



**Model Number**

**ML8-54-F-5771**

Retroreflective sensor

300 mm fixed cable with M12 x 1, 4-pin connector

**Features**

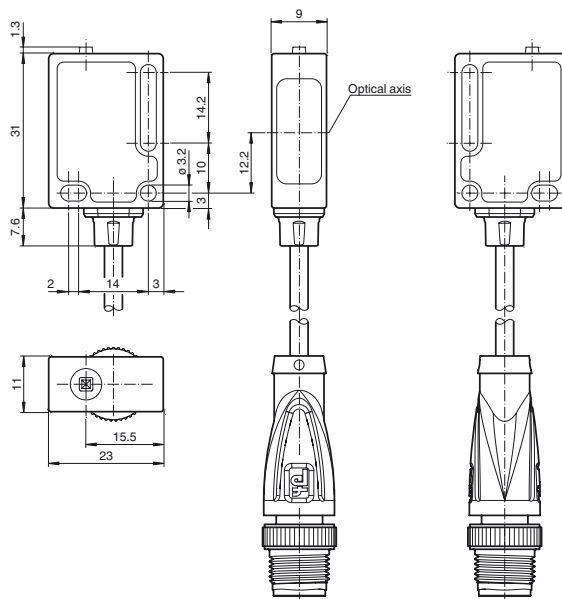
- Cost-optimized series for standard tasks
- Miniature design
- Coaxial optical system
- Usable up to detection range 0
- High accuracy for precise positioning operations
- Flexible use with versatile mounting opportunities

**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.

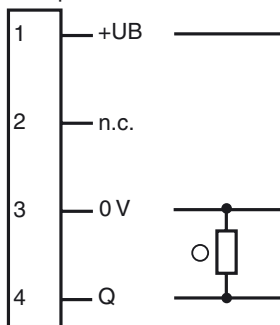
Release date: 2019-11-26 15:37 Date of issue: 2019-11-26 252362\_eng.xml

**Dimensions**



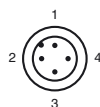
**Electrical connection**

Option: 103



○ = Light on  
● = Dark on

**Pinout**



Wire colors in accordance with EN 60947-5-2

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

**Technical data****General specifications**

Effective detection range	0 ... 1.5 m
Reflector distance	0 ... 1.5 m
Threshold detection range	1.9 m
Reference target	H85-2 reflector
Light source	LED
Light type	modulated visible red light , 660 nm
Polarization filter	yes
Angle deviation	max. $\pm 1^\circ$
Diameter of the light spot	approx. 40 mm at detection range 1 m
Angle of divergence	1.7 °
Ambient light limit	40000 Lux

**Functional safety related parameters**

MTTF <sub>d</sub>	980 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Function indicator	LED, yellow switching state Stability control
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**Electrical specifications**

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	< 20 mA at 24 V DC

**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	
Switching frequency	f	1 kHz
Response time		500 $\mu$ s

**Conformity**

Product standard	EN 60947-5-2
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**Ambient conditions**

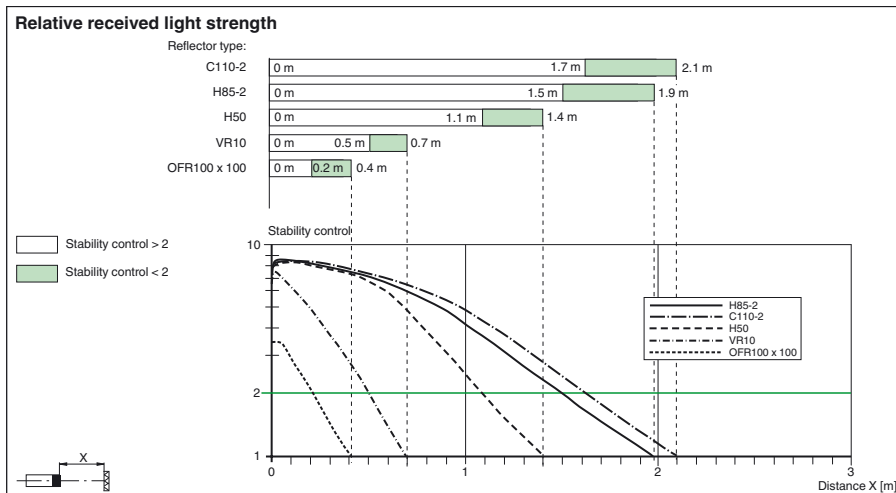
Ambient temperature	-30 ... 60 °C (-22 ... 140 °F)
Storage temperature	-40 ... 75 °C (-40 ... 167 °F)

**Mechanical specifications**

Housing width	11 mm
Housing height	31 mm
Housing depth	23 mm
Degree of protection	IP67
Connection	fixed cable 300 mm with M12 x 1 connector , 4-pin
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Mass	30 g

**Approvals and certificates**

Protection class	II, rated voltage $\leq$ 50 V AC with pollution degree 1-2 according to IEC 60664-1 functional insulation acc. to DIN EN 50178
UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated $\leq$ 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 aid for ML7 and ML8 series, Mounting bracket

**OMH-ML7-02**

Mounting aid for ML7 and ML8 series, Mounting bracket

**OMH-ML7-03**

Mounting aid for ML7 and ML8 series, Fixing plate

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)