



Model Number

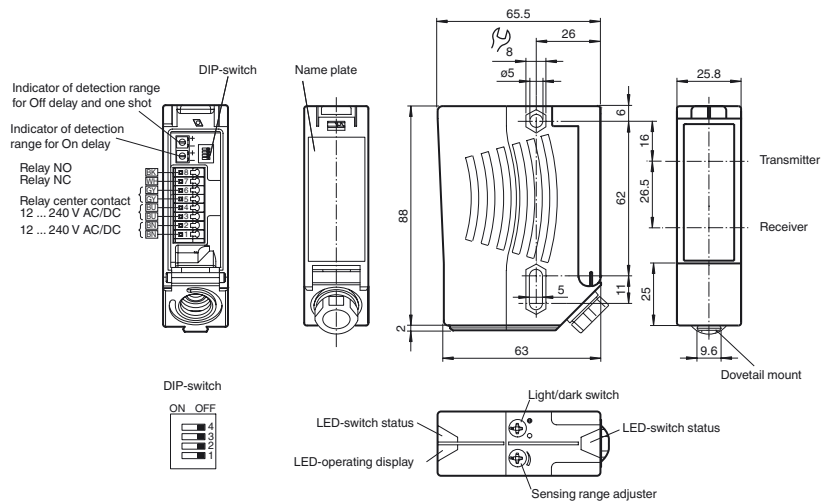
RLK28-8-H-400-RT-Z/31/116

Background suppression sensor
with terminal compartment

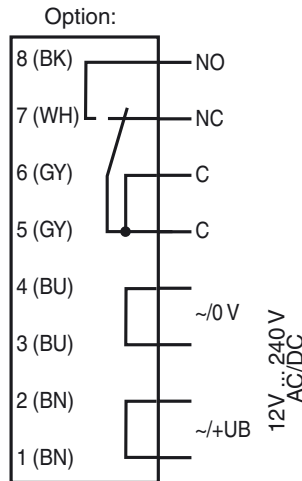
Features

- 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



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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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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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 | 620 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 | Sensing range adjuster , Light-on/dark-on changeover switch |

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 | EN 60947-5-2:2007+A1:2012 |
| EMC Directive 2004/108/EC | EN 60947-5-2:2007+A1:2012 |
| Standard conformity | |
| Product standard | EN 60947-5-2:2007+A1:2012 IEC 60947-5-2:2007 + A1:2012 |
| Standards | UL 60947-5-2: 2014 EN 62471:2008 |

Approvals and certificates

| | |
|------------------|--|
| EAC conformity | TR CU 020/2011 TR CU 004/2011 |
| 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 | E87056 , 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

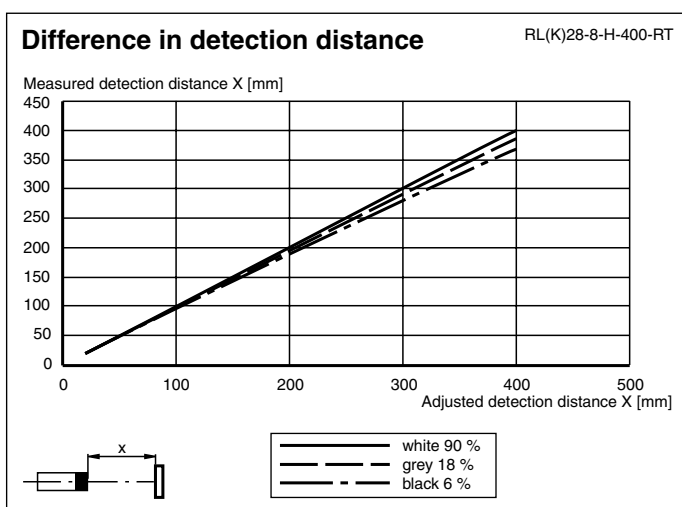
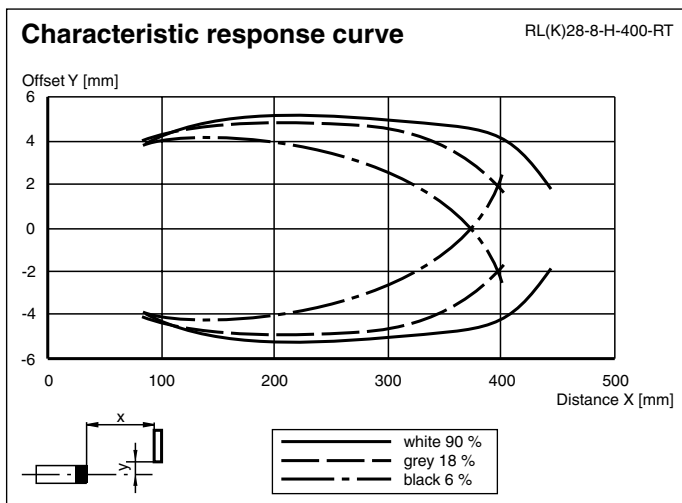
Mounting bracket for rear wall mounting

OMH-RL28-C

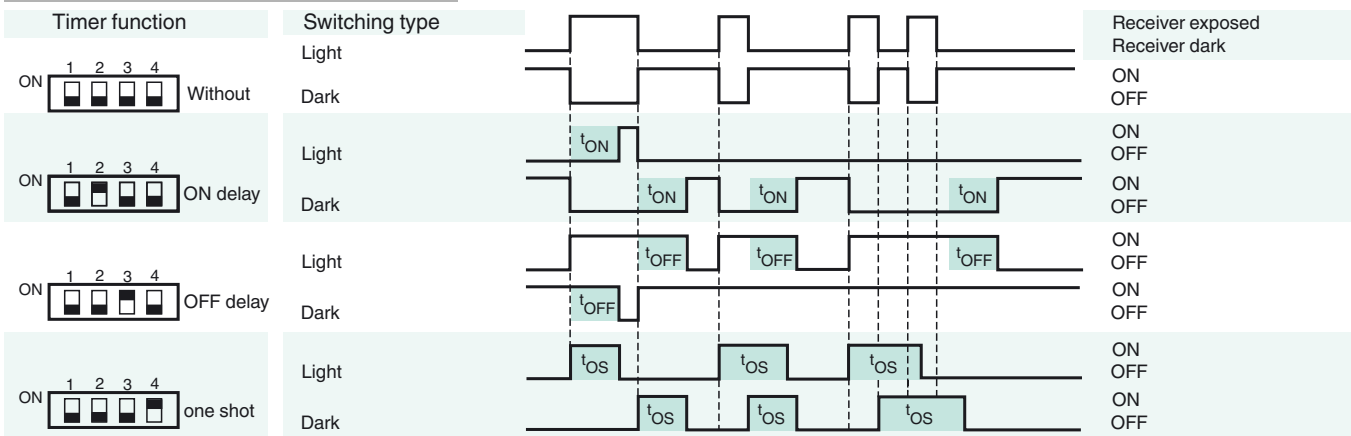
Weld slag cover model

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

Curves/Diagrams



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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