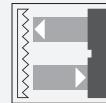




Retroreflective sensor

MLV41-55-6328



- Rugged series in corrosion-resistant metal housing
- Extremely high switching frequency
- Clear and functional display concept for the operating modes
- Resistant against noise: reliable operation under all conditions
- Aluminum housing with high quality Delta-Seal coated

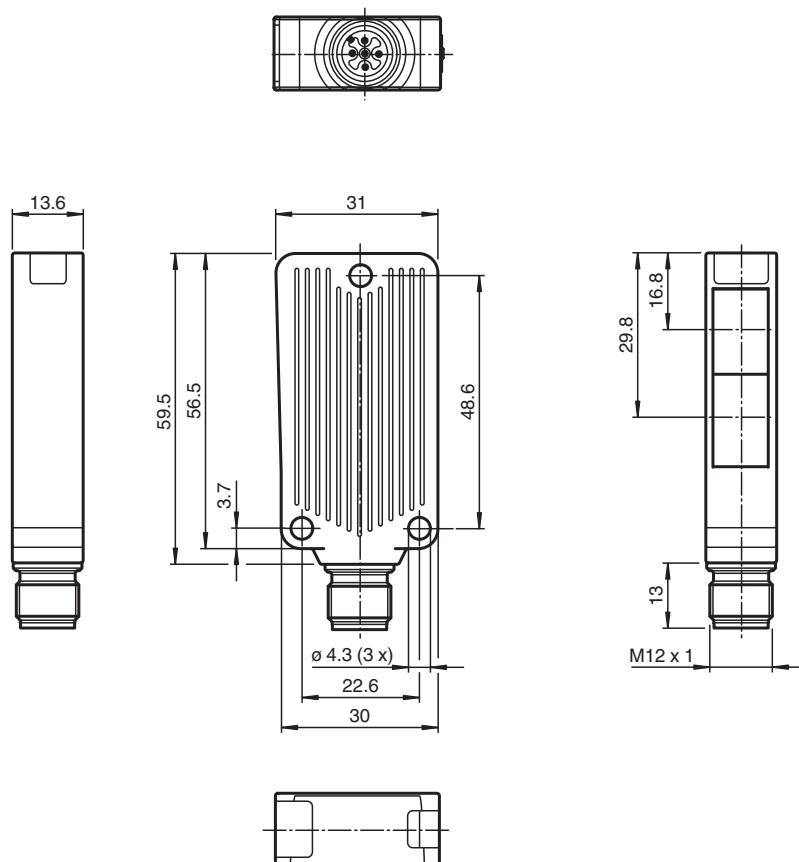
Retroreflective sensor with polarization filter



Function

The unique and extremely popular design of the MLV41 series enables it to be mounted correctly in confined areas and offers all the functions that are normally only found on larger photoelectric 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



Technical Data

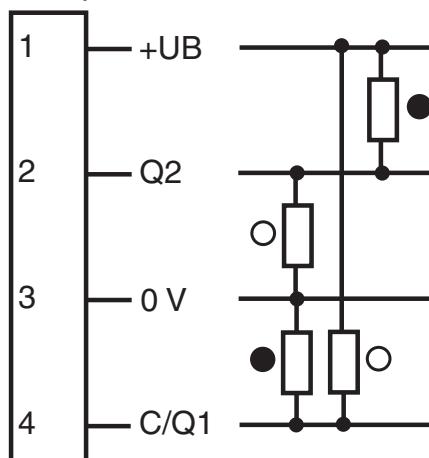
General specifications		
Effective detection range	0 ... 8 m Detection range is preset to 0 ... 0.5 m	
Reflector distance	0.1 ... 8 m	
Threshold detection range	10 m	
Reference target	H50 reflector	
Light source	LED	
Light type	modulated visible red light , 625 nm	
Polarization filter	yes	
Angle deviation	max. $\pm 1.5^\circ$	
Diameter of the light spot	approx. 300 mm at detection range 8.5 m	
Opening angle	1.5 $^\circ$	
Optical face	frontal	
Ambient light limit	20000 Lux	
Functional safety related parameters		
MTTF _d	844 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) , IO link communication: green LED goes out briefly (1 Hz)	
Function indicator	LED yellow, lights up when light beam is free, flashes when falling short of the operating reserve	
Control elements	none	
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I ₀	max. 30 mA
Interface		
Interface type	IO-Link	
Protocol	IO-Link V1.0	
Mode	COM2 (38.4 kBIt/s)	
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		
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 $^\circ$ C (-40 ... 140 $^\circ$ F)	
Storage temperature	-40 ... 75 $^\circ$ C (-40 ... 167 $^\circ$ F)	
Mechanical specifications		
Housing width	31 mm	
Housing height	56.5 mm	
Housing depth	13.6 mm	
Degree of protection	IP67	

Technical Data

Connection	4-pin, M12 x 1 connector
Material	
Housing	Aluminum, Delta-Seal coated
Optical face	glass pane
Connector	metal
Mass	50 g

Connection Assignment

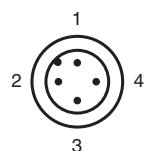
Option:



