



Background suppression sensor RL23-8-H-1000-IR/49/92

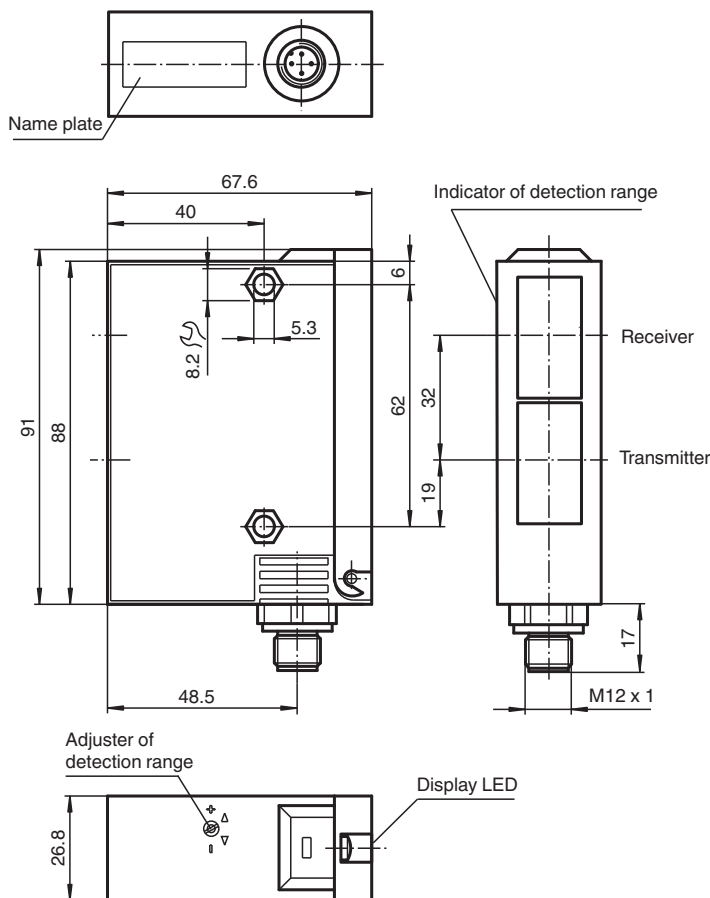


- Adjustable background suppression
- Infrared light
- Sturdy plastic housing
- Optical surface made of scratch-resistant glass

Background suppression sensor

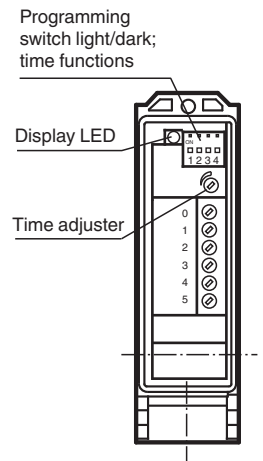
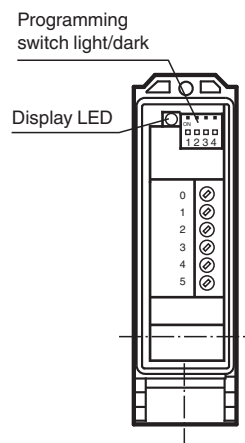


Dimensions



Terminal compartment
RL23-8-H-1000
RLK23-8-H-1000

Terminal compartment
RL23-8-H-2000
RLK23-8-H-2000



Technical Data

General specifications

Detection range	50 ... 1000 mm
Detection range min.	50 ... 150 mm
Detection range max.	50 ... 1000 mm
Light source	IREd
Light type	modulated infrared light
Black-white difference (6 %/90 %)	< 10 %
Diameter of the light spot	25 mm at 1000 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		1 PNP and 1 NPN short-circuit protected, reverse polarity protected
Switching voltage	30 V DC	
Switching current		max. 200 mA
Switching frequency	f	70 Hz
Response time		5 ms

Conformity

Product standard	EN 60947-5-2
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Approvals and certificates

