



Fiber optic sensor MLV41-LL-RT/95/136



- 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

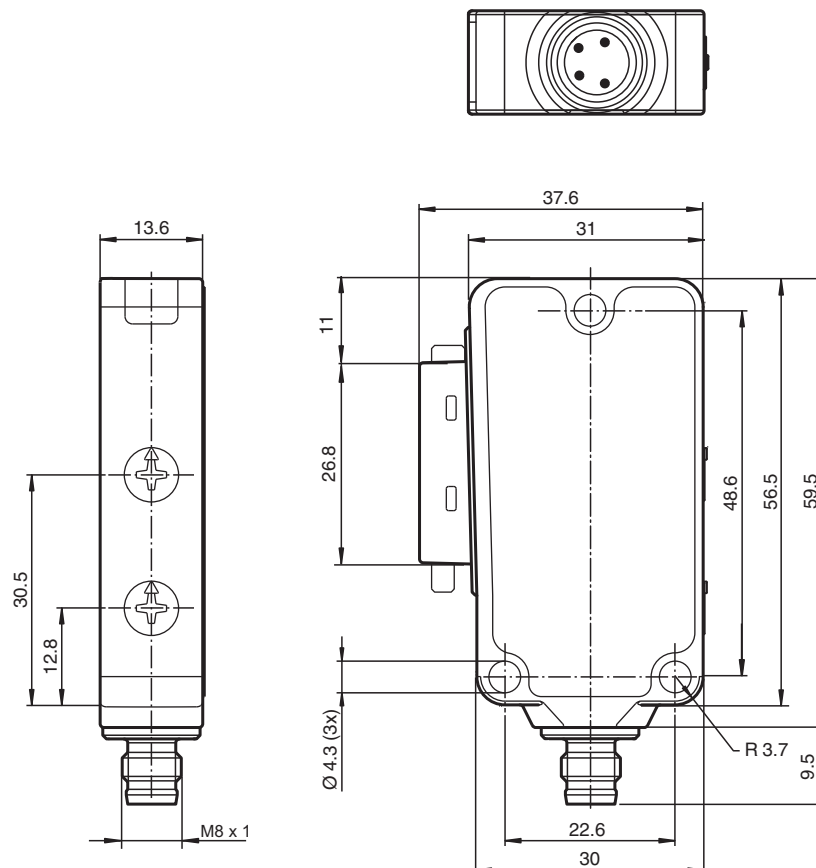
Robust fiber optic sensor for glass fiber optics, red light, push-pull output, M8 plug



Function

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



Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 249783_eng.pdf

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

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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 operating reserve
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 "D" position (dark switch)	
Signal output		2 push-pull (4 in 1) outputs, complementary, short-circuit proof, reverse polarity protected
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
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Approvals and certificates

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

Ambient conditions

Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-40 ... 75 °C (-40 ... 167 °F)

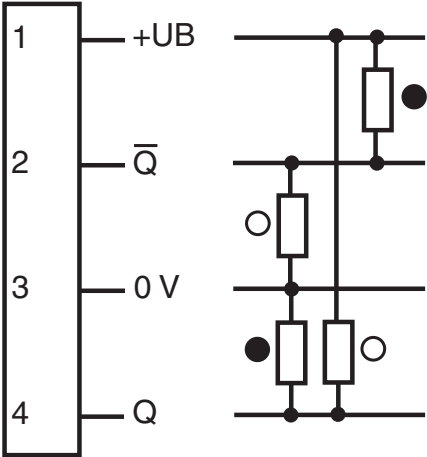
Mechanical specifications

Housing width		31 mm
Housing height		56.5 mm
Housing depth		13.6 mm
Fiber optic adapter		04
Degree of protection		IP67
Connection		M8 x 1 connector, 4-pin
Material		
Housing		Aluminum , Delta-Seal coated
Optical face		Fiber optic connection
Connector		metal
Mass		50 g

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Connection

Option:



○ = Light on
● = Dark on

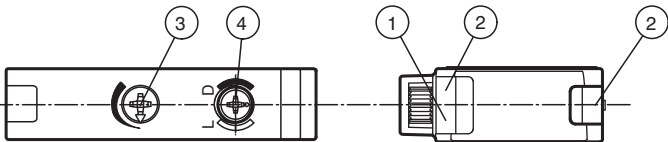
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Assembly



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

Accessories

	V31-WM-2M-PUR	Female cordset single-ended M8 angled A-coded, 4-pin, PUR cable grey
	V31-GM-2M-PUR	Female cordset single-ended M8 straight A-coded, 4-pin, PUR cable grey

Accessories

	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