



Background suppression sensor MLV41-8-H-RT-5036

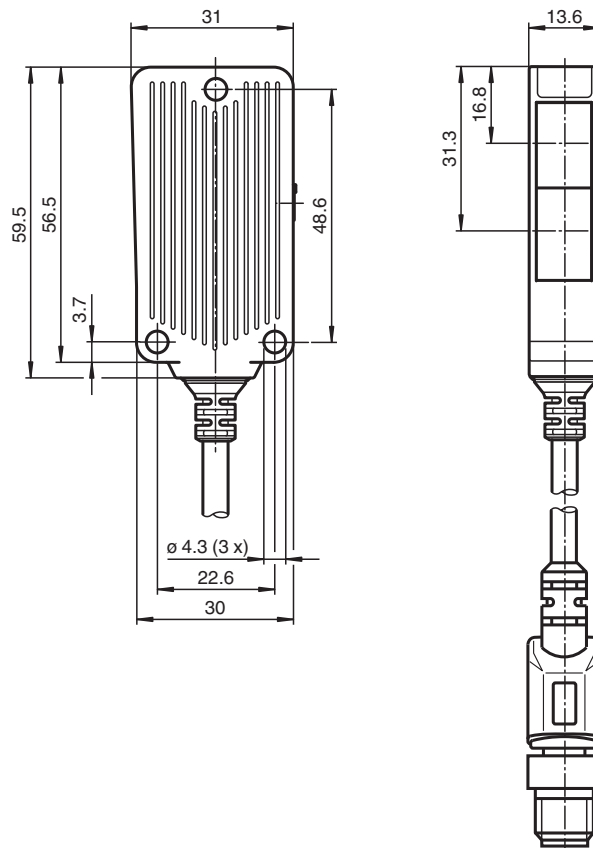


- Reliable detection of all surfaces, independent of color and structure
- Minimal black-white difference
- Precise background suppression
- Extremely high switching frequency
- Clearly visible function indicators
- Short circuit and low voltage indicator

Background suppression sensor



Dimensions



Technical Data

General specifications

Detection range	30 ... 320 mm fixed
Background suppression	+ 10 % of the upper limit of the detection range

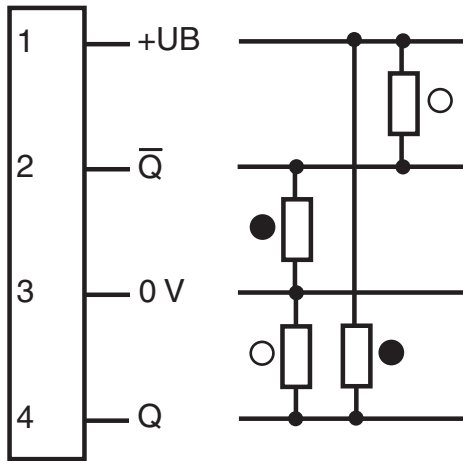
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Technical Data

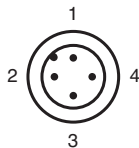
Light source	LED	
Light type	modulated visible red light , 660 nm	
Black-white difference (6 %/90 %)	< 15 % at 320 mm	
Diameter of the light spot	approx. 8 mm at sensor range 320 mm	
Opening angle	1.5 °	
Ambient light limit	40000 Lux	
Functional safety related parameters		
MTTF _d	1260 a	
Mission Time (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	2 LEDs yellow ON: object inside the scanning range OFF: object outside the scanning range	
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	max. 25 mA
Output		
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
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
Ambient conditions		
Ambient temperature		-40 ... 60 °C (-40 ... 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
Degree of protection		IP67
Connection		fixed cable 300 mm with M12 connector, 4-pin
Material		
Housing		Aluminum , Delta-Seal coated
Optical face		glass pane
Mass		100 g

Connection

Option:



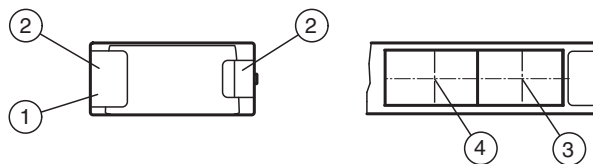
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

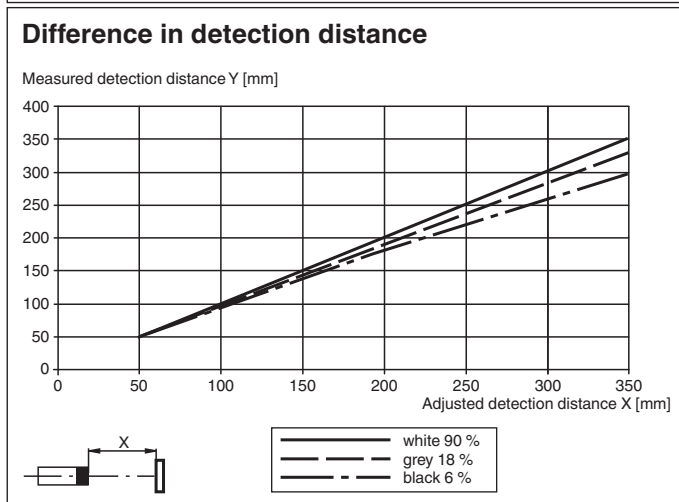
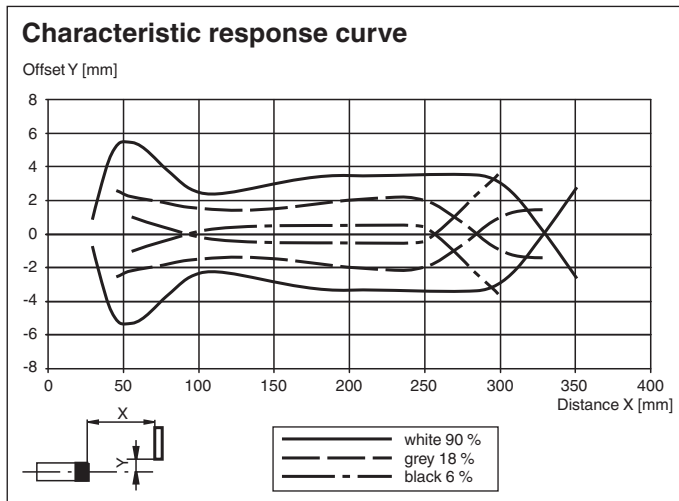
Assembly





1	Operating display green	3	Optical axis transmitter
2	Function display yellow	4	Optical axis receiver

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Characteristic Curve



Accessories

	OMH-40	Mounting bracket
	OMH-09	Mounting bracket for Sensors series MLV41 for M12 rod mounting