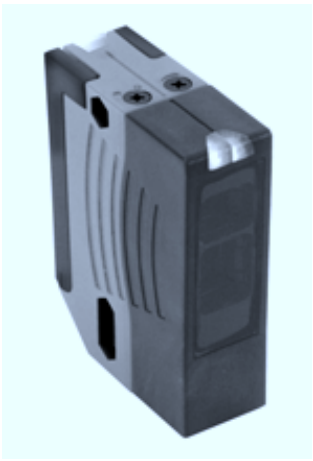


Model Number

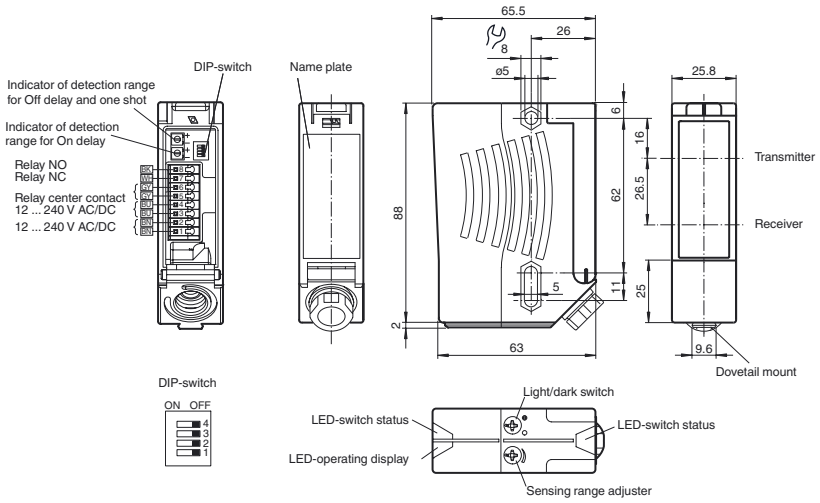
RLK28-8-H-400-RT-Z/31/116

Background suppression sensor
with terminal compartment

Features

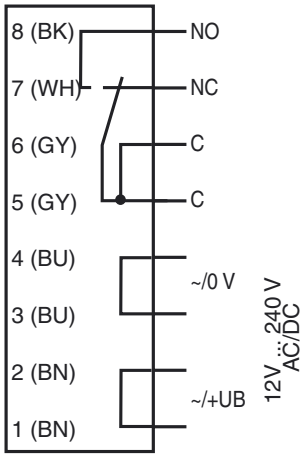
- Universal series with highly versatile fields of use
- Resistant against noise: reliable operation under all conditions
- Good alignability due to red transmission LED
- Programmable time function GAN, GAB, IAB and GAN-IAB as double function
- Version for universal voltages

Dimensions



Electrical connection

Option:



The relay-functions "NC" and "NO" bear on the switching mode "Light-ON".
This complies to the default setting of the light/dark switch, located on top of the housing (factory setting).

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Technical data

General specifications		
Detection range		20 ... 400 mm
Detection range min.		20 ... 150 mm
Detection range max.		20 ... 400 mm
Adjustment range		150 ... 400 mm
Background suppression		max. + 10 % of the upper limit of the detection range
Light source		LED
Light type		modulated visible red light , 660 nm
Black/White difference (6 %/90 %)		< 10 %
Diameter of the light spot		approx. 12 mm at a distance of 400 mm
Angle of divergence		Emitter 1.2°, Receiver 2°
Ambient light limit		50000 Lux
Functional safety related parameters		
$MTTF_d$		880 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green
Function indicator		2 LEDs yellow ON: object inside the scanning range OFF: object outside the scanning range
Control elements		Light/Dark switch
Control elements		Detection range adjuster
Electrical specifications		
Operating voltage	U_B	12 ... 240 V AC/DC
Power consumption	P_0	≤ 3.5 VA
Output		
Switching type		light/dark on, switchable (selectable, light/dark switching is only activated if the receiver has 'dark on' selected.)
Signal output		Relay, 1 alternator
Switching voltage		max. 250 V AC/DC
Switching current		max. 2 A
Switching power		DC: max. 50 W AC: max. 500 VA
Switching frequency	f	25 Hz
Response time		20 ms
Timer function		ON delay (GAN), OFF delay (GAB), one shot (IAB), ON delay-one shot (GAN-IAB), ON delay-OFF delay (GAN-GAB), programmable adjustment interval 0.1 ... 10 s
Ambient conditions		
Ambient temperature		-40 ... 60 °C (-40 ... 140 °F)
Storage temperature		-40 ... 75 °C (-40 ... 167 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		terminal compartment with 8 spring-loaded terminals for wire cross section 0.5 ... 1.5 mm^2, insulation stripping 7.5 ... 8.5 mm, M16 x 1.5 cable gland
Material		
Housing		Plastic ABS
Optical face		Plastic pane
Mass		112 g
Compliance with standards and directives		
Directive conformity		Low Voltage Directive 2006/95/EC EMC Directive 2004/108/EC
Standard conformity		
Product standard		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
Protection class		II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Caution! The protection class 2 is only valid when the terminal compartment is closed.
UL approval		cULus Listed **Caution:** This equipment is considered as open-type equipment. It must be mounted within an enclosure, that is suitably designed for protection against internal fire and personal injury resulting from accessibility to live parts according UL 508.
CCC approval		Certified by China Compulsory Certification (CCC)

