



**Model Number**

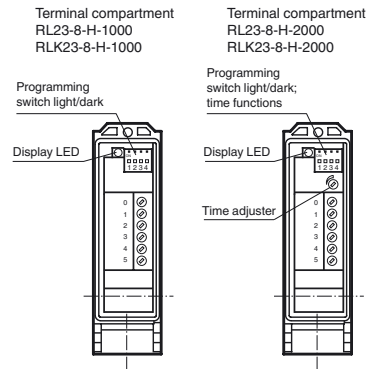
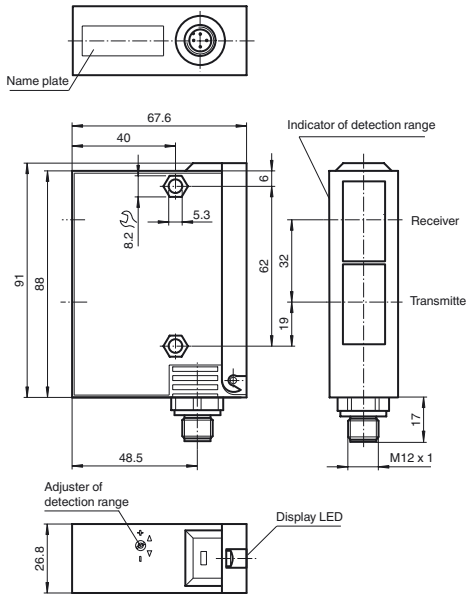
**RL23-8-H-2000-IR/49/92/104**

Background suppression sensor with M12, 4-pin metal connector

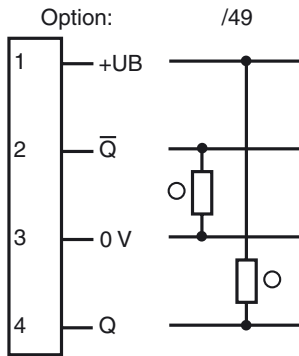
**Features**

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

**Dimensions**

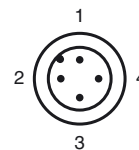


**Electrical connection**



○ = Light on  
● = Dark on

**Pinout**



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Subject to modifications without notice

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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 <sub>d</sub>	540 a
Mission Time (T <sub>M</sub> )	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 <sub>B</sub>	10 ... 30 V DC
Ripple		10 %
No-load supply current	I <sub>0</sub>	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**

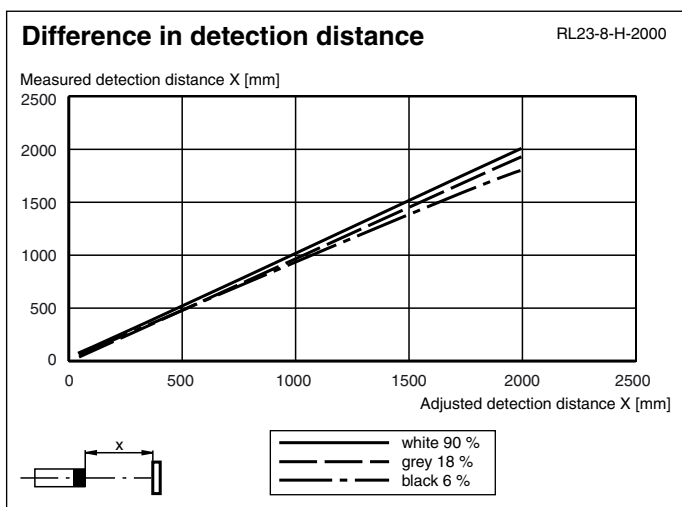
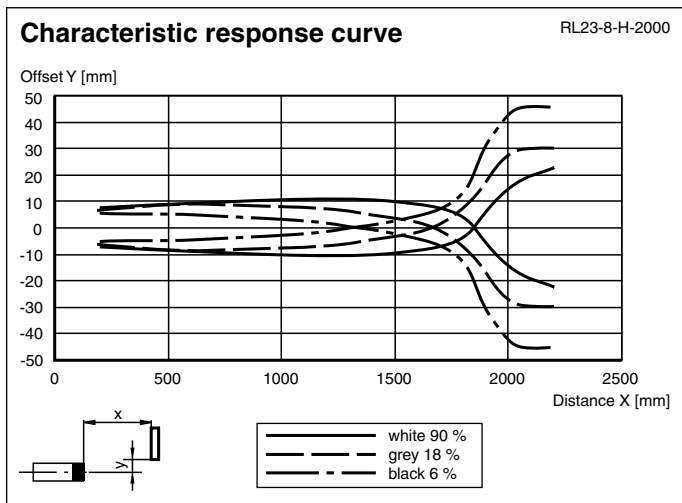
Mounting bracket

**OMH-RLK29-HW**

Mounting bracket for rear wall mounting

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

**Curves/Diagrams**



**Timer functions**

Timer function	Switching type	Receiver exposed	Receiver dark
ON Without	Light	ON	OFF
ON ON delay	Light	ON	OFF
ON OFF delay	Light	ON	OFF
ON one shot	Light	ON	OFF
	Dark	OFF	ON
	Dark	OFF	ON
	Dark	OFF	ON
	Dark	OFF	ON

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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ON 	Dark on
ON 	Light on