



Background suppression sensor RL23-8-H-2000-IR/104/116/125

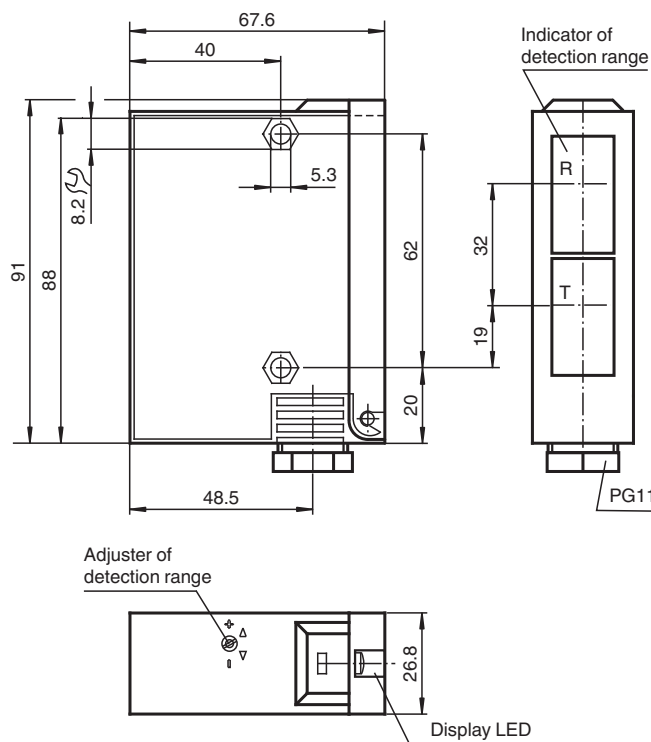


- Adjustable background suppression
- Infrared light
- Timer function
- Sturdy plastic housing
- Optical surface made of scratch-resistant glass
- Protected against mutual interference (no cross-talk)

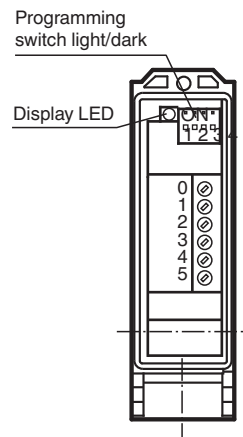
Background suppression sensor



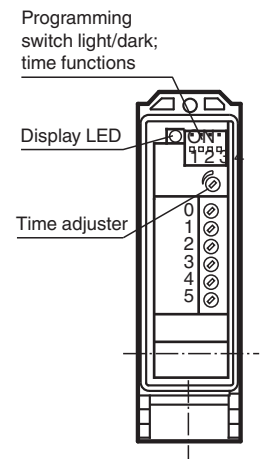
Dimensions



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 ... 2000 mm
Detection range min.	50 ... 150 mm
Detection range max.	50 ... 3000 mm
Light source	IREd
Light type	modulated infrared light
Black-white difference (6 %/90 %)	< 20 %
Diameter of the light spot	50 mm at 2000 mm sensor range
Opening angle	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 indicator	LED yellow, lights up with receiver lit
Control elements	Programming switch for light/dark switching
Control elements	Sensing range adjuster
Control elements	Time adjuster

Electrical specifications

Operating voltage	U _B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I ₀	100 mA

Input

Test input	emitter deactivation at +U _B
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Output

Switching type		light/dark on
Signal output		2 PNP, complementary, 1 NPN 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
Timer function		ON delay (GAN), OFF delay (GAB), one shot (IAB), programmable, adjustment range 0.1 ...10 s

