



Model Number

MLV41-LL-RT-2492

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

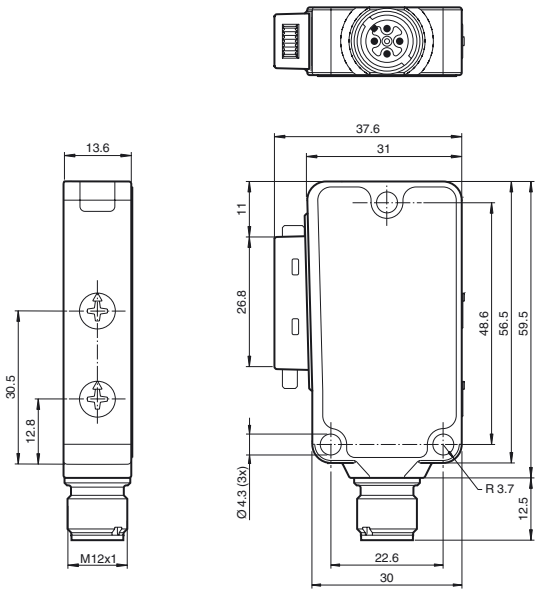
Features

- Robust fiber optic sensor for reliable operation under all conditions
- Adjustable continuous sensitivity
- Easy fiber optic installation with quick-action clamping lock
- Aluminum housing with high-quality Delta Seal coating

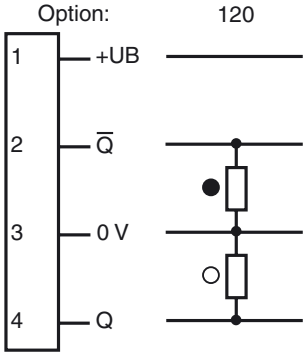
Product information

The unique and extremely popular design of the MLV41 series enables it be mounted correctly in confined areas and offers all the functions that are normally only found on larger phototelectric sensors. The MLV41 series comes with a range of functions. For example, highly visible status LEDs on the front and back, resistance to ambient light, crosstalk protection and universally applicable output stages that permit every possible switching logic and polarity to be realized. The enhanced resistance to ambient light ensures reliable operation even where modern energy-saving lamps with electronic ballasts are in use. The same applies where multiple devices are present, i.e. the use of a number of sensors in the same vicinity causes no problems.

Dimensions

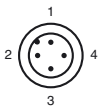


Electrical connection



○ = Light on
● = Dark on

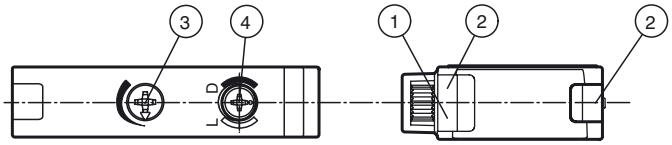
Pinout



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Indicators/operating means



1	Operating display green	3	Sensing range adjuster
2	Function display yellow	4	Bright/dark switch

Release date: 2019-11-27 14:12 Date of issue: 2019-11-27 249781_eng.xml

Technical data

General specifications		
Sensor range		on black (6 %): up to 36 mm on Kodak white, reflection factor 90% up to 120 mm with LLR 04-1.6-0.5-WC3 fiberoptic cable
Adjustment range		0 ... 120 mm on Kodak white, reflection factor 90%
Reference target		100 mm x 100 mm on Kodak white, reflection factor 90%
Light source		LED
Light type		modulated visible red light , 660 nm
Functional safety related parameters		
$MTTF_d$		770 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz)
Function indicator		LED yellow, lights up with receiver lit ; flashes when falling short of the stability control
Control elements		Sensitivity adjuster, light/dark switch
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I_0	max. 40 mA
Output		
Switching type		light/dark on switchable The switching modes specified in the "Electrical Connection" section apply to L/D switches in the "L" position (light switch)
Signal output		2 PNP, complementary, short-circuit protected, reverse polarity protected , open collectors
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Voltage drop	U_d	≤ 2.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms
Conformity		
Product standard		EN 60947-5-2
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-40 ... 75 °C (-40 ... 167 °F)
Mechanical specifications		
Housing width		31 mm
Housing height		56.5 mm
Housing depth		13.6 mm
Fiber optic adapter		04
Degree of protection		IP67
Connection		4-pin, M12 x 1 connector
Material		
Housing		Aluminum , Delta-Seal coated
Optical face		Fiber optic connection
Connector		metal
Mass		50 g
Approvals and certificates		
Protection class		II, rated voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1 functional insulation acc. to DIN EN 50178
UL approval		cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure)
CCC approval		CCC approval / marking not required for products rated ≤36 V

Accessories

OMH-41
Mounting bracket

V1-G-2M-PUR
Female cordset, M12, 4-pin, PUR cable

V1-W-2M-PUR
Female cordset, M12, 4-pin, PUR cable

LCR 04-1,6-0,5-Z1
Glass fiber optic - diffuse with PVC covering

LLR 04-1,6-0,5-G(M6x30)
Glass fiber optic - diffuse with metal silicone covering

LCR 04-1,6-0,5-WC 3
Glass fiber optic - diffuse with PVC covering

LLR 04-1,6-0,5-W C3
Glass fiber optic - diffuse with metal silicone covering

LCE 04-1,6-1,0-Z1
Glass fiber optic - thru-beam with PVC covering

LCE 04-1,6-1,0 G
Glass fiber optic - thru-beam with PVC covering

LLE 04-1,6-1,0-G
Glass fiber optic - thru-beam with metal silicone covering

LCE 04-1,6-1,0-W C3
Glass fiber optic - thru-beam with PVC covering

LLE 04-1,6-1,0-W C3
Glass fiber optic - thru-beam with metal silicone covering

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

Release date: 2019-11-27 14:12 Date of issue: 2019-11-27 249781_eng.xml