

Background suppression sensor

RL23-8-H-500-RT/47/92/104

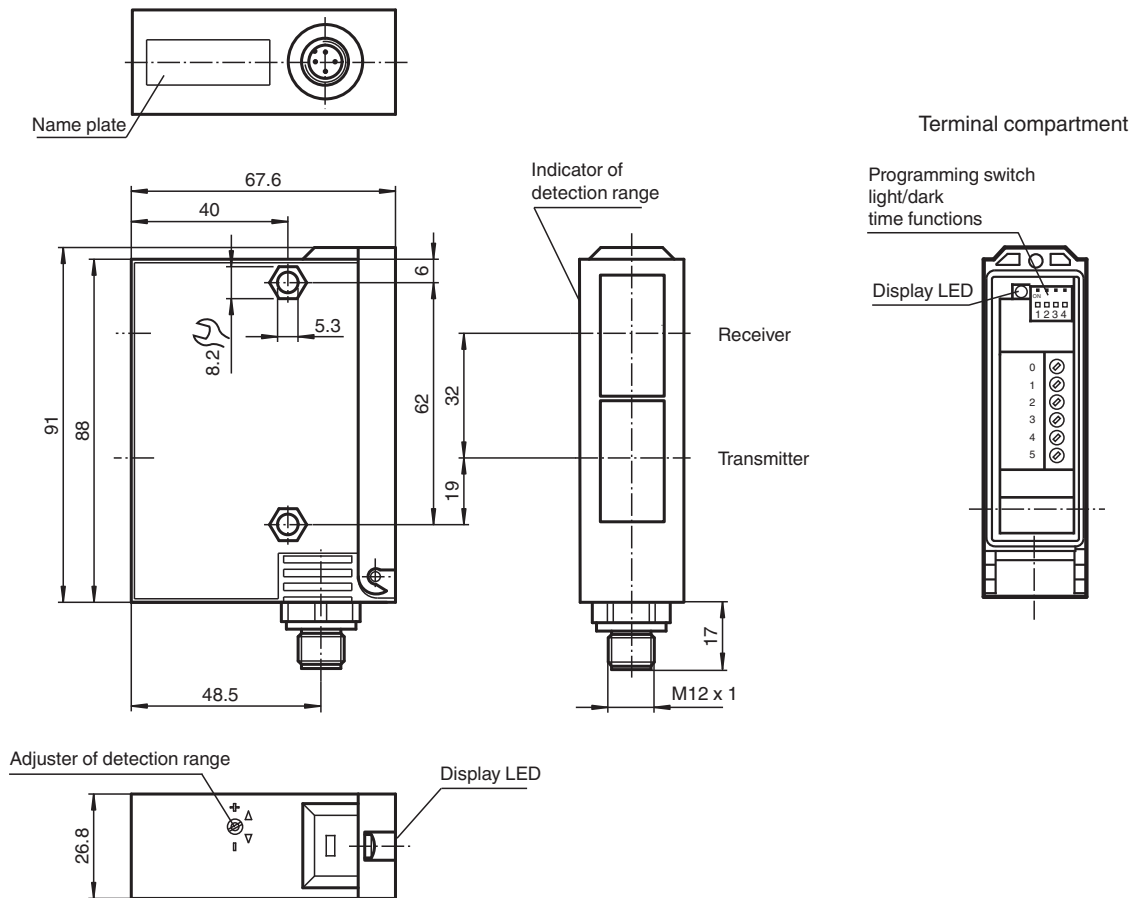


- Adjustable background suppression
- Visible red light
- Sturdy plastic housing
- Optical surface made of scratch-resistant glass
- Protected against mutual interference (no cross-talk)

Background suppression sensor



Dimensions



Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 419471_eng.pdf

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

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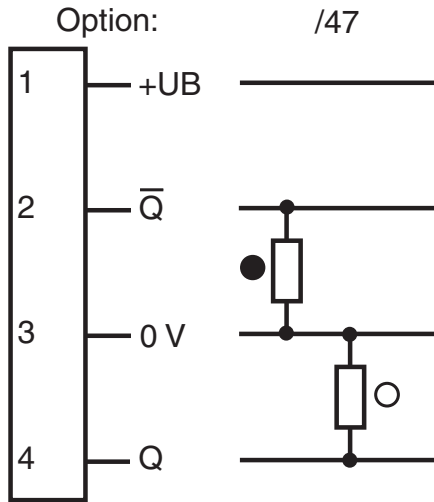
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Technical Data