UL approval	cULus
CCC approval	CCC approval / marking not required for products rated ≤36 V

Ambient conditions

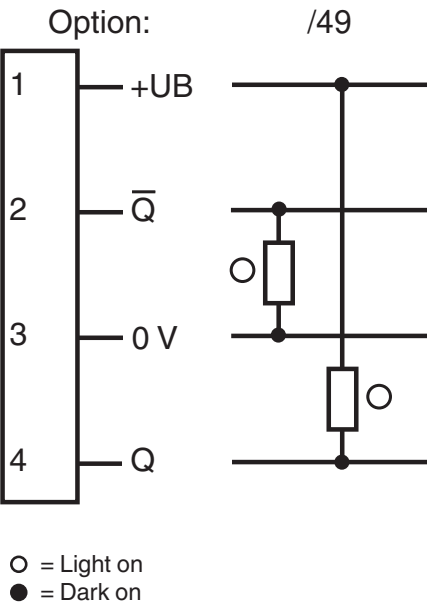
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-20 ... 75 °C (-4 ... 167 °F)

Mechanical specifications

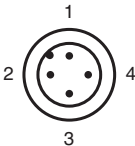
Housing width	26.8 mm
Housing height	91 mm
Housing depth	67.6 mm
Degree of protection	IP65
Connection	4-pin, M12 x 1 connector
Material	
Housing	Terluran® GV15
Optical face	glass
Mass	180 g

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 419450_eng.pdf

Connection Assignment



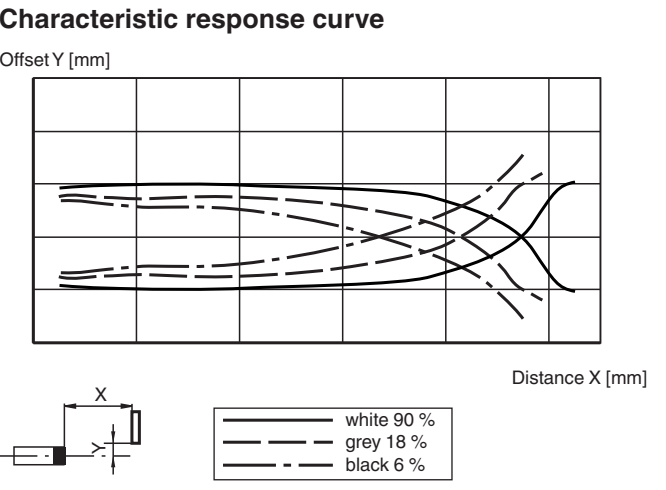
Connection Assignment



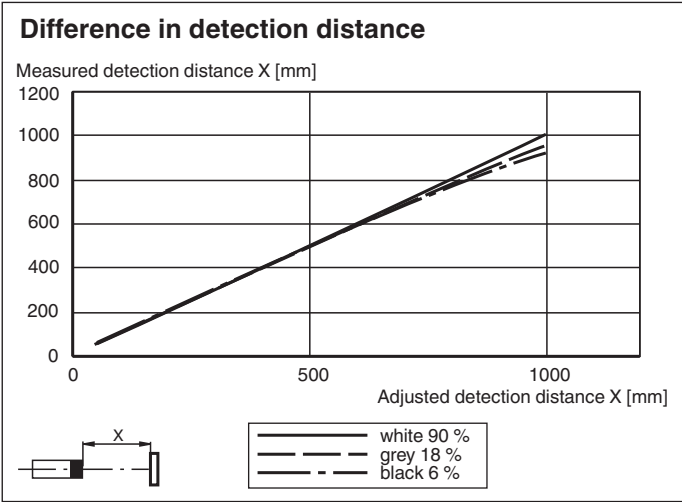
Wire colors in accordance with EN 60947-5-2

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

Characteristic Curve



Characteristic Curve



Accessories

	OMH-05	Mounting aid for round steel ø 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

ON 1 2 3 4	Dark on
ON 1 2 3 4	Light on

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