



Model Number

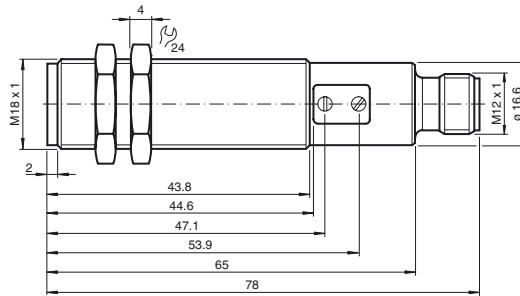
VL18LL-M/40a/118/128

Fiber optic sensor
with 4-pin, M12 x 1 connector

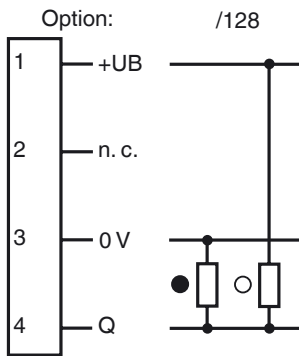
Features

- 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, with no mutual interference (no cross-talk)
- M12 plug connection
- Protection class 2

Dimensions

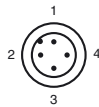


Electrical connection



○ = Light on
● = Dark on

Pinout



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

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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
Angle of divergence	26 °
Optical face	frontal
Ambient light limit	30000 Lux
Hysteresis	H < 15 %

Functional safety related parameters

MTTF _d	700 a
Mission Time (T _M)	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 _B	10 ... 30 V DC , class 2
Ripple		10 %
No-load supply current	I ₀	< 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 _d	≤ 2.5 V DC
Switching frequency	f	500 Hz
Response time		1 ms

Standard conformity

Standards	EN 60947-5-2
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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

Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

UL approval	cULus Listed, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

Accessories**LMR 18-3,2-0,5-K1**

Glass fiber optic - diffuse with metal covering

LCR 18-3,2-0,5-K5

Glass fiber optic - diffuse with PVC covering

LMR 18-3,2-0,5-K4

Glass fiber optic - diffuse with metal covering

LME 18-2,3-0,5-K1

Glass fiber optic - thru-beam with metal covering

LME 18-2,3-0,5-K3

Glass fiber optic - thru-beam with metal covering

LME 18-2,3-0,5-K5

Glass fiber optic - thru-beam with metal covering

LSE 18-2,3-0,5-K9

Glass fiber optic - thru-beam with silicon covering

LME 18-1,9-0,5-K9

Glass fiber optic - thru-beam with metal covering

Other suitable accessories can be found at www.pepperl-fuchs.com