



### Model Number

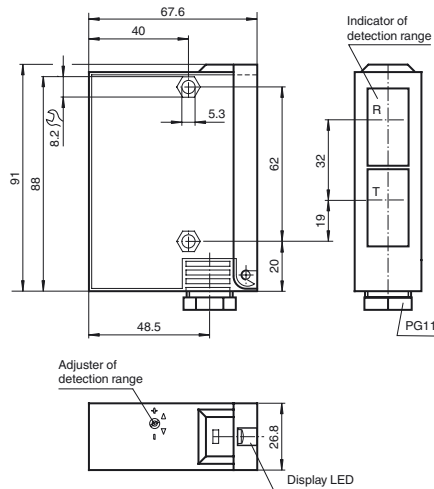
**RLK23-8-H-2000-IR/31/116**

Background suppression sensor  
with terminal compartment

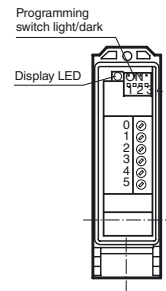
### Features

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

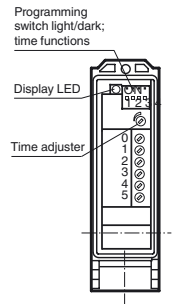
### Dimensions



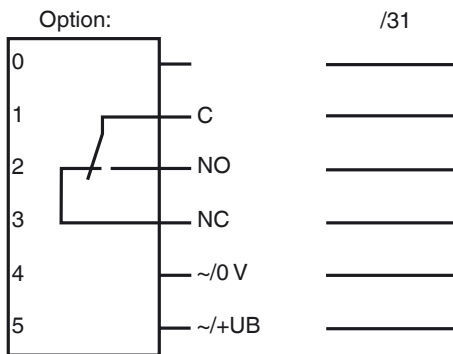
Terminal compartment  
RL23-8-H-1000  
RLK23-8-H-1000



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



### Electrical connection



**Technical data****General specifications**

|                                   |                               |
|-----------------------------------|-------------------------------|
| Detection range                   | 50 ... 2000 mm                |
| Detection range min.              | 50 ... 150 mm                 |
| Detection range max.              | 50 ... 3000 mm                |
| Light source                      | IREd                          |
| Light type                        | modulated infrared light      |
| Black/White difference (6 %/90 %) | < 20 %                        |
| Diameter of the light spot        | 50 mm at 2000 mm sensor range |
| Angle of divergence               | 1.5 °                         |
| Ambient light limit               | 5000 Lux                      |

**Functional safety related parameters**

|                                |       |
|--------------------------------|-------|
| MTTF <sub>d</sub>              | 850 a |
| Mission Time (T <sub>M</sub> ) | 20 a  |
| Diagnostic Coverage (DC)       | 0 %   |

**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 <sub>B</sub> | 12 ... 240 V AC/DC (automatic adaption to +UB) |
| Power consumption | P <sub>0</sub> | 3 VA                                           |

**Output**

|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| Switching type      | light/dark on                                                                               |
| Signal output       | 1 relay output, 1 alternator                                                                |
| Switching voltage   | max. 240 V AC                                                                               |
| Switching current   | max. 2 A                                                                                    |
| Switching frequency | f 25 Hz                                                                                     |
| Response time       | 20 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 |
|------------------|--------------|

**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           | terminal compartment |
| Material             |                      |
| Housing              | Terluran® GV15       |
| Optical face         | glass                |
| Mass                 | 180 g                |

**Approvals and certificates**

|                |                                                   |
|----------------|---------------------------------------------------|
| EAC conformity | TR CU 020/2011<br>TR CU 004/2011                  |
| UL approval    | cULus                                             |
| 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**

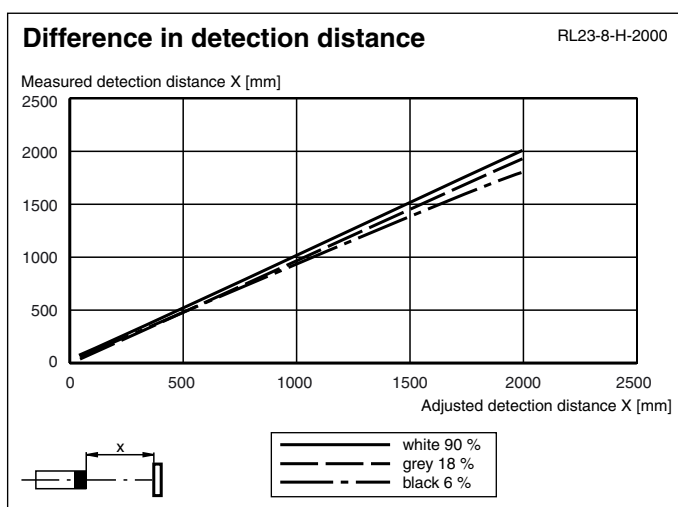
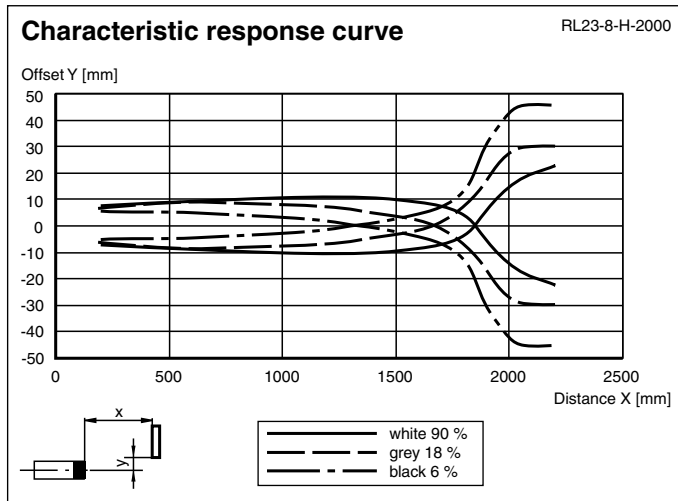
Mounting bracket

**OMH-RLK29-HW**

Mounting bracket for rear wall mounting

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

## Curves/Diagrams



## Timer functions

| Timer function       | Switching type |  |                                                |
|----------------------|----------------|--|------------------------------------------------|
| ON 1 2 3 4 Without   | Light          |  | Receiver exposed<br>Receiver dark<br>ON<br>OFF |
| ON 1 2 3 4 ON delay  | Light          |  | ON<br>OFF                                      |
| ON 1 2 3 4 OFF delay | Light          |  | ON<br>OFF                                      |
| ON 1 2 3 4 one shot  | Light          |  | ON<br>OFF                                      |
|                      | Dark           |  | ON<br>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  |                                         |

## Light/Dark switch

|            |         |
|------------|---------|
| ON 1 2 3 4 | Dark on |
|------------|---------|

Release date: 2019-11-27 14:07 Date of issue: 2019-11-27 419492\_eng.xml

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

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|                                                                                                                                            |          |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <div><div>ON</div><div><div>1</div><div>2</div><div>3</div><div>4</div></div><div><div></div><div></div><div></div><div></div></div></div> | Light on |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------|