



**Model Number**

**ML4.2-8-H-20-IR-4549**

Background suppression sensor with 2 m fixed cable

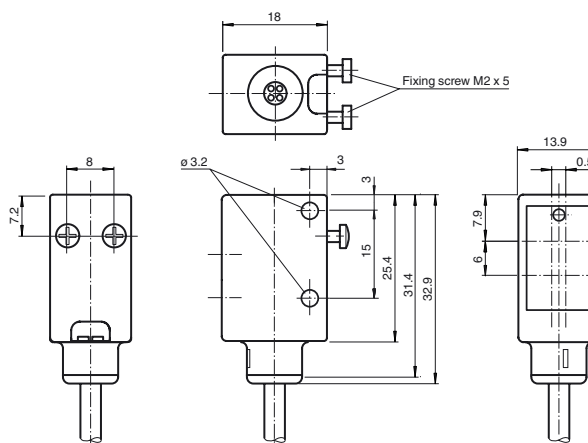
**Features**

- Dual sensor with two Light spots
- Precise background suppression
- Very small black-white difference
- Highly visible LEDs for Power-On, switching status, short-circuit, and undervoltage
- Metal-reinforced fastening holes
- Tamper-proof version with no adjustments
- Push-pull output

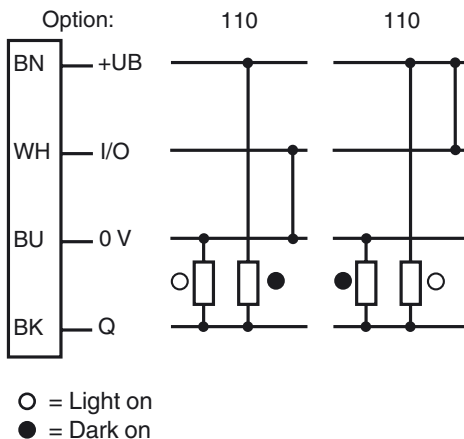
**Product information**

The ML4.2 series is characterized by a robust, powerful and standard design in a miniature housing. The housing offers IP67/ IP69K degree of protection, a scratch- and chemical-resistant lens, highly visible LEDs and robust all-metal bushings for mounting. Adjustable and tamper-proof sensors are available with a universal push-pull output and an electrical light ON/dark ON switch. The sensors have a high ambient light limit. Reflections from the background are suppressed. The unusually small, sharp light spot and the quick response time offer maximum switching precision on object edges.. Both red and infrared light sources are available. A high-performance fixed focus background suppressor is a useful feature. The sensors are suitable for precise object detection and open up a wide range of application fields.

**Dimensions**



**Electrical connection**



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

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

Detection range	7 ... 20 mm
Detection range max.	5 ... 25 mm
Background suppression	starts from 25 mm
Light source	2 IRED
Light type	modulated infrared light , 880 nm
Black/White difference (6 %/90 %)	approx. 1 mm
Diameter of the light spot	2 light spots: size 2.5 mm distance 5 mm at 20 mm
Angle of divergence	approx. 5 °
Ambient light limit	
Continuous light	40000 Lux
Modulated light	5000 Lux

**Functional safety related parameters**

MTTF <sub>d</sub>	1940 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Operation indicator	LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz)
Function indicator	LED yellow: lights when object is detected

**Electrical specifications**

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

**Output**

Switching type	light/dark on electrically switchable	
Signal output	Push-pull output, short-circuit protected, reverse polarity protected	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U <sub>d</sub>	≤ 2.5 V DC
Switching frequency	f	500 Hz
Response time		1 ms

**Conformity**

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

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

**Mechanical specifications**

Housing width	13.9 mm
Housing height	31.4 mm
Housing depth	18 mm
Degree of protection	IP67 / IP69K
Connection	2 m fixed cable
Material	
Housing	ABS
Optical face	glass pane
Cable	PUR
Mass	approx. 50 g

**Compliance with standards and directives**

Standard conformity	
Shock and impact resistance	IEC / EN 60068. half-sine, 40 g in each X, Y and Z directions
Vibration resistance	IEC / EN 60068-2-6. Sinus. 10 -150 Hz, 5 g in each X, Y and Z directions

**Approvals and certificates**

CE conformity	yes
UL approval	cULus Listed
CCC approval	CCC approval / marking not required for products rated ≤36 V

