



## 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

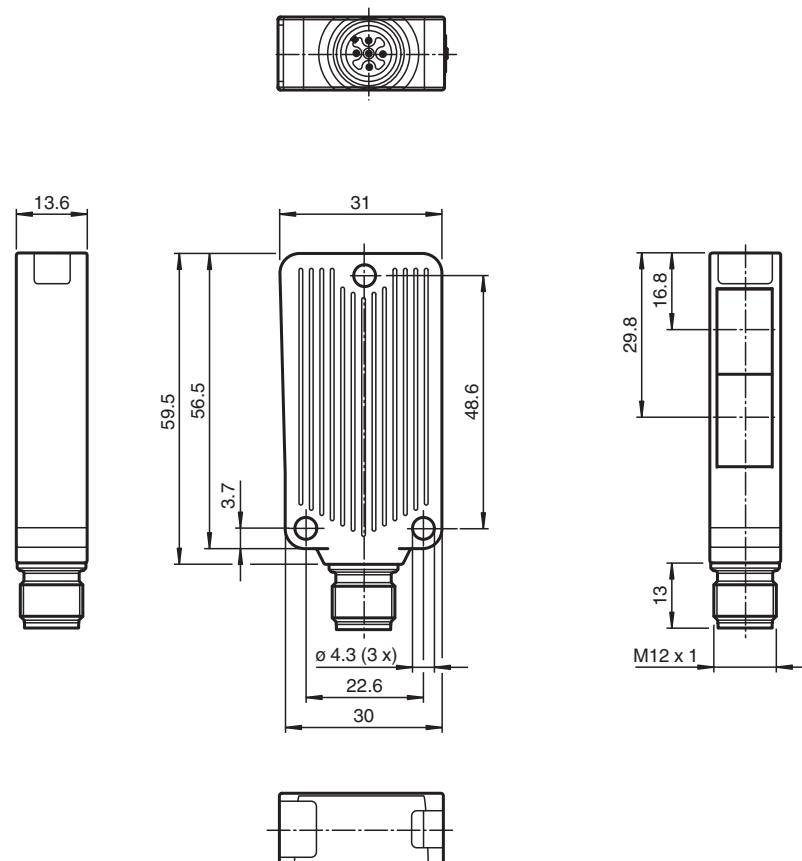
Retroreflective sensor with polarization filter



### 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 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



## Technical Data

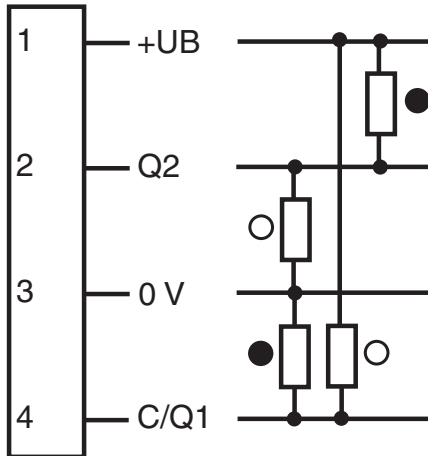
General specifications		
Effective detection range		0 ... 8 m Detection range is preset to 0 ... 0.5 m
Reflector distance		0.1 ... 8 m
Threshold detection range		10 m
Reference target		H50 reflector
Light source		LED
Light type		modulated visible red light , 625 nm
Polarization filter		yes
Angle deviation		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 <sub>d</sub>		844 a
Mission Time (T <sub>M</sub> )		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 <sub>B</sub>	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	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 <sub>d</sub>	$\leq 2.5$ 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 $\leq 36$ V
Ambient conditions		
Ambient temperature		-40 ... 60 $^\circ\text{C}$ (-40 ... 140 $^\circ\text{F}$ )
Storage temperature		-40 ... 75 $^\circ\text{C}$ (-40 ... 167 $^\circ\text{F}$ )
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

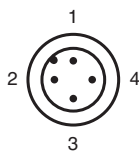
**Connection Assignment**

Option:



