



**Model Number**

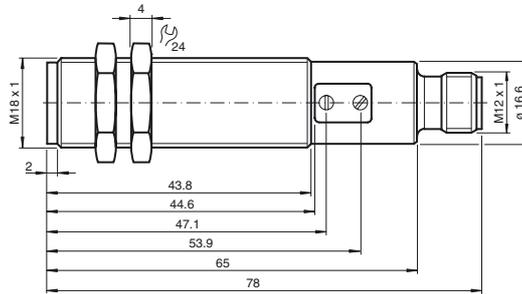
**VL18LL-M/32/40a/118**

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

**Features**

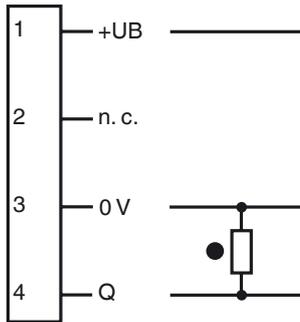
- Strong metallic housing in cylindrical shape M18 x 1
- Degree of protection IP67
- Not sensitive to ambient light, even with switched energy saving lamps
- Multiple device installation possible, with no mutual interference (no cross-talk)
- M12 plug connection
- Protection class 2

**Dimensions**



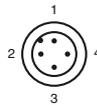
**Electrical connection**

Option: /32



○ = Light on  
● = Dark on

**Pinout**



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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 <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	1 PNP output, short-circuit protected, reverse polarity protected, open collector	
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

**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](http://www.pepperl-fuchs.com)