

Background suppression sensor

RL23-8-H-2000-IR/47/92

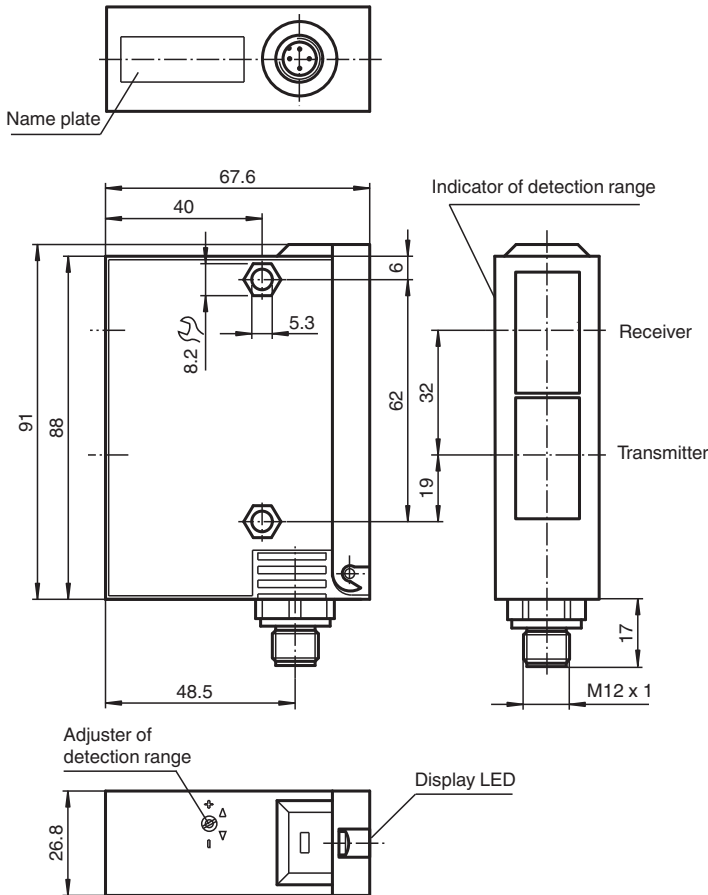


- Adjustable background suppression
- Infrared light
- Timer function
- Sturdy plastic housing
- Optical surface made of scratch-resistant glass

Background suppression sensor



Dimensions

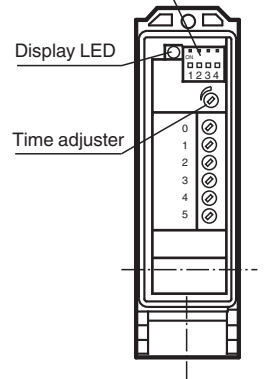
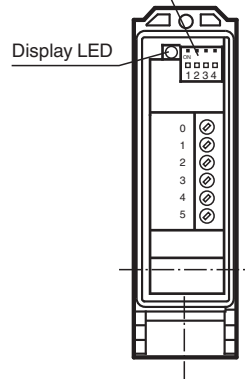


Terminal compartment
RL23-8-H-1000
RLK23-8-H-1000

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

Programming
switch light/dark

Programming
switch light/dark;
time functions

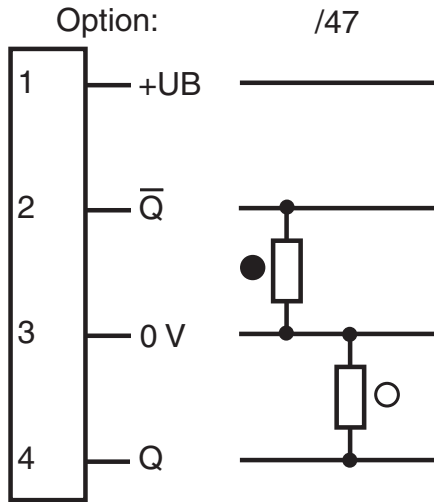


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Technical Data

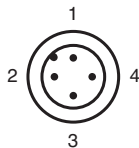
General specifications		
Detection range		50 ... 2000 mm
Detection range min.		50 ... 150 mm
Detection range max.		50 ... 3000 mm
Light source		IRE D
Light type		modulated infrared light
Black-white difference (6 %/90 %)		< 20 %
Diameter of the light spot		50 mm at 2000 mm sensor range
Opening angle		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
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	70 Hz
Response time		5 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
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