○ = Light on  
● = Dark on

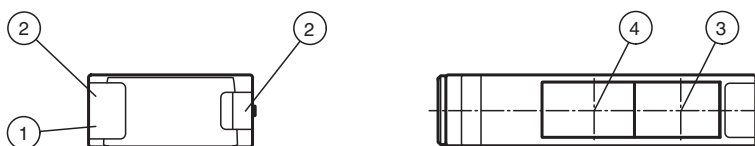
**Connection Assignment**



Wire colors in accordance with EN 60947-5-2

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

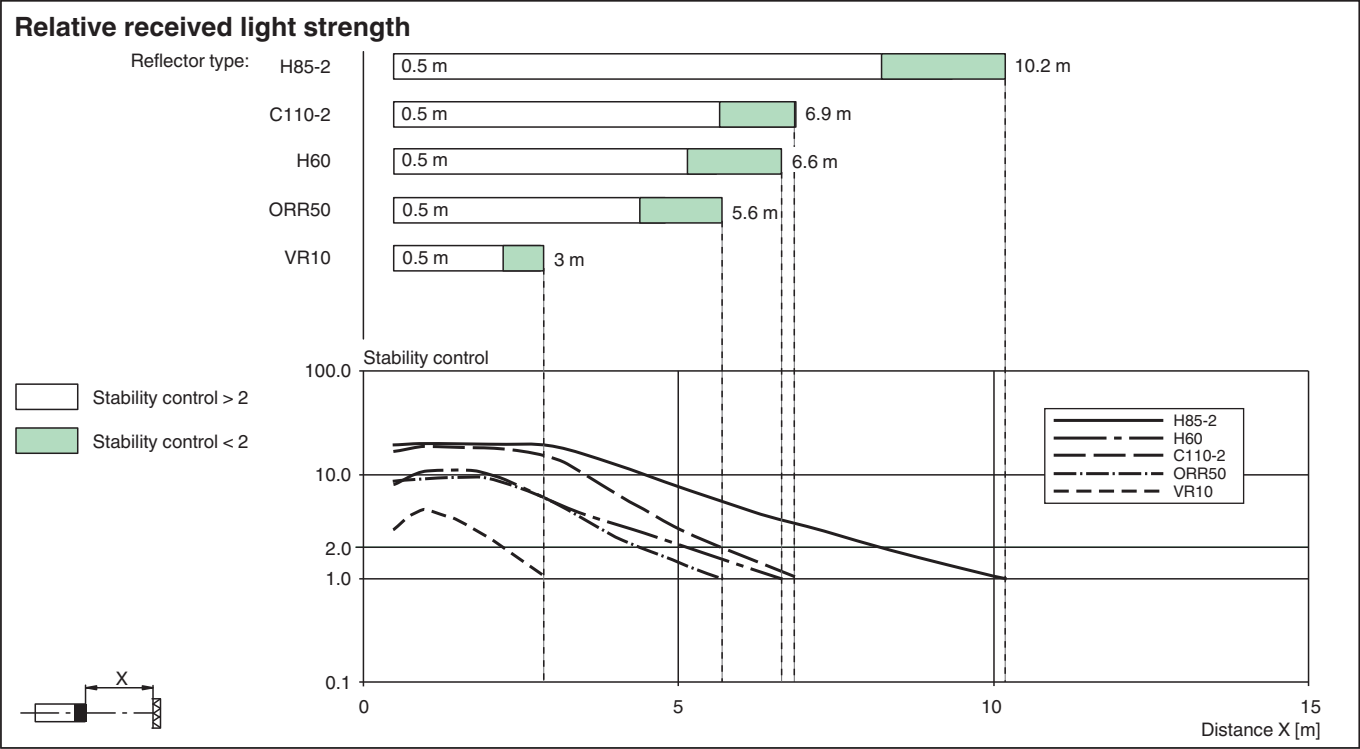
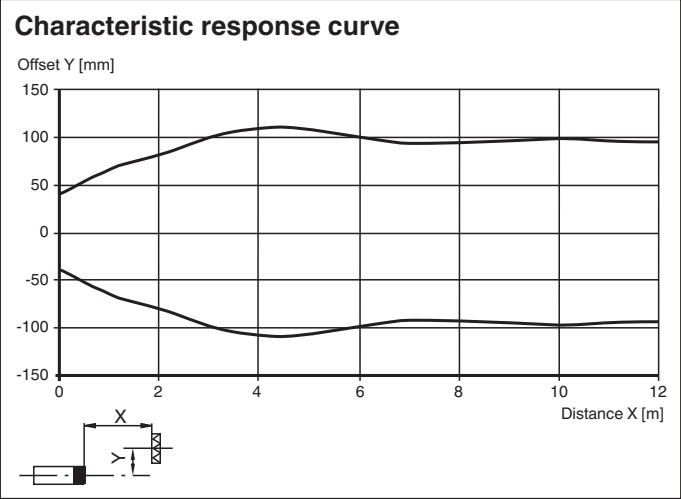
**Assembly**



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

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**Characteristic Curve**




**Accessories**

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

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**Accessories**

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