



Model Number

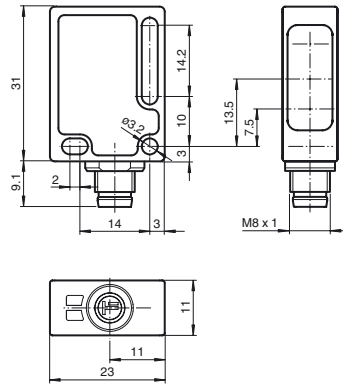
ML8-54-G/25/103/143

Retroreflective sensor
with 4-pin, M8 x 1 connector

Features

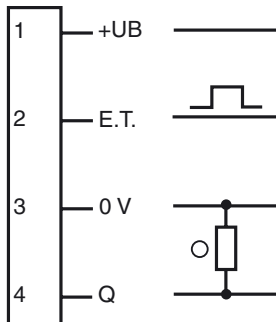
- Miniature design
- Flexible mounting possibilities due to slotted hole
- Protection class II
- Protection degree IP65

Dimensions



Electrical connection

Option: 103



○ = Light on
● = Dark on

Release date: 2011-09-16 13:55 Date of issue: 2011-09-16 187603_eng.xml

Subject to modifications without notice

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@pepperl-fuchs.com

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

Technical data**General specifications**

Effective detection range	0 ... 0.5 m
Reflector distance	0.02 ... 0.5 m
Threshold detection range	0.65 m
Reference target	A25 reflector
Light source	LED
Light type	modulated visible red light
Diameter of the light spot	approx. 25 mm at a distance of 0.5 m
Angle of divergence	approx. 3 °
Ambient light limit	40000 Lux
MTBF	280000 h

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	< 20 mA
Protection class		II , rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1

Input

Function input	Ext. Teach-In input (ET)
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Output

Switching type	light on	
Signal output	1 PNP output, short-circuit protected, protected from reverse polarity, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U _d	≤ 1.5 V DC
Response time		250 μs

Ambient conditions

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

Mechanical specifications

Protection degree	IP65
Connection	M8 x 1 connector, 4-pin
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Mass	approx. 10 g

Compliance with standards and directives

Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007
Standards	EN 50178, UL 508

Approvals and certificates

UL approval	cULus Listed
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Teach-In

Connect the sensor to operating voltage, the LED green lights up constantly. The sensor operates at max. sensitivity (delivery status) or with the last taught values.

Mount suitable reflector opposite light beam switch.

- Adjust the unit to the reflector.
- Press the Teach-In button - as an acknowledgement the green LED will quickly turn off one time.
- Press the Teach-In button until both LEDs green and yellow are blinking in parallel (2Hz). Release the Teach-In button now.
- While the green and yellow LEDs are blinking alternating (2 Hz) the unit is in the internal set up procedure.
- **Teach-In successful:** Both LEDs green and yellow are on. The unit is ready to use and in switching mode now.
- **Teach-In not successful:** Both LEDs are flashing alternating (4 Hz) for approx. 5 seconds. Afterwards the sensor returns to max. sensitivity setting. Please retry the Teach-In procedure beginning by step 1.

Accessories

OMH-ML7-01
Mounting bracket

OMH-ML7-02
Mounting bracket

OMH-ML7-03
Fixing plate