



Model Number

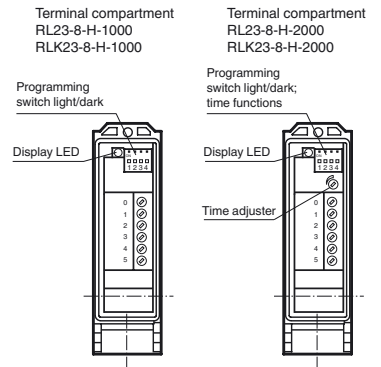
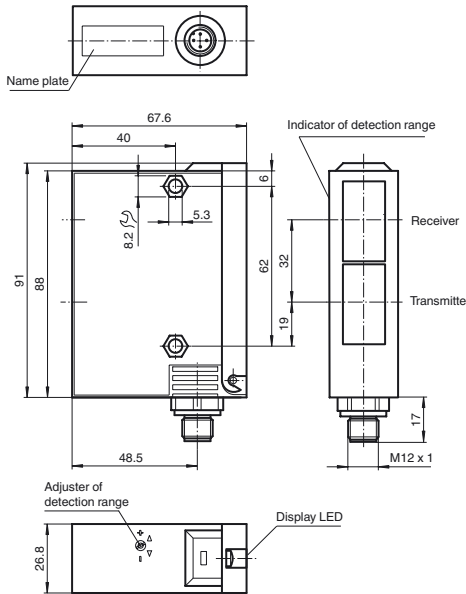
RL23-8-H-2000-IR/49/92

Background suppression sensor with 4-pin, M12 x 1 connector

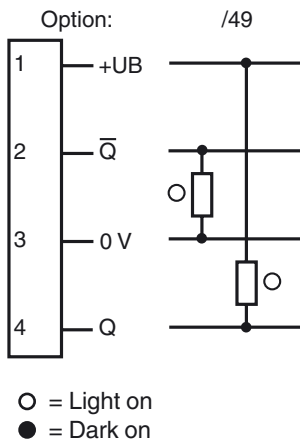
Features

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

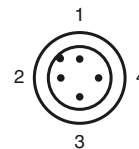
Dimensions



Electrical connection



Pinout



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Technical data**General specifications**

Detection range	50 ... 2000 mm
Detection range min.	50 ... 150 mm
Detection range max.	50 ... 3000 mm
Light source	IREL
Light type	modulated infrared light
Black/White difference (6 %/90 %)	< 20 %
Diameter of the light spot	50 mm at 2000 mm sensor range
Angle of divergence	1.5 °
Ambient light limit	5000 Lux

Functional safety related parameters

MTTF _d	540 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	60 %

Indicators/operating means

Function display	LED yellow, lights up with receiver lit
Controls	Programming switch for light/dark switching
Controls	Detection range adjuster
Controls	Time 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
Timer function	ON delay (GAN), OFF delay (GAB), one shot (IAB), programmable, adjustment range 0.1 ... 10 s	

Ambient conditions

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

Mechanical specifications

Protection degree	IP65
Connection	connector M12 x 1, 4-pin
Material	
Housing	Terluran GV15
Optical face	glass
Mass	180 g

Compliance with standards and directives

Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

UL approval	cULus
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

Accessories**OMH-05**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-07

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-21

Mounting bracket

OMH-22

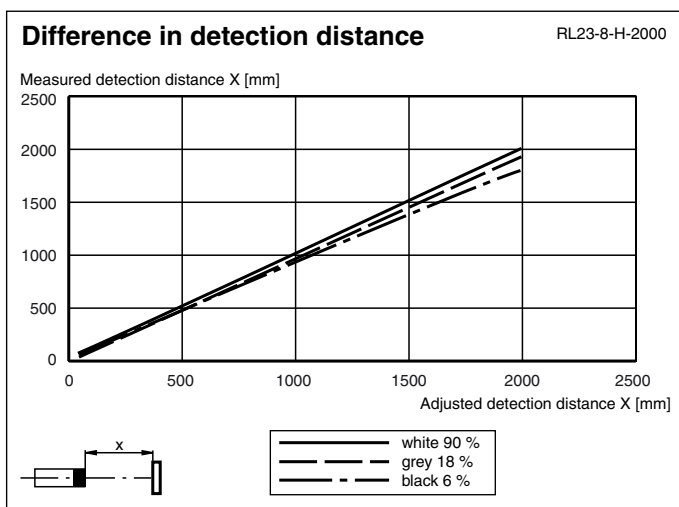
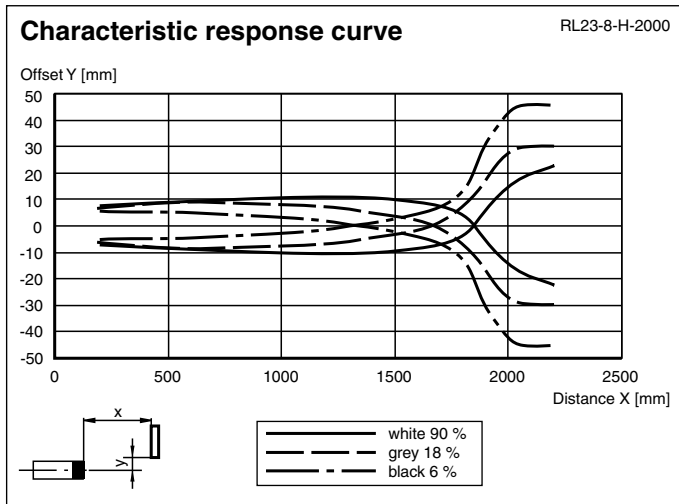
Mounting bracket

OMH-RLK29-HW

Mounting bracket for rear wall mounting

Other suitable accessories can be found at www.pepperl-fuchs.com

Curves/Diagrams



Timer functions

Timer function	Switching type		Receiver exposed Receiver dark
ON 1 2 3 4 Without	Light		ON
	Dark		OFF
ON 1 2 3 4 ON delay	Light		ON
	Dark		OFF
ON 1 2 3 4 OFF delay	Light		ON
	Dark		OFF
ON 1 2 3 4 one shot	Light		ON
	Dark		OFF

Time t_{ON} , t_{OFF} and t_{OS} are adjustable from 0.1 to 10 seconds.
The Light-/Dark-Switch (Left, outer switch) is shown in the "Dark ON" position.

Type	Description	Notes
-Z	OFF delay timer	Adjustable time interval (0.1 s - 10 s)
	one shot timer	
	ON delay timer	

Light/Dark switch

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<p>ON </p>	<p>Dark on</p>
<p>ON </p>	<p>Light on</p>

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