



Background suppression sensor ML4.2-8-H-21-22-RT/40b/110/115



- Precise background suppression
- Very small black-white difference
- Small, sharp light spot
- 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

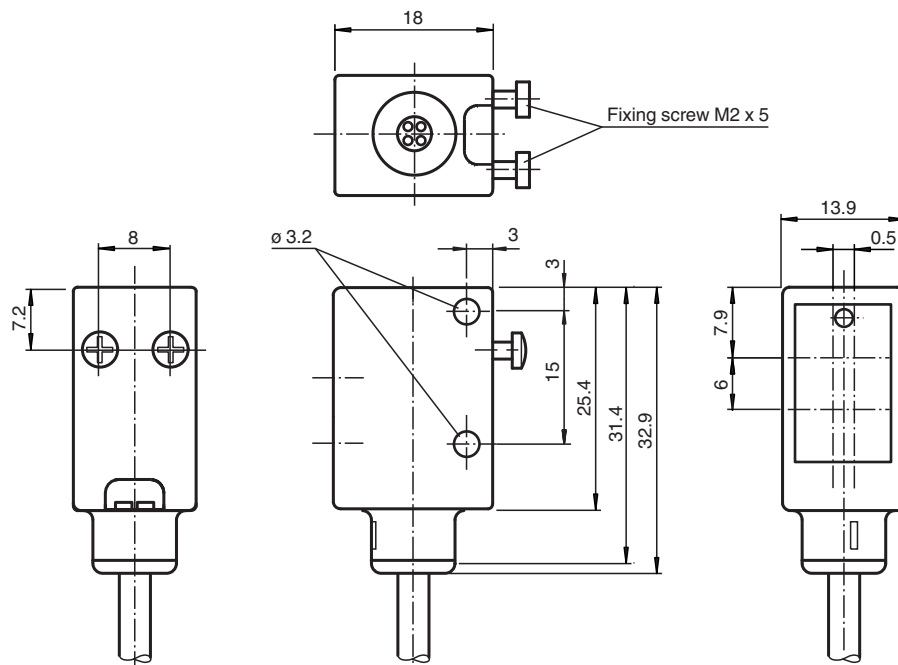
Background suppression sensor



Function

The ML100 series is characterized by its miniature housing with integral, all-metal threaded bushings. All versions are equipped with a visible red transmitter LED. This greatly simplifies installation and commissioning. The switching states are easily visible from all directions thanks to the highly visible LEDs.

Dimensions



Release date: 2021-09-29 Date of issue: 2021-09-29 Filename: 240949_eng.pdf

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

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PEPPERL+FUCHS

Technical Data

General specifications

Detection range	on white (90 %): : 10 ... 21 mm , on black (6 %): 10 ... 20 mm
Detection range max.	5 ... 22 mm
Background suppression	starts from 22 mm
Light source	LED
Light type	modulated visible red light , 660 nm
Black-white difference (6 %/90 %)	approx. 1 mm
Diameter of the light spot	approx. 1.5 mm at 21 mm
Angle of divergence	approx. 5 °
Ambient light limit	
Continuous light	40000 Lux
Modulated light	5000 Lux

Functional safety related parameters

MTTF _d	1940 a
Mission Time (T _M)	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 _B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I ₀	< 25 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 _d	≤ 2.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms

Conformity

Product standard	EN 60947-5-2
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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

