

## Retroreflective sensor ML7-55-3419



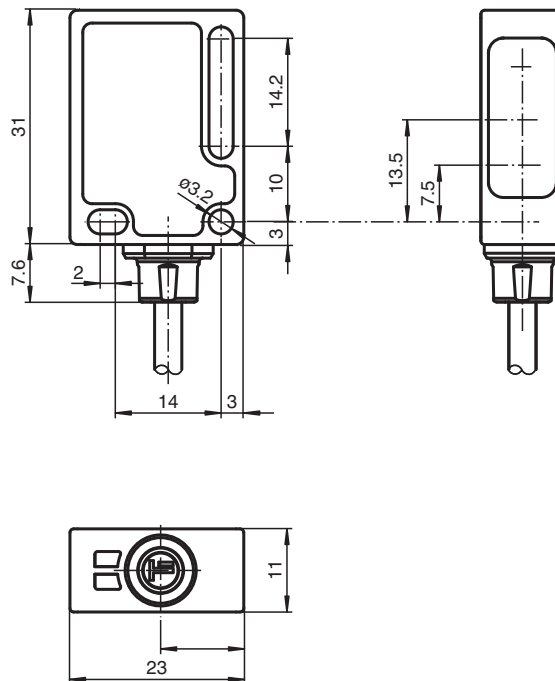
- Reliable sensor for standard applications
- Miniature design with versatile mounting options
- Automatic adjustment of sensitivity via TEACH-IN
- Resistant against noise: reliable operation under all conditions
- Clear and functional display concept for the operating modes
- Certified by ECOLAB

Retroreflective sensor for standard applications, miniature design, polarization filter, front optical face, 3.5 m detection range, red light, dark on, PNP output, weak signal output, fixed cable with plug



### Function

### Dimensions



## Technical Data

General specifications		
Effective detection range		0 ... 3 m
Reflector distance		0.03 ... 3 m
Threshold detection range		3.5 m
Reference target		H85-2 reflector
Light source		LED
Light type		modulated visible red light
Polarization filter		yes
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 <sub>d</sub>		1530 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green, flashes in case of short-circuit
Function indicator		LED yellow, lights up when light beam is free, flashes when falling short of the stability control
Control elements		Teach-In key
Electrical specifications		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC , class 2
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	< 20 mA
Output		
Pre-fault indication output		1 PNP, active when level falls below function reserve after approx. 5 s. Immediately active if the beam is interrupted 4 times during the flashtime.
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 <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
UL approval		cULus
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-40 ... 75 °C (-40 ... 167 °F)
Mechanical specifications		
Housing width		23 mm
Housing height		31 mm
Housing depth		11 mm
Degree of protection		IP65
Connection		1200 mm fixed cable with Mate-N-Lok connector
Material		
Housing		PC (glass-fiber-reinforced Makrolon)
Optical face		PMMA
Mass		approx. 50 g

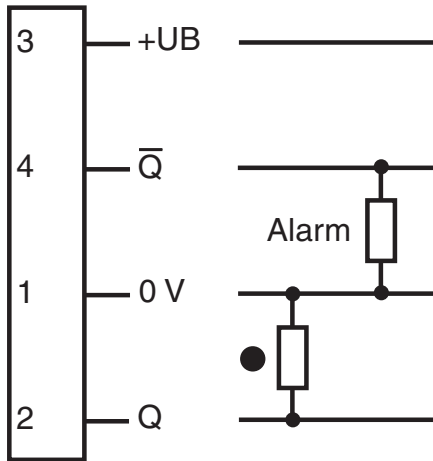
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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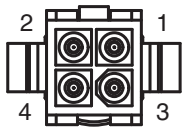
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**Connection Assignment**

