

Background suppression sensor

RL23-8-H-2000-IR/49/92

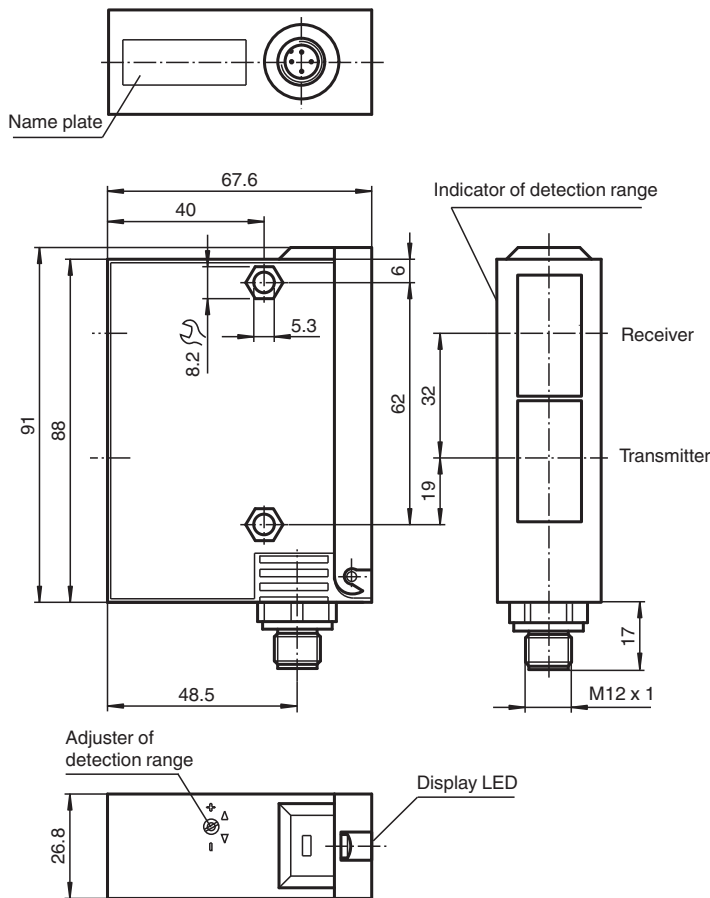


- Adjustable background suppression
- Infrared light
- Timer function
- Sturdy plastic housing
- Optical surface made of scratch-resistant glass

Background suppression sensor



Dimensions



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

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

Programming
switch light/dark

Programming
switch light/dark;
time functions

Display LED

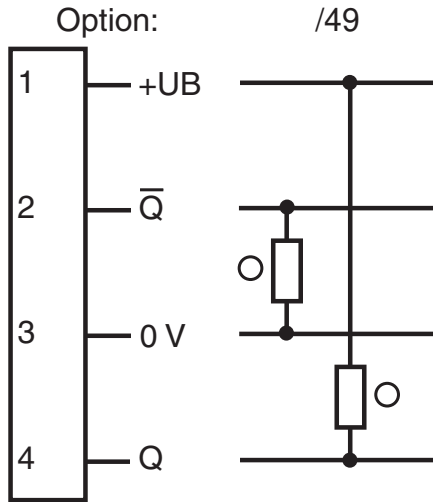
Display LED

Time adjuster

Technical Data

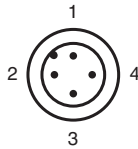
| General specifications | | |
|--------------------------------------|----------------|---|
| Detection range | | 50 ... 2000 mm |
| Detection range min. | | 50 ... 150 mm |
| Detection range max. | | 50 ... 3000 mm |
| Light source | | IREd |
| Light type | | modulated infrared light |
| Black-white difference (6 %/90 %) | | < 20 % |
| Diameter of the light spot | | 50 mm at 2000 mm sensor range |
| Opening angle | | 1.5 ° |
| Ambient light limit | | 5000 Lux |
| Functional safety related parameters | | |
| MTTF _d | | 540 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 60 % |
| 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 _B | 10 ... 30 V DC |
| Ripple | | 10 % |
| No-load supply current | I ₀ | 100 mA |
| Output | | |
| Switching type | | light/dark on |
| Signal output | | 1 PNP and 1 NPN short-circuit protected, reverse polarity protected |
| Switching voltage | | 30 V DC |
| Switching current | | max. 200 mA |
| Switching frequency | f | 70 Hz |
| Response time | | 5 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 |
| Approvals and certificates | | |
| EAC conformity | | TR CU 020/2011 |
| UL approval | | cULus |
| CCC approval | | CCC approval / marking not required for products rated ≤36 V |
| 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 | | 4-pin, M12 x 1 connector |
| Material | | |
| Housing | | Terluran® GV15 |
| Optical face | | glass |
| Mass | | 180 g |

