



Model Number

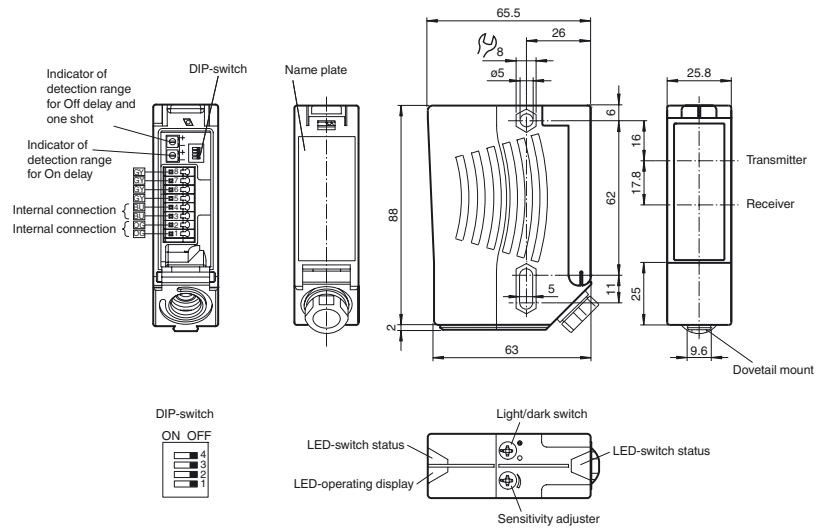
RL28-55-V-Z/49/76a/82b/116

Retroreflective sensor
with terminal compartment

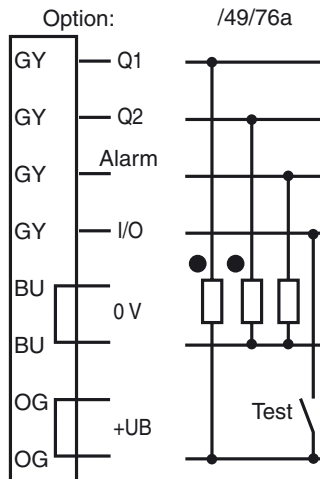
Features

- Foreground suppression, suited to recording of sheet-shrink-wrapped objects
- Ultra bright LEDs for power on, pre fault indication and switching state
- Programmable time function GAN, GAB, IAB and GAN-IAB as double function
- Not sensitive to ambient light, even with switched energy saving lamps
- Waterproof, protection degree IP67
- Protection class II

Dimensions



Electrical connection



○ = Light on
● = Dark on

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Subject to modifications without notice

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411
fa-info@pepperl-fuchs.com

Copyright Pepperl+Fuchs
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

Technical data**General specifications**

| | |
|---------------------------|---|
| Effective detection range | 0 ... 13 m |
| Reflector distance | 0.5 ... 13 m (blind range 0 ... 0.2 m faded out) |

| | |
|---------------------------|------|
| Threshold detection range | 17 m |
|---------------------------|------|

| | |
|----------------------------|--------------------------------------|
| Reference target | H85-2 reflector |
| Light source | LED |
| Light type | modulated visible red light , 660 nm |
| Diameter of the light spot | approx. 220 mm at a distance of 13 m |
| Angle of divergence | emitter 1.2° receiver 2° |
| Ambient light limit | 80000 Lux |

Functional safety related parameters

| | |
|--------------------------------|--------|
| MTTF _d | 1140 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 90 % |

Indicators/operating means

| | |
|-------------------|--|
| Operating display | LED green |
| Function display | 2 LEDs yellow, light up when light beam is free, flash when falling short of the stability control, off when light beam is interrupted |
| Controls | sensitivity adjustment (Adjustment to < 25% of the effective operating range) , Light/Dark switch |

Electrical specifications

| | | |
|------------------------|----------------|----------------|
| Operating voltage | U _B | 10 ... 30 V DC |
| Ripple | | 10 % |
| No-load supply current | I ₀ | 40 mA |

Input

| | |
|------------|---|
| Test input | emitter deactivation with +U _B |
|------------|---|

Output

| | | |
|------------------------------------|--|---------|
| Output of the pre-fault indication | 1 PNP, inactive when falling short of the stability control for 10s; immediately inactive if 4 light beam interruptions take place | |
| Switching type | light/dark on, switchable (selectable, light/dark switching is only activated if the receiver has 'dark on' selected.) | |
| Signal output | 1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected , open collectors | |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 200 mA | |
| Switching frequency | f | 1000 Hz |
| Response time | | 0.5 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 0.02 s ... 1 s | |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -40 ... 60 °C (-40 ... 140 °F) |
| Storage temperature | -40 ... 75 °C (-40 ... 167 °F) |

Mechanical specifications

| | |
|-------------------|---|
| Protection degree | IP67 |
| Connection | terminal compartment with 8 spring-loaded terminals for wire cross section 0.5 ... 1.5 mm ² [Hoch], insulation stripping 7.5 ... 8.5 mm, M16 x 1.5 cable gland |
| Material | |
| Housing | Plastic ABS |
| Optical face | plastic |
| Mass | approx. 112 g |

