



**Model Number**

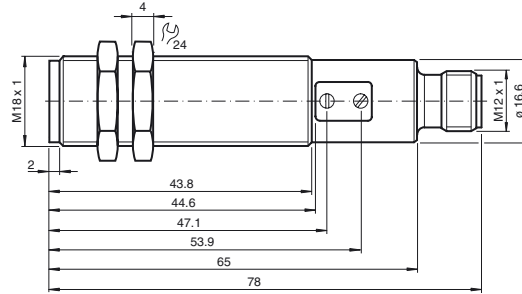
**VL18LL-M/30/40a/118**

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

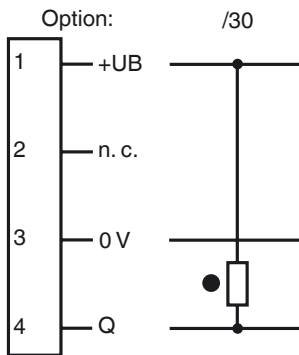
**Features**

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

**Dimensions**

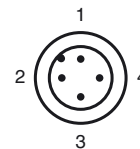


**Electrical connection**



○ = Light on  
● = Dark on

**Pinout**



Release date: 2012-04-27 11:39 Date of issue: 2012-04-27 801644\_eng.xml

Subject to modifications without notice

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411  
fa-info@pepperl-fuchs.com

Copyright Pepperl+Fuchs  
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**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
Approvals	CE, cULus
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**

Operating display	LED green, flashes in case of short-circuit
Function display	LED yellow, lights up with receiver lit
Controls	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 ≤ 300 V AC with pollution degree 1-2 according to IEC 60664-1

**Output**

Switching type	light/dark on, switchable
Signal output	1 NPN output, short-circuit protected, reverse polarity protected, open collector
Switching voltage	30 V DC
Switching current	max. 200 mA
Switching frequency	f 500 Hz
Response time	1 ms

**Standard conformity**

Standards	EN 60947-5-2
-----------	--------------

**Ambient conditions**

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)

**Mechanical specifications**

Protection degree	IP67
Connection	M12 connector, 4-pin
Material	
Housing	brass, nickel-plated
Optical face	plastic
Mass	60 g

**Approvals and certificates**

CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.
--------------	--

**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)