object, 300 mm detection range, red laser light, laser class 2, PNP output, analog output, control input, M12 plug



Dimensions



Release date: 2024-06-24 Date of issue: 2024-06-24 Filename: 193922_eng.pdf

Technical Data

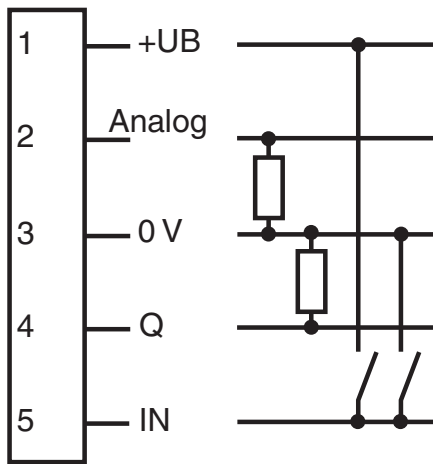
General specifications

Measurement range	80 ... 300 mm
Light source	laser diode typ. service life 50,000 h at Ta = +40 °C
Light type	modulated visible red light

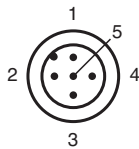
Technical Data

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
Input		
Control input		Laser off (HIGH +UB) Keypad lock (LOW 0 V)
Output		
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 _{max} = 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		
Degree of protection		IP67
Connection		5-pin, M12 x 1 plastic connector
Material		
Housing		ABS , impact resistant
Optical face		PMMA
Mass		approx. 43 g
Dimensions		
Height		50 mm
Width		17 mm
Depth		50 mm

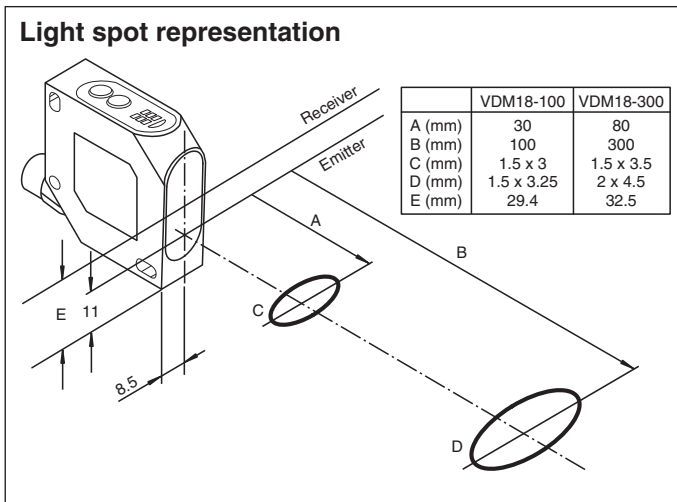
Connection Assignment



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.