

Model Number

ML8-55/25/103/115b/138

Retroreflective sensor with 0.3 m fixed cable and M12 connector, 4-pin

Features

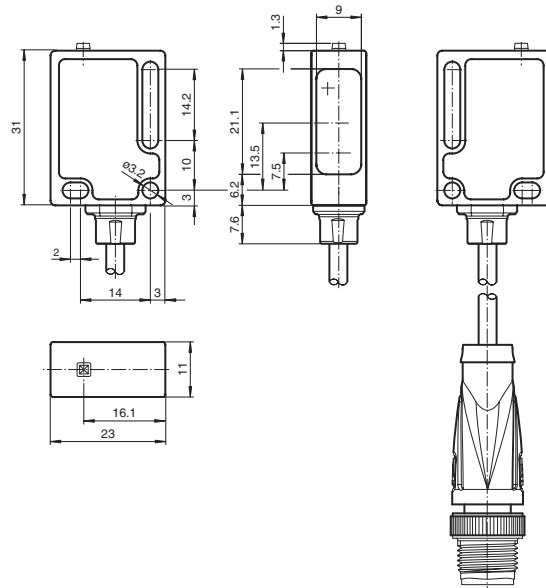
- Cost-optimized series for standard tasks
- Miniature design
- Tamper-proof, no operating controls
- 2-way LED indicator for switch status
- Flexible use with versatile mounting opportunities

Product information

Small, robust and reliable, the ML8 series of miniature sensors is particularly suitable for non-contact detection of objects in confined spaces. The LED indicator is located behind the lens and provides reliable information on the sensor's operating status. The LED is always visible, even if the sensor is completely embedded. Flexible mounting options and fixed preset detection ranges simplify setup and operation.

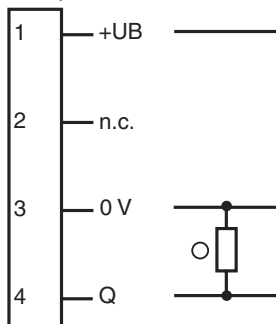
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Dimensions



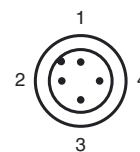
Electrical connection

Option: 103

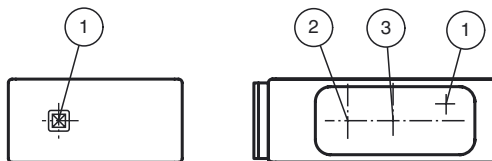


○ = Light on
● = Dark on

Pinout



Indicators/operating means



1	Switching state	yellow
2	Emitter	
3	Receiver	

Technical data**General specifications**

Effective detection range	0 ... 3 m
Reflector distance	0.02 ... 3 m
Threshold detection range	3.5 m
Reference target	H85-2 reflector
Light source	LED
Light type	modulated visible red light
Diameter of the light spot	approx. 180 mm at a distance of 3.5 m
Angle of divergence	approx. 3 °
Ambient light limit	40000 Lux

Functional safety related parameters

MTTF _d	2340 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Function display	LED yellow: switching state
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Electrical specifications

Operating voltage	U _B	10 ... 30 V DC , class 2
Ripple		max. 10 %
No-load supply current	I ₀	< 12 mA

Output

Switching type	light on	
Signal output	1 PNP output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U _d	≤ 1.5 V DC
Response time		1.8 ms

Ambient conditions

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

Mechanical specifications

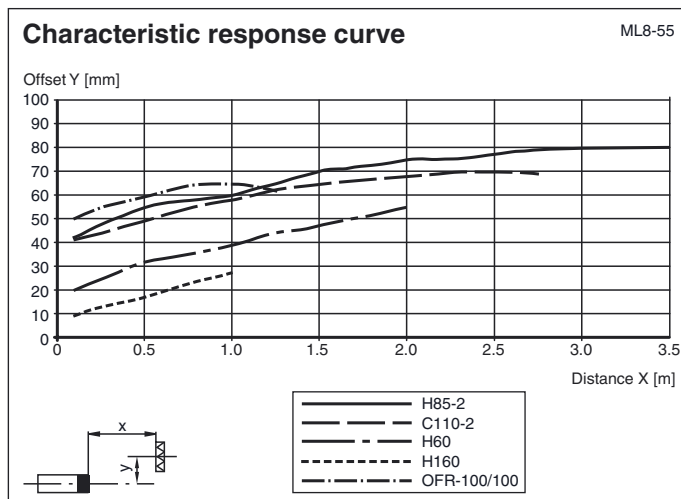
Protection degree	IP67
Connection	fixed cable 300 mm with M12 connector, 4-pin
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Mass	approx. 30 g

Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 60947-5-2:2007
Protection degree	EN 60529
Standards	EN 50178, UL 508

Approvals and certificates

Protection class	II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

Curves/Diagrams**Accessories****Montagekit OMH-ML7-01**

Mounting set consisting of bracket OMH-ML-01 sheet OMH-ML7-03, and fastening material

Montagekit OMH-ML7-02

Mounting set consisting of bracket OMH-ML-02 sheet OMH-ML7-03, and fastening material

OMH-ML7-01

Mounting bracket

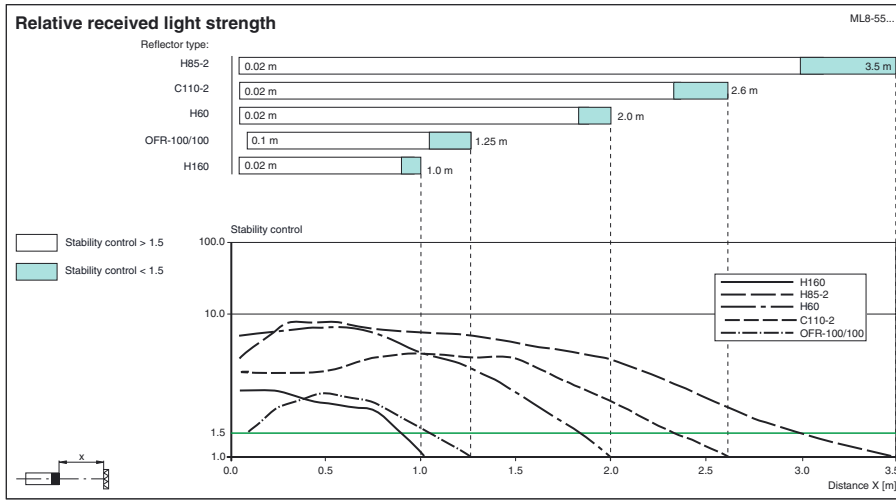
OMH-ML7-02

Mounting bracket

OMH-ML7-03

Fixing plate

Other suitable accessories can be found at www.pepperl-fuchs.com



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

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