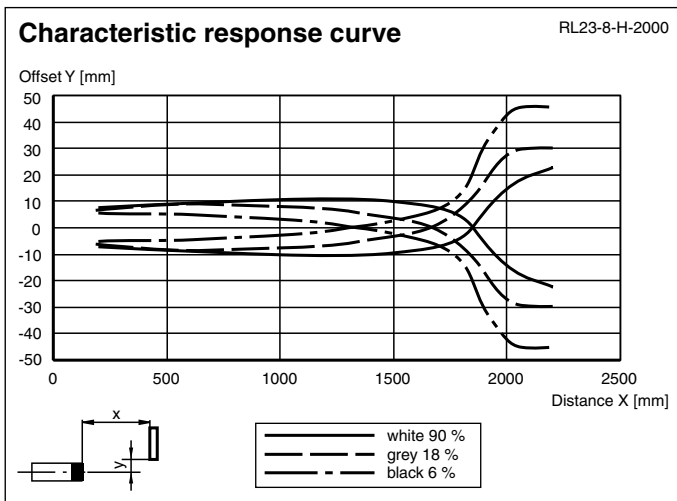
Connection Assignment



Wire colors in accordance with EN 60947-5-2

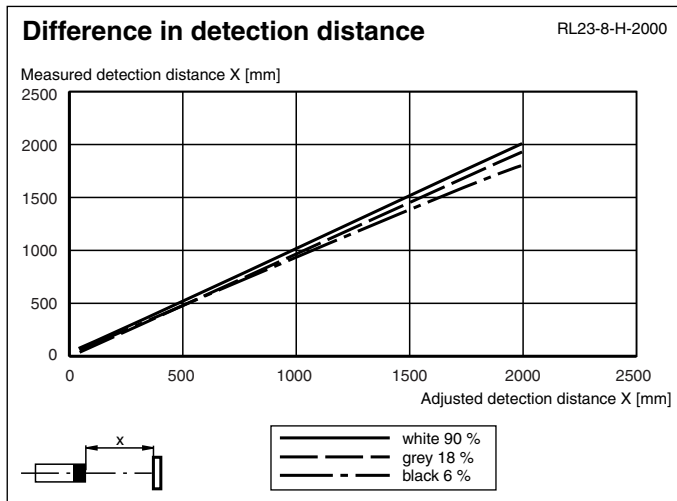
1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Characteristic Curve







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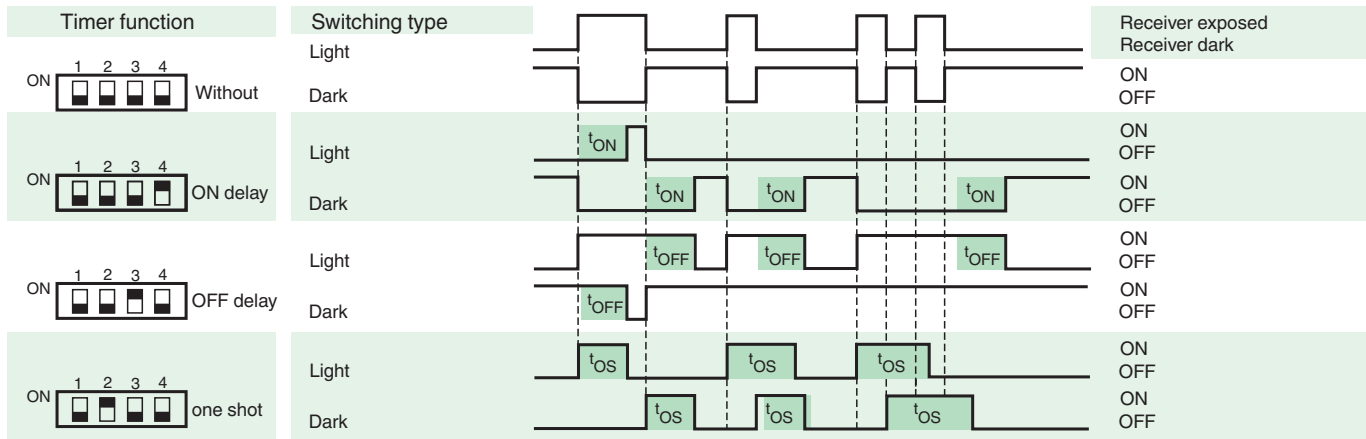
Characteristic Curve



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


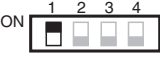
Timer functions



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

	Dark on
	Light on