

# Fiber optic sensor

## VL18LL-M/40a/118/128

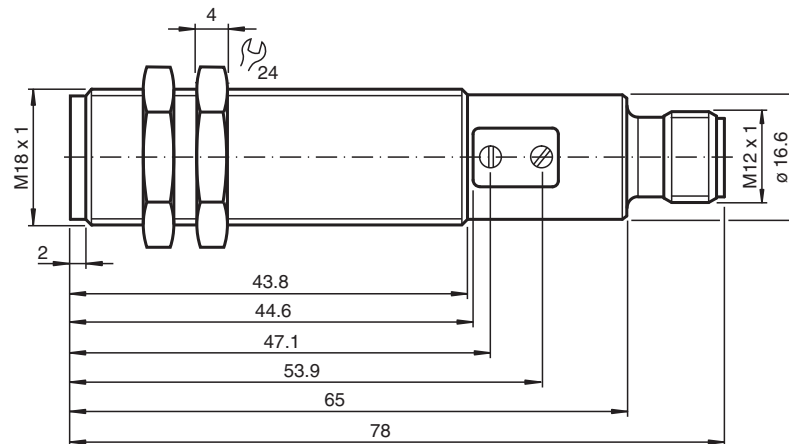


- Strong metallic housing in cylindrical shape M18 x 1
- Degree of protection IP67
- Not sensitive to ambient light, even with switched energy saving lamps
- Multiple device installation possible, no mutual interference (no cross-talk)
- M12 plug connection
- Protection class 2

Fiber optic sensor for glass fiber optics



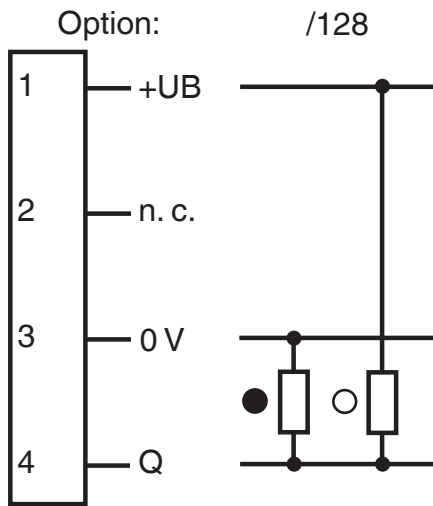
### Dimensions



## Technical Data

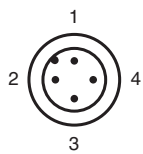
General specifications		
Sensor range		up to 70 mm (LMR 18-3,2-1,0-K4)
Detection range		up to 300 mm (LME 18-2,3-0,5-K3)
Light source		LED, 650 nm visible red light
Light type		modulated visible red light
Opening angle		26 °
Optical face		frontal
Ambient light limit		30000 Lux
Hysteresis	H	< 15 %
Functional safety related parameters		
MTTF <sub>d</sub>		700 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green, flashes in case of short-circuit
Function indicator		LED yellow, lights up with receiver lit
Control elements		Sensitivity adjuster, light/dark switch
Electrical specifications		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC , class 2
Ripple		10 %
No-load supply current	I <sub>0</sub>	< 35 mA
Protection class		II , rated voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1
Output		
Switching type		light/dark on, switchable
Signal output		Push-pull (4 in 1) output short-circuit protected overvoltage protected
Switching voltage		30 V DC
Switching current		max. 200 mA
Voltage drop	U <sub>d</sub>	≤ 2.5 V DC
Switching frequency	f	500 Hz
Response time		1 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
EAC conformity		TR CU 020/2011
UL approval		cULus Listed, Type 1 enclosure
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-30 ... 70 °C (-22 ... 158 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		M12 connector, 4-pin
Material		
Housing		brass, nickel-plated
Optical face		plastic
Mass		60 g

## Connection Assignment



○ = Light on  
● = Dark on

## Connection Assignment



## Accessories

	<b>LMR 18-3,2-0,5-K1</b>	Glass fiber optic - diffuse with metal covering
	<b>LCR 18-3,2-0,5-K5</b>	Glass fiber optic - diffuse with PVC covering
	<b>LMR 18-3,2-0,5-K4</b>	Glass fiber optic - diffuse with metal covering
	<b>LME 18-2,3-0,5-K1</b>	Glass fiber optic - thru-beam with metal covering
	<b>LME 18-2,3-0,5-K3</b>	Glass fiber optic - thru-beam with metal covering
	<b>LME 18-2,3-0,5-K5</b>	Glass fiber optic - thru-beam with metal covering
	<b>LSE 18-2,3-0,5-K9</b>	Glass fiber optic - thru-beam with silicon covering
	<b>LME 18-1,9-0,5-K9</b>	Glass fiber optic - thru-beam with metal covering
	<b>V1-W-2M-PUR</b>	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey

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## Accessories



**V1-G-2M-PUR**

Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey