

Model Number

ML71-8-200/25/102/115

Diffuse mode sensor with 2 m fixed cable

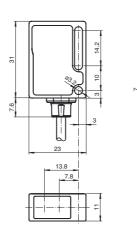
Features

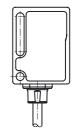
- Miniature design with front optical ٠ face
- Automatic adjustment of sensitivity ٠ via TEACH-IN
- Clearly visible function indicators ٠
- Flashing power on LED in case of • short-circuit
- Not sensitive to ambient light ٠
- Protected against mutual interference ٠ (no crosstalk)

Product information

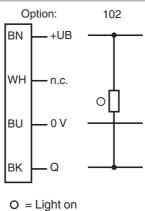
Small, robust, effective, and reliable - these are the properties of the ML7 sensor series. Due to their small size, number of versions, and two different lens positions, they are particularly suited for installation in tight spaces. The robust design and high quality of Pepperl+Fuchs mean they can also be used under harsh environmental conditions. The efficient technology, switching frequencies up to 1000 Hz, high resistance to ambient light, and 4-in-1 output make the series suitable for non-contact object detection.





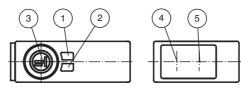


Electrical connection



= Dark on

Indicators/operating means



1	Operating display	green
2	Signal display	yellow
3	TEACH-IN button	
4	Emitter	
5	Receiver	

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Technical data		
General specifications		
Detection range	20 200 mm	
Adjustment range	60 200 mm	
Reference target	standard white, 100 mm x 100 mm	
Light source		
Light type	modulated visible red light	
Diameter of the light spot	approx. 15 mm at a distance of 200 mm	
Angle of divergence	approx. 4.5 °	
Ambient light limit	40000 Lux	
Functional safety related paramet		
MTTF _d	1610 a	
Mission Time (T _M)	20 a	
Diagnostic Coverage (DC)	0%	
	0 %	
Indicators/operating means		
Operating display	LED green, flashes in case of short-circuit	
Function display	LED yellow, lights up with receiver lit	
Controls	TEACH-IN key	
Electrical specifications		
Operating voltage	U _B 10 30 V DC , class 2	
Ripple	max. 10 %	
No-load supply current	l ₀ < 20 mA	
Output		
Switching type	light on	
Signal output	1 NPN output, short-circuit protected, reverse polarity protec- ted, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
	$U_d \leq 1.5 V DC$	
	f 1000 Hz	
Response time	0.5 ms	
Ambient conditions		
Ambient temperature	-20 60 °C (-4 140 °F)	
Storage temperature	-40 75 °C (-40 167 °F)	
Mechanical specifications		
Protection degree	IP67 / IP69K	
Connection	2 m fixed cable	
Material		
Housing	PC (glass-fiber-reinforced Makrolon)	
Optical face	PMMA	
Mass	approx. 50 g	
Compliance with standards and d		
Standard conformity		
Product standard	EN 60947-5-2:2007	
	IEC 60947-5-2:2007	
Standards	EN 50178, UL 508	
Approvals and certificates		
Protection class	II, rated voltage ≤ 250 V AC with pollution degree 1-2 accor- ding to IEC 60664-1	
	cULus	
UL approval CCC approval	Products with a maximum operating voltage of ≤36 V do not	

Accessories

OMH-ML7-01 Mounting bracket

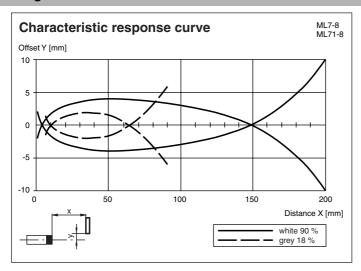
OMH-ML7-02 Mounting bracket

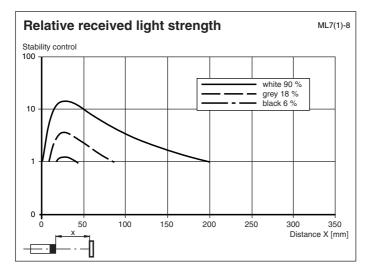
OMH-ML7-03 Fixing plate

Suitable cable sockets can be found in the Internet



Curves/Diagrams





TEACH-IN

Connect the sensor to operating voltage, the LED green lights up constantly. The sensor operates at max. sensitivity (delivery status) or with the last teached values.

- Adjust the unit to the target.
- Press the TEACH-IN button as an acknowledge the green LED will switch off shortly for one time.
- Press the TEACH-IN button until both LED's green and yellow are blinking in parallel (2Hz). Release the TEACH-IN button now.
- While the green and yellow LEDs are blinking alternating (2Hz) the unit is in the internal set up procedure.
- TEACH-IN successful: Both LEDs green and yellow are on. The unit is ready to use and in switching mode now.
- **TEACH-IN not successful:** Both LEDs are flashing alternating (4Hz) for approx. 5 seconds. Afterwards the sensor returns to max. sensitivity setting. Please retry the TEACH-IN procedure beginning by step 1.

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