**Accessories****OMH-4.1**

Mounting Clamp

**OMH-ML6**

Mounting bracket

**OMH-ML6-U**

Mounting bracket

**OMH-ML6-Z**

Mounting bracket

**V31-GM-2M-PVC**

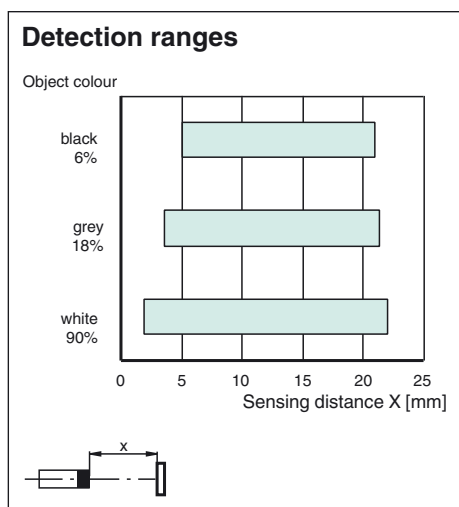
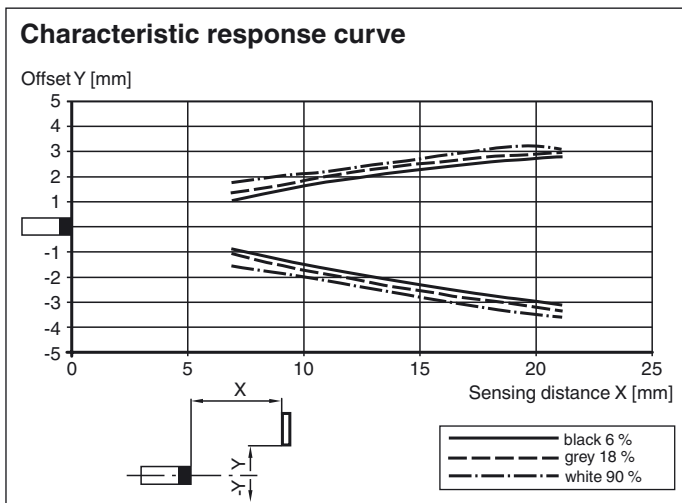
Female cordset single-ended, M8, 4-pin, PVC cable

**V31-WM-2M-PVC**

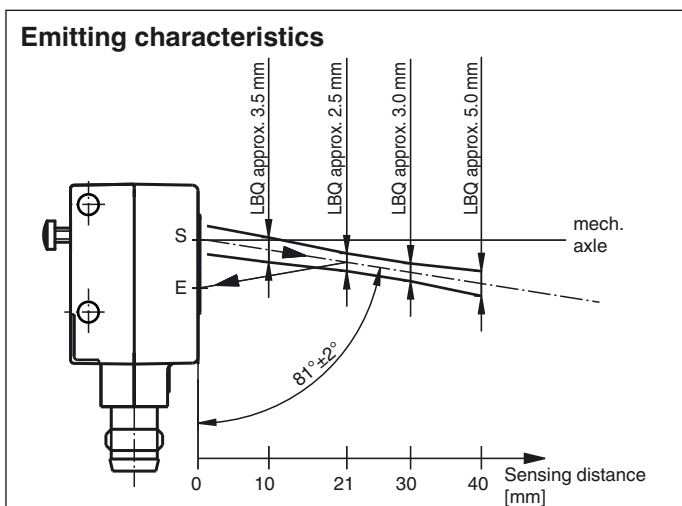
Female cordset single-ended, M8, 4-pin, PVC cable

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

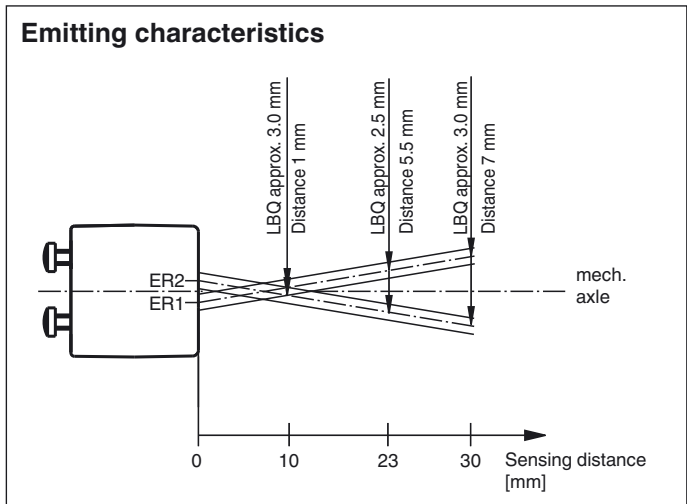
**Curves/Diagrams**



**Curves/Diagrams**



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