

### Model Number

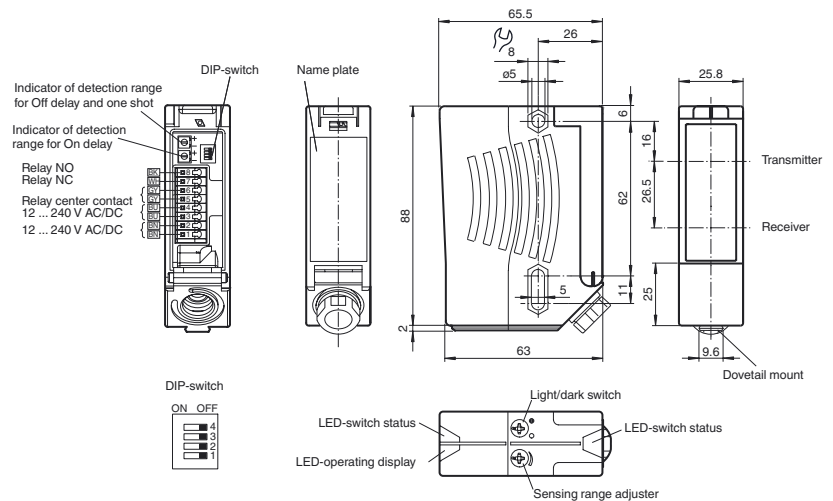
**RLK28-8-H-700-RT-Z/31/116**

## Background suppression sensor with terminal compartment

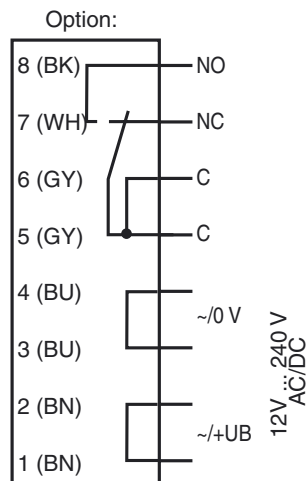
## Features

- 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



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).

## Technical data

### General specifications

Detection range	20 ... 700 mm
Detection range min.	20 ... 200 mm
Detection range max.	20 ... 700 mm
Adjustment range	200 ... 700 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 %)	< 20 %
Diameter of the light spot	approx. 15 mm at a distance of 700 mm
Angle of divergence	Emitter 1.2°, Receiver 2°
Ambient light limit	50000 Lux

### Functional safety related parameters

MTTF <sub>d</sub>	880 a
Mission Time (T <sub>M</sub> )	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 <sub>B</sub>	12 ... 240 V AC/DC
Power consumption	P <sub>0</sub>	≤ 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 <sup>2</sup> , 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 <b>Caution:</b> 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

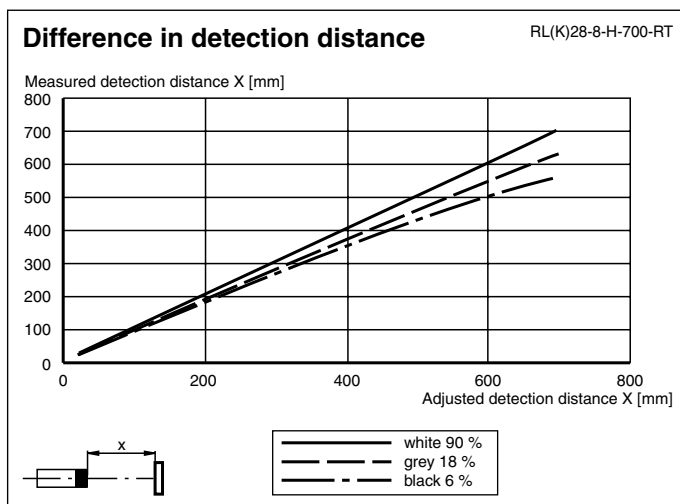
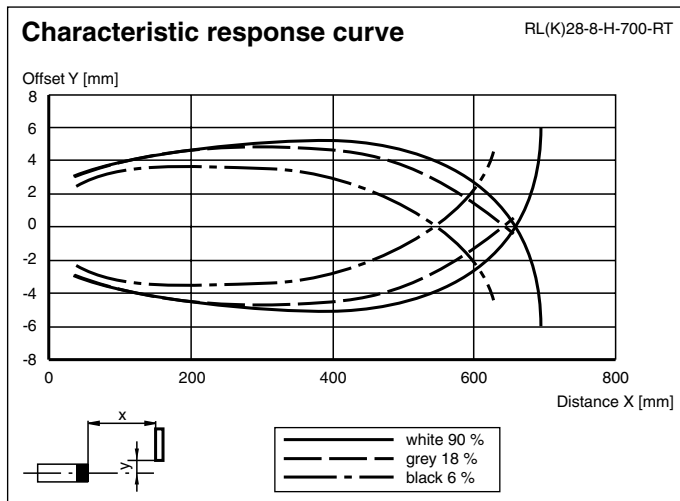
Mounting bracket for rear wall mounting

### OMH-RL28-C

Weld slag cover model

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://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	$t_{ON}$	ON
	Dark	$t_{ON}$	OFF
ON 1 2 3 4 OFF delay	Light	$t_{OFF}$	ON
	Dark	$t_{OFF}$	OFF
ON 1 2 3 4 one shot	Light	$t_{OS}$	ON
	Dark	$t_{OS}$	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	
	ON delay timer / OFF delay timer	
	ON delay timer / one shot timer	