







Model Number

M8/MV8/76a/103/143

Thru-beam sensor with 4-pin, M8 x 1 connector

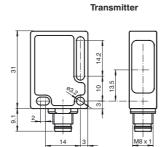
Features

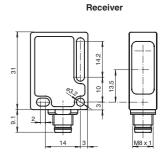
- Cost-optimized series for standard
- Miniature design with versatile mounting options
- Tamper-proof, no operating controls

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

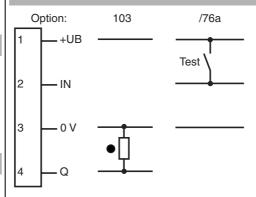








Electrical connection

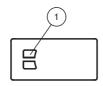


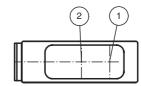
- O = Light on
- = Dark on

Pinout



Indicators/operating means





Functional display | yellow 2 Optical axis

Technical data		
System components		
Emitter		M8/76a/143
Receiver		MV8/103/143
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 parame	eters	
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
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
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		M8 x 1 connector, 4-pin
Material		
Housing		PC (glass-fiber-reinforced Makrolon)
Optical face		PMMA
Connector		plastic
Mass		approx. 20 g (emitter and receiver)
Compliance with standards and ves	directi-	
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 \leq 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 and dusts not -1 cock

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

V31-WM-2M-PUR

4-pin, M8 socket, PUR cable

V31-WM-2M-PVC

M8, 4-pin socket, PVC cable

V31-GM-2M-PVC

M8, 4-pin socket, PVC cable

V31-GM-2M-PUR

4-pin, M8 socket, PUR cable

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

FPEPPERL+FUCHS

CCC approval

CCC approval / marking not required for products rated ≤36 V

Curves/Diagrams