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-MLV11-K
dove tail mounting clamp

OMH-RLK29
Mounting bracket

OMH-RLK29-HW
Mounting bracket for rear wall mounting

OMH-RL28-C
Weld slag cover model

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

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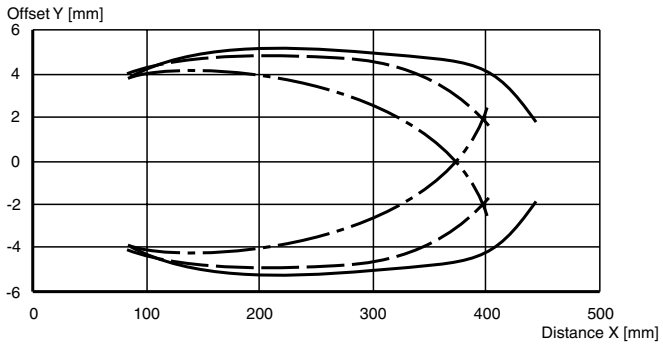
Curves/Diagrams

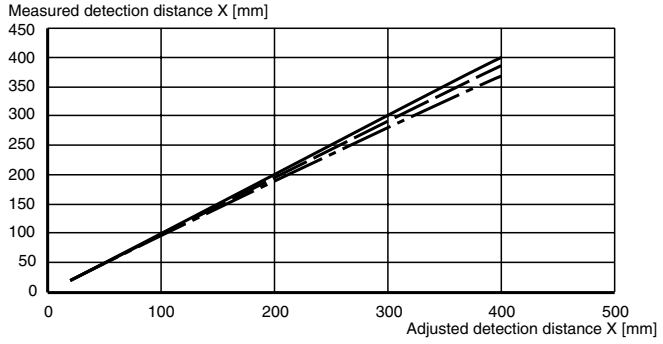
Characteristic response curve

RL(K)28-8-H-400-RT

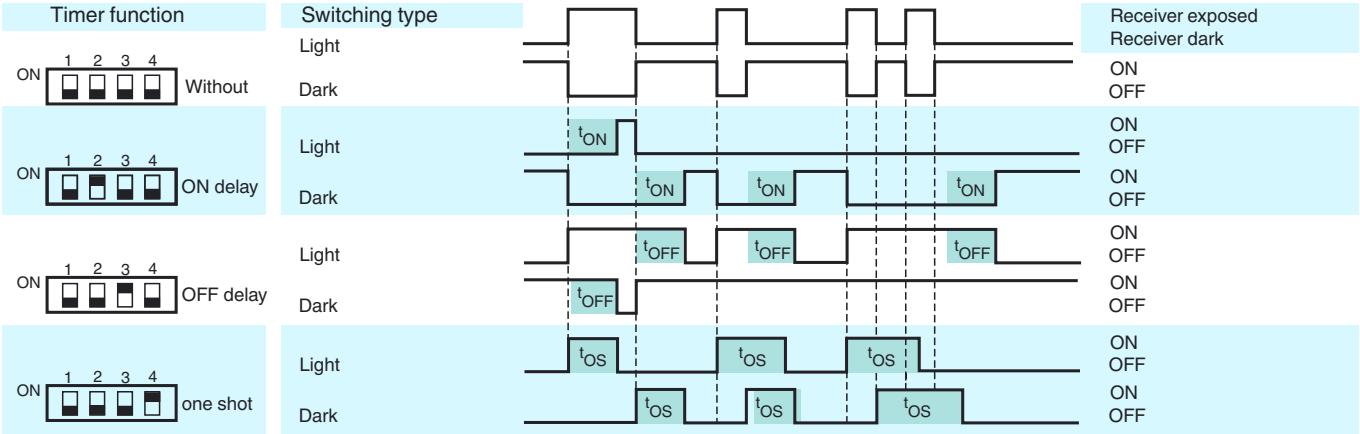


Difference in detection distance

RL(K)28-8-H-400-RT



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	
	ON delay timer / OFF delay timer	
	ON delay timer / one shot timer	

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