Compliance with standards and directives

| | |
|---------------------|-------------------|
| Standard conformity | |
| Product standard | EN 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 |
| CCC approval | Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval. |

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

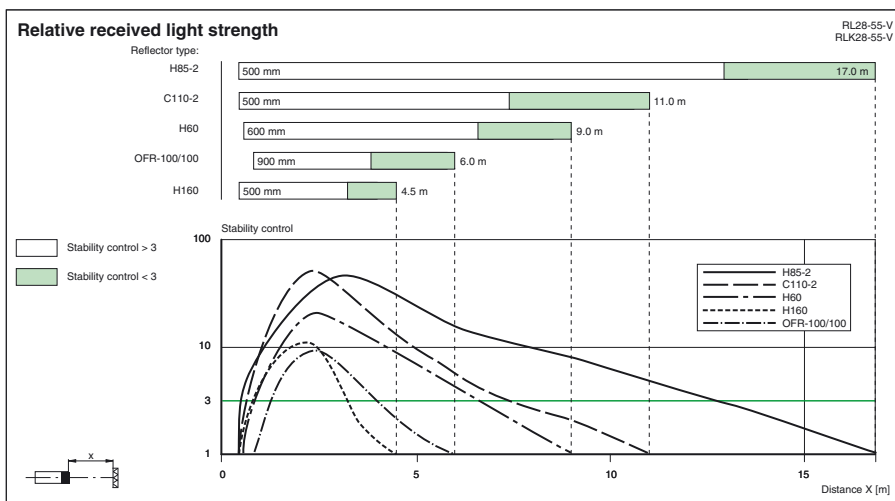
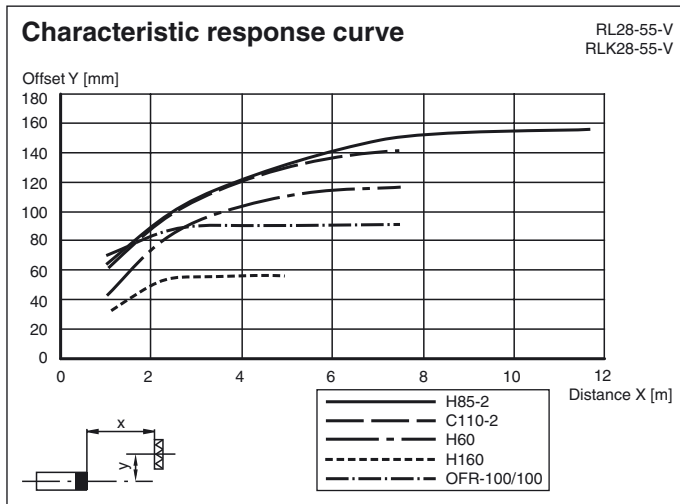
Mounting bracket for rear wall mounting

OMH-RL28-C

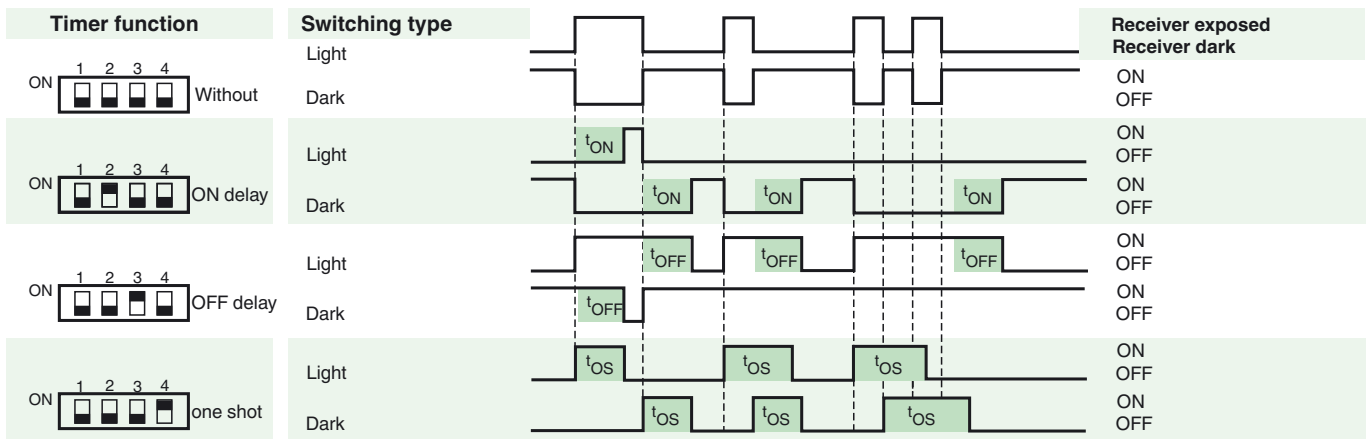
Protective cover

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 0.02 to 1 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 (0.02 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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