



Model Number

M8/MV8/76a/103/115b

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

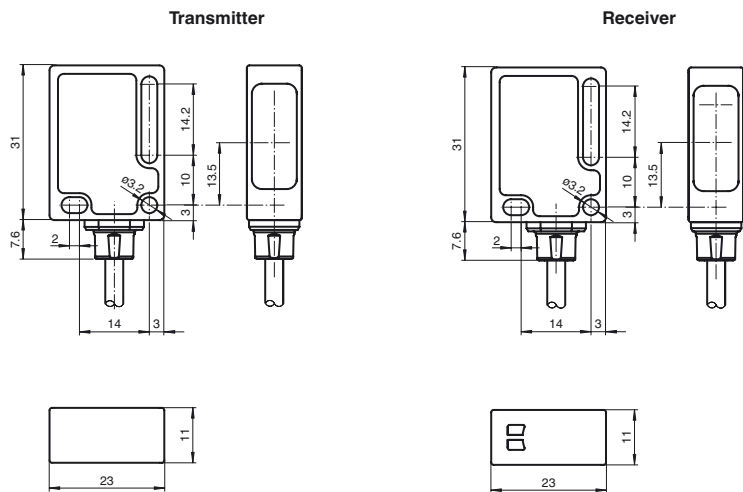
Features

- Cost-optimized series for standard tasks
- Miniature design with versatile mounting options
- Tamper-proof, no operating controls

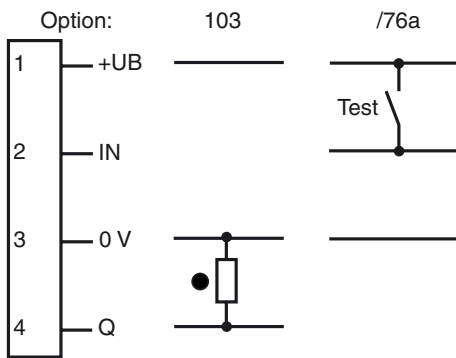
Product information

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.

Dimensions

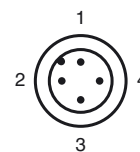


Electrical connection

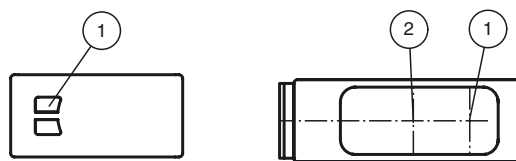


○ = Light on
● = Dark on

Pinout



Indicators/operating means



1	Functional display	yellow
2	Optical axis	

Release date: 2013-04-18 14:06 Date of issue: 2013-05-13 216267_eng.xml

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 4411
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

Technical data**System components**

Emitter	M8/76a/115b
Receiver	MV8/103/115b

General specifications

Effective detection range	0 ... 3.5 m
Threshold detection range	4.5 m
Light source	LED
Light type	modulated visible red light , 660 nm
Target size	min. 7 mm
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	1090 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Function display	Receiver: LED yellow, lights up when light beam is free, flashes when falling short of the stability control
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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	Emitter: ≤ 17 mA Receiver: ≤ 15 mA

Input

Test input	emitter deactivation at +U _B
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Output

Switching type	dark 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
Switching frequency	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
Connection	fixed cable 300 mm with M12 connector, 4-pin
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Mass	approx. 100 g (emitter and receiver)

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

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

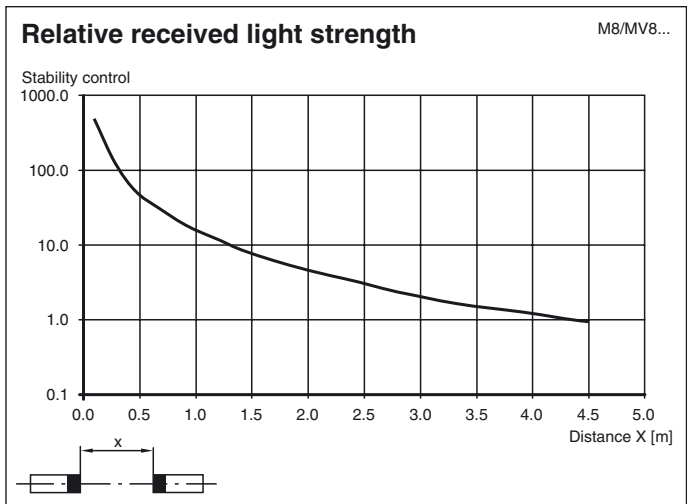
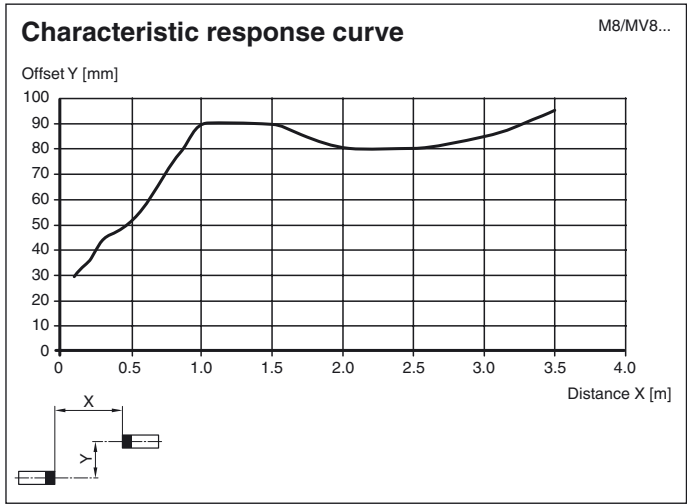
Mounting bracket

OMH-ML7-03

Fixing plate

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

Curves/Diagrams



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