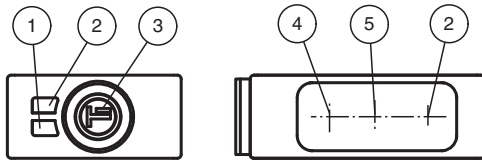


○ = Light on  
● = Dark on

**Connection Assignment**

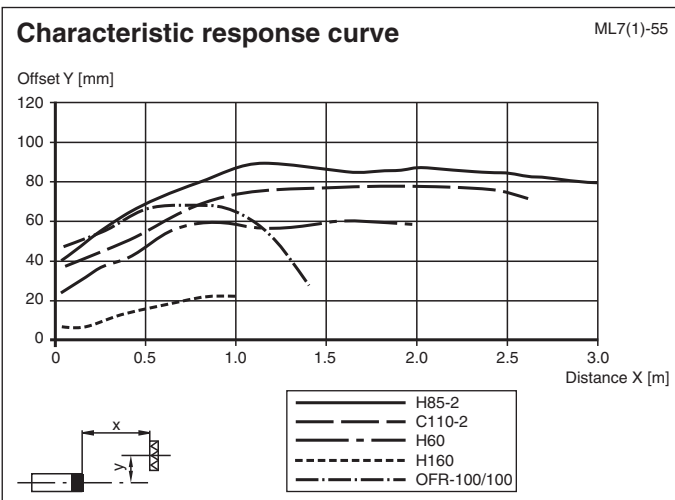


**Assembly**



1	Operating display	green
2	Signal display	yellow
3	TEACH-IN button	
4	Emitter	
5	Receiver	

**Characteristic Curve**



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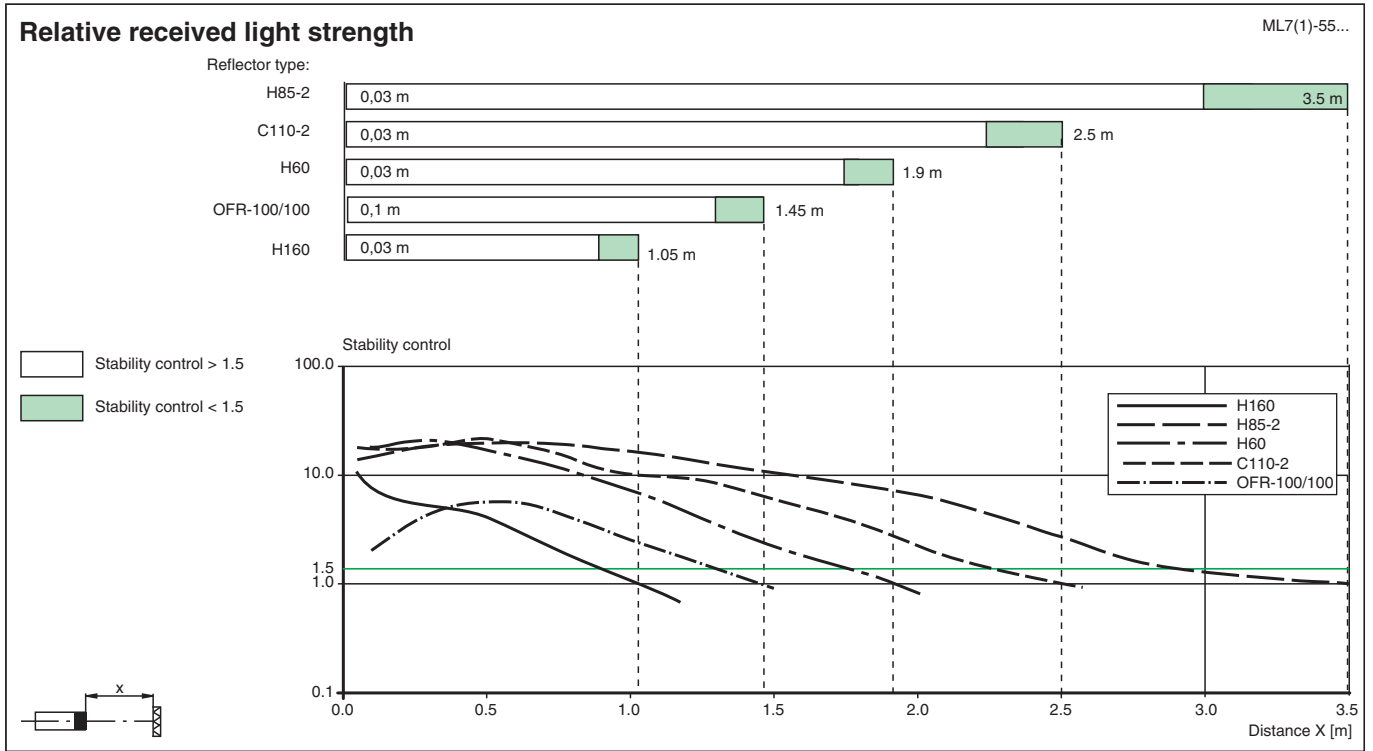
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## Accessories

	<b>OMH-ML7-01</b>	Mounting aid for ML7 and ML8 series, Mounting bracket
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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.