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

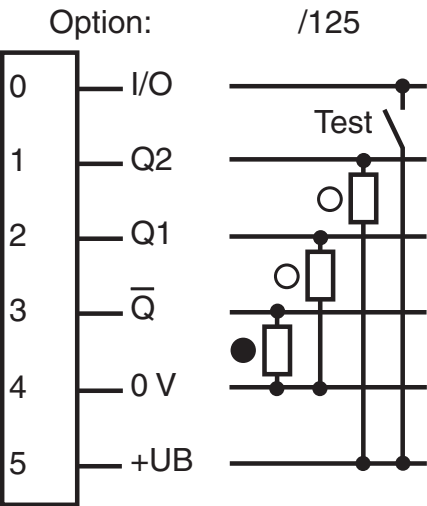
Ambient conditions

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

Mechanical specifications

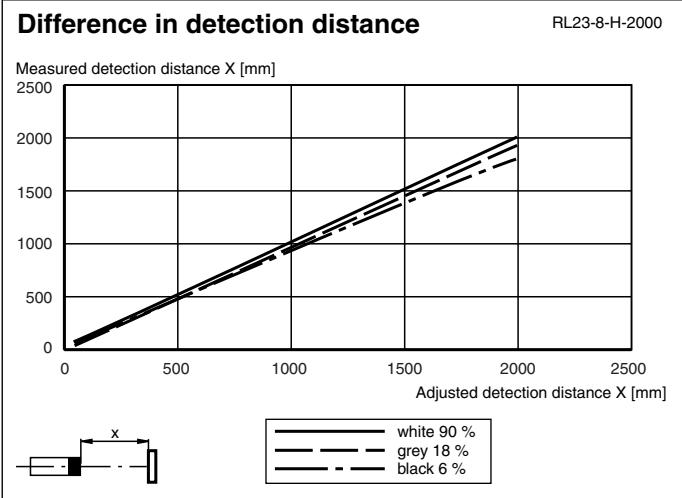
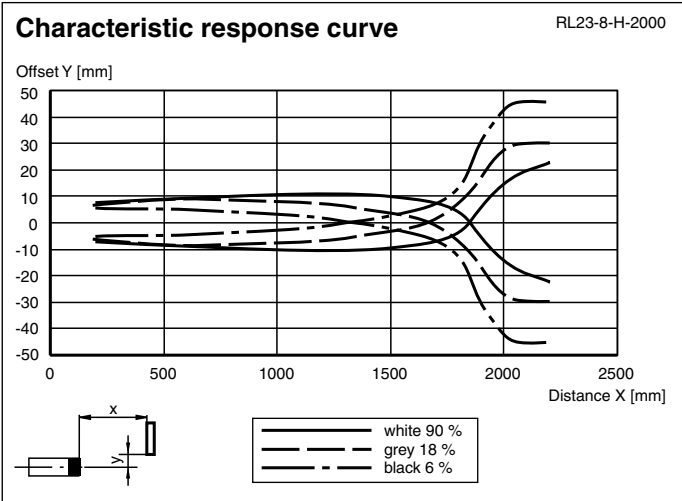
Housing width	26.8 mm
Housing height	91 mm
Housing depth	67.6 mm
Degree of protection	IP65
Connection	terminal compartment
Material	
Housing	Terluran® GV15
Optical face	glass
Mass	180 g

Connection Assignment



○ = Light on
● = Dark on

Characteristic Curve

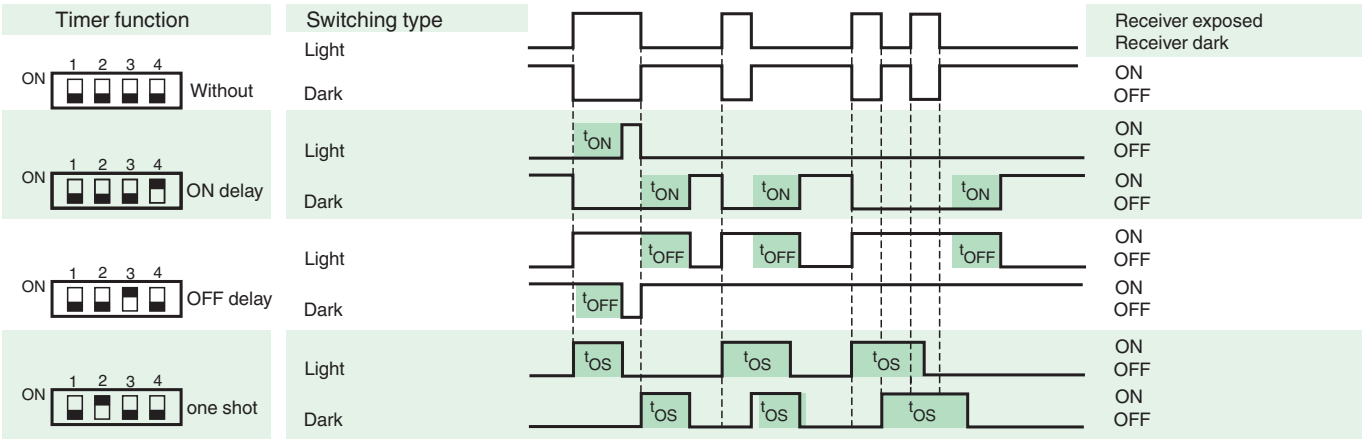


Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 419447_eng.pdf

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

Timer functions



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-on/dark-on changeover switch

ON 	Dark on
ON 	Light on