General specifications		
Detection range		50 ... 500 mm
Detection range min.		50 ... 150 mm
Detection range max.		50 ... 500 mm
Light source		LED
Light type		modulated visible red light
Black-white difference (6 %/90 %)		< 5 %
Diameter of the light spot		12 mm at 500 mm sensor range
Opening angle		1.5 °
Ambient light limit		12000 Lux
Functional safety related parameters		
MTTF _d		540 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		60 %
Indicators/operating means		
Function indicator		LED yellow, lights up with receiver lit
Control elements		Programming switch for light/dark switching
Control elements		Sensing range adjuster
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I ₀	100 mA
Output		
Switching type		light/dark on
Signal output		2 PNP, complementary, short-circuit protected, reverse polarity protected
Switching voltage		30 V DC
Switching current		max. 200 mA
Switching frequency	f	10 Hz
Response time		50 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		-20 ... 75 °C (-4 ... 167 °F)
Mechanical specifications		
Housing width		26.8 mm
Housing height		91 mm
Housing depth		67.6 mm
Degree of protection		IP65
Connection		4-pin, M12 x 1 connector
Material		
Housing		Terluran® GV15
Optical face		glass
Mass		180 g

Connection Assignment



○ = Light on
 ● = Dark on

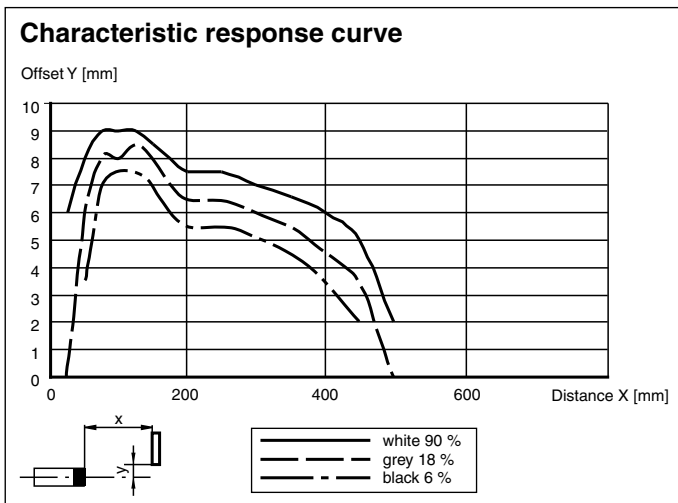
Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Characteristic Curve



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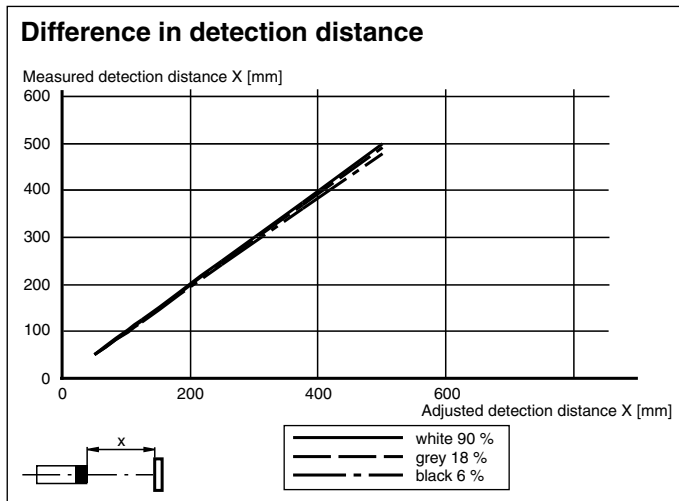
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Characteristic Curve



Accessories

	OMH-05	Mounting aid for round steel \varnothing 12 mm or sheet 1.5 mm ... 3 mm
	OMH-21	Mounting bracket: mounting aid for sensors in the RL* series
	OMH-22	Mounting aid for RL* series
	OMH-RLK29-HW	Mounting bracket for rear wall mounting

Light-on/dark-on changeover switch

 <p>ON 1 2 3 4</p>	Dark on
 <p>ON 1 2 3 4</p>	Light on

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