○ = Light on

● = Dark on

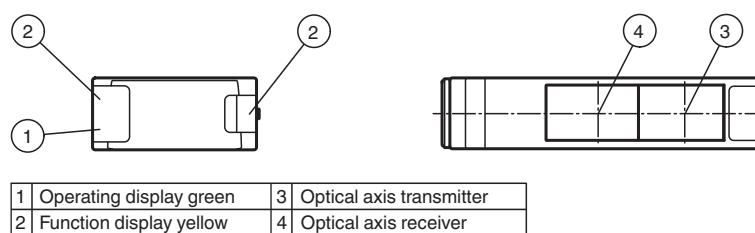
Connection Assignment



Wire colors in accordance with EN 60947-5-2

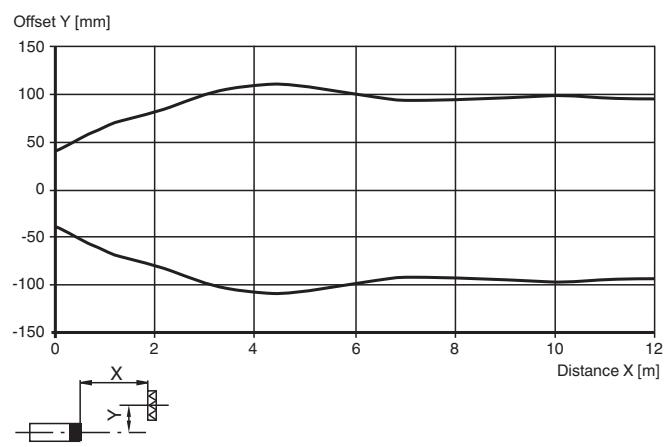
1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Assembly

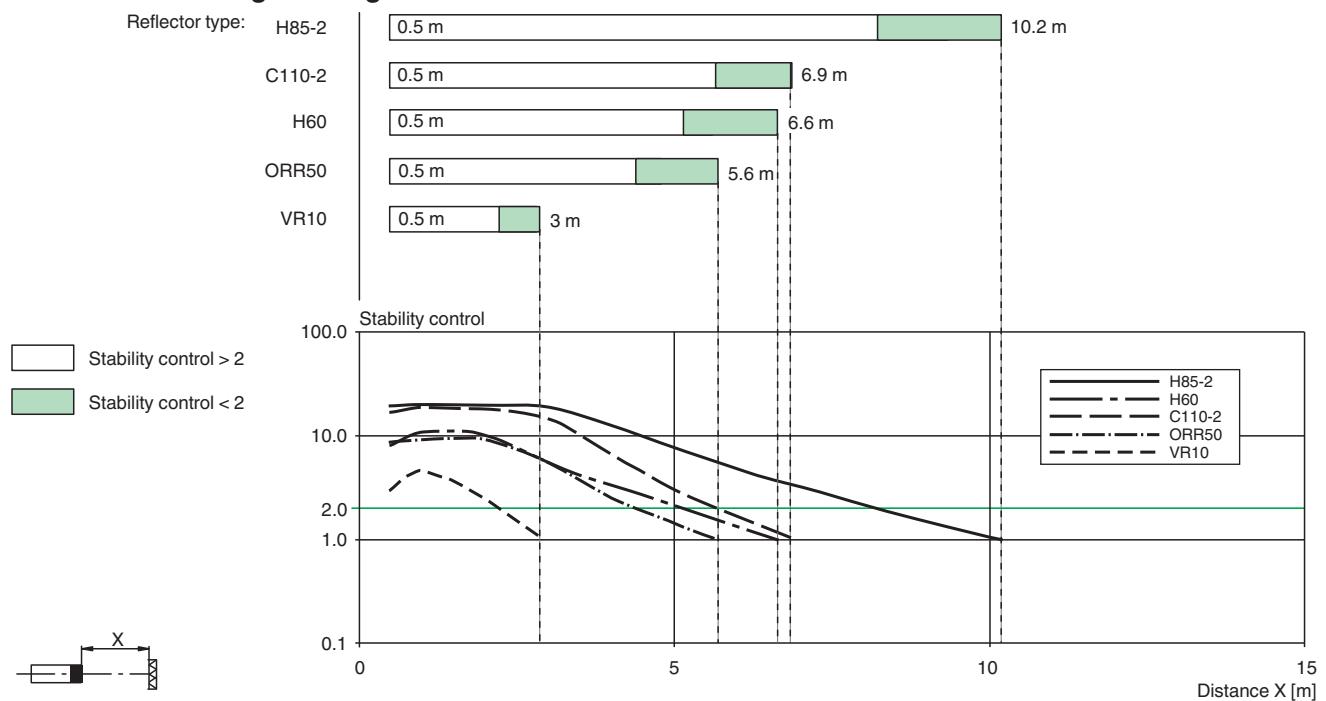


Characteristic Curve

Characteristic response curve



Relative received light strength



Accessories

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 266315_eng.pdf

	OMH-09	Mounting bracket for Sensors series MLV41 for M12 rod mounting
	OMH-40	Mounting bracket
	REF-H85-2	Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes
	REF-H50	Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap
	REF-VR10	Reflector, rectangular 60 mm x 19 mm, mounting holes

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

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Accessories

	ORR50G	Reflector, rectangular 50.9 mm x 60.9 mm, mounting holes, fixing strap and polarization filter
	OFR-100/100	Reflective tape 100 mm x 100 mm