Ambient conditions

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

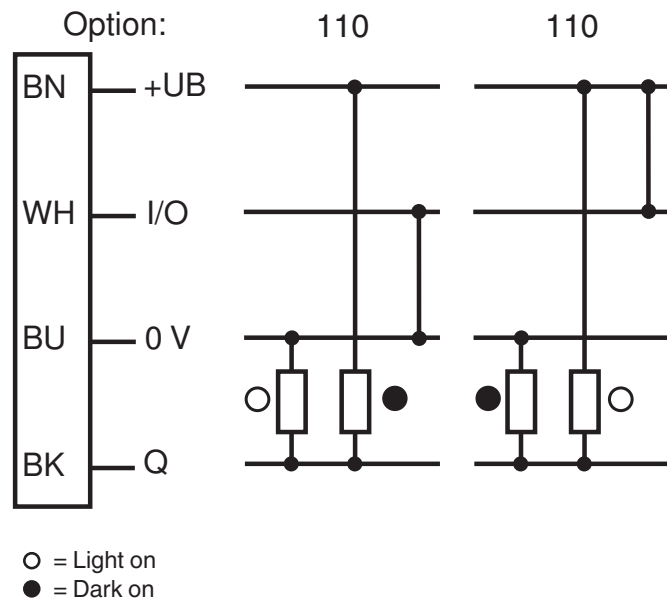
Mechanical specifications

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

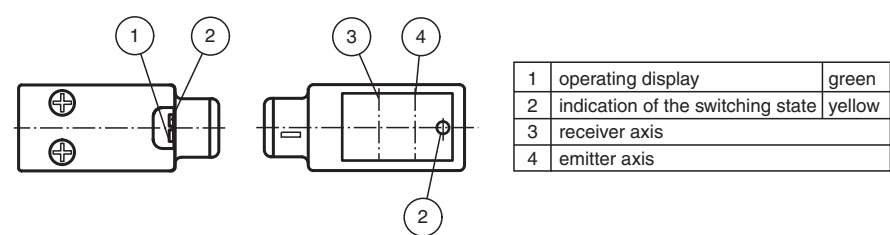
Technical Data

Optical face	glass pane
Cable	PUR
Mass	approx. 15 g

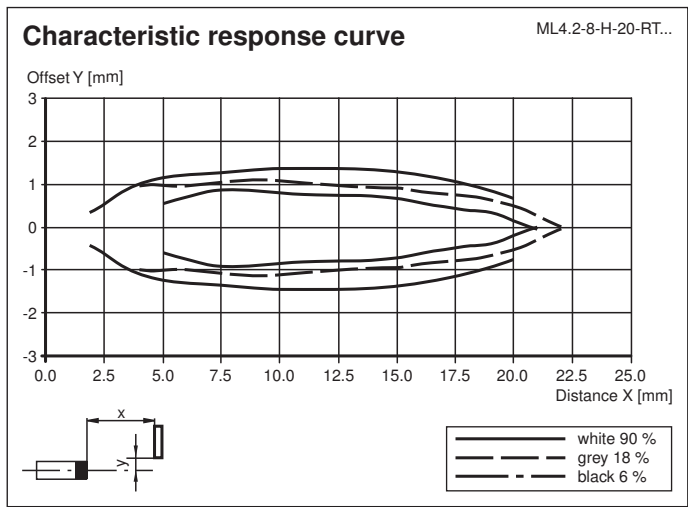
Connection Assignment



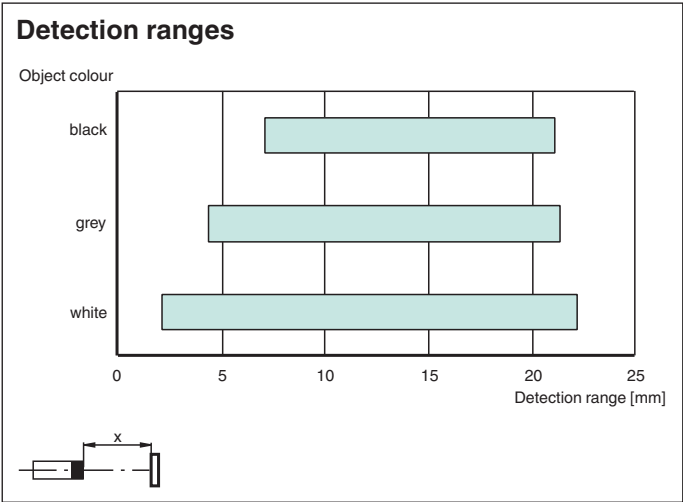
Assembly



Characteristic Curve



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Accessories

	OMH-4.1	Mounting Clamp
	OMH-ML6	Mounting bracket
	OMH-ML6-U	Mounting bracket
	OMH-ML6-Z	Mounting bracket