



**Model Number**

**ML100-6-IR/95/102**

Retroreflective sensor  
with 4-pin, M8 x 1 connector

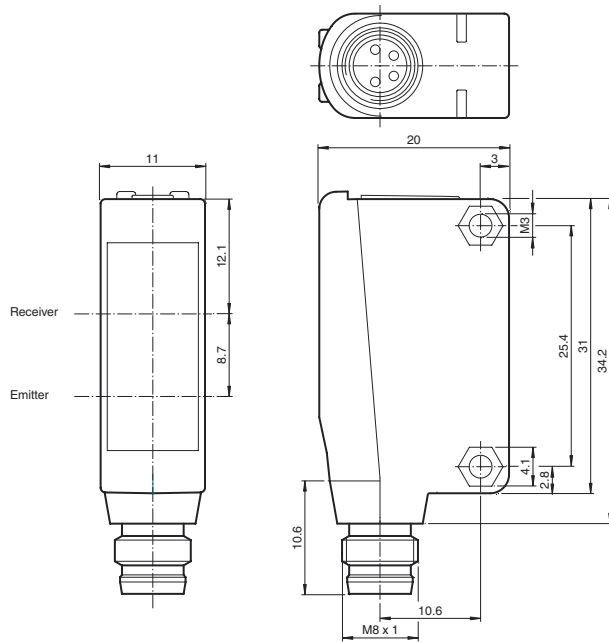
**Features**

- User-friendliest photoelectric sensor series for standard applications
- Miniature design
- Not sensitive to ambient light
- Metal-reinforced fastening holes
- Version with infrared light

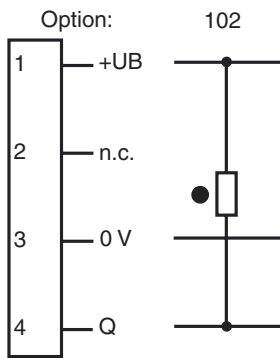
**Product information**

The ML100 series comprises a complete family of photoelectric sensors which are ideally suited for applications where long ranges and a high level of reliability are required. Due to their miniature design, the ML100 series sensors are also suitable for use in extremely confined areas. During operation, the ML 100 miniature sensors are characterized by a high performance Infrared-LED, extremely low power consumption and insensitivity to ambient lighting. The status LEDs, which are highly visible from all sides, provide clear information regarding reliable operation. Secure mounting is ensured by the threaded metal bushing. This means that the threading is more durable and enables maximum tightening torque.

**Dimensions**



**Electrical connection**

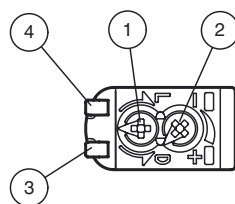


- = Light on
- = Dark on

**Pinout**



**Indicators/operating means**



1	Light-Dark-switching	
2	Sensitivity adjuster	
3	Signal display	yellow
4	Operating display	green

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

Effective detection range	0 ... 5 m
Reflector distance	0.01 ... 5 m
Threshold detection range	7 m
Reference target	H50 reflector
Light source	IRED
Light type	modulated infrared light
Polarization filter	no
Diameter of the light spot	approx. 500 mm at a distance of 7 m
Angle of divergence	approx. 4 °
Optical face	frontal
Ambient light limit	EN 60947-5-2:2007

**Functional safety related parameters**

MTTF <sub>d</sub>	860 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Operation indicator	LED green: power on
Function indicator	LED yellow: lights up when receiving the light beam ; flashes when falling short of the stability control; OFF when light beam is interrupted
Control elements	sensitivity adjustment
Control elements	Light/Dark switch

**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

**Output**

Switching type	light/dark on, switchable	
Signal output	1 NPN output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA , resistive load	
Voltage drop	U <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms

**Ambient conditions**

Ambient temperature	-30 ... 60 °C (-22 ... 140 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

**Mechanical specifications**

Degree of protection	IP67
Connection	connector M8 x 1 , 4-pin
Material	
Housing	PC (Polycarbonate)
Optical face	PMMA
Mass	approx. 10 g

**Compliance with standards and directives**

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007
Standard conformity	
Standards	UL 508

**Approvals and certificates**

UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V
UN/ECE Regulation No. 10 (E1)	Type-approval number: 047350

**Accessories****OMH-ML100-03**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

**OMH-ML100-04**

Mounting bracket

**OMH-ML100-05**

Mounting bracket

**OMH-ML100-08**

Mounting aid

**OMH-F10-ML100**

Mounting aid for ML100 series

**OMH-10**

Mounting aid

**REF-H33**

Reflector with screw fixing

**V31-WM-2M-PUR**

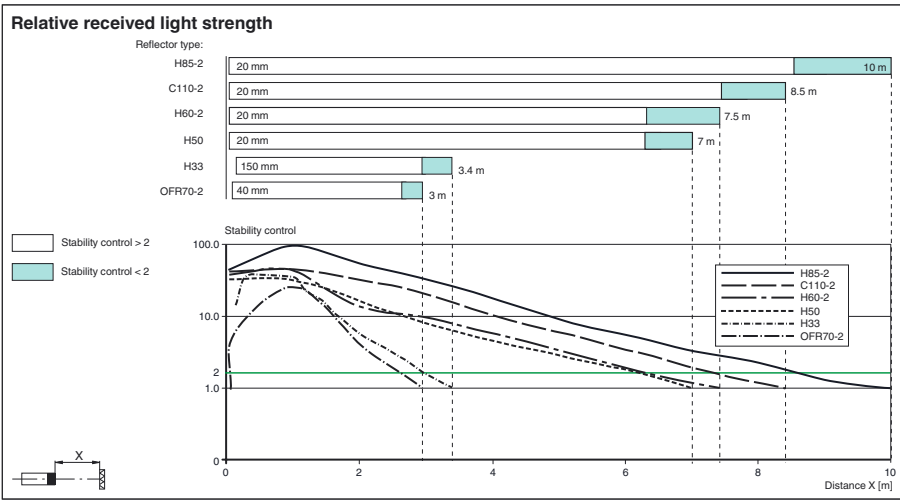
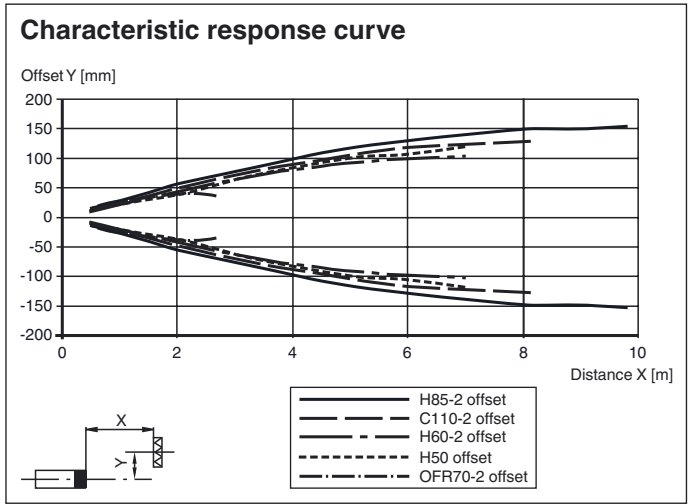
Female cordset, M8, 4-pin, PUR cable

**V31-GM-2M-PUR**

Female cordset, M8, 4-pin, PUR cable

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

Curves/Diagrams



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

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