Connection Assignment



○ = Light on
● = Dark on

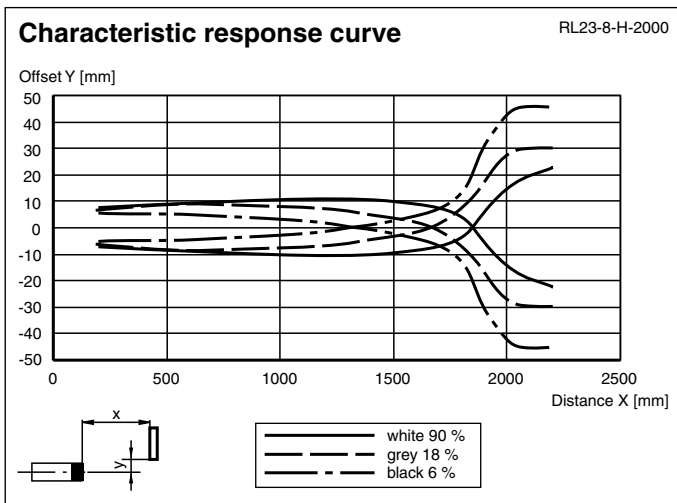
Connection Assignment



Wire colors in accordance with EN 60947-5-2

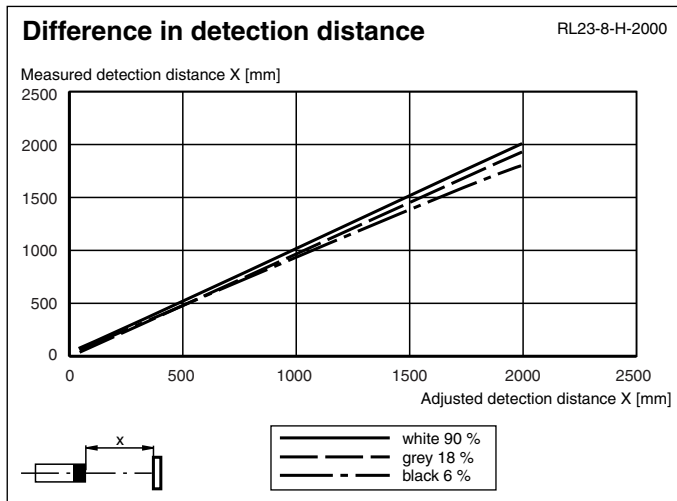
| | | |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

Characteristic Curve







Release date: 2022-08-02 Date of issue: 2022-08-03 Filename: 419456_eng.pdf

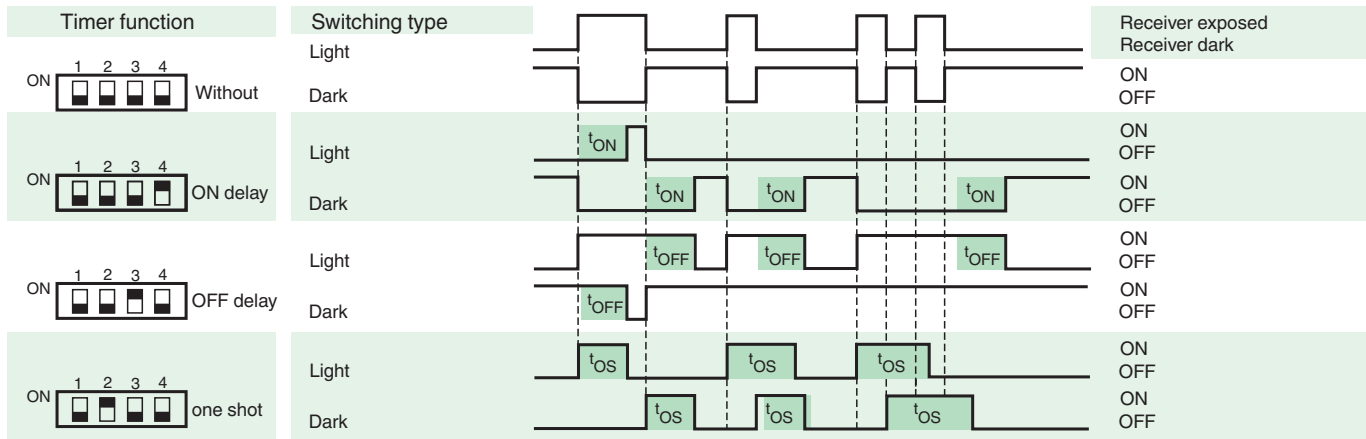
Characteristic Curve



Accessories

| | | |
|---|---------------------|---|
|  | OMH-05 | Mounting aid for round steel \varnothing 12 mm or sheet 1.5 mm ... 3 mm |
|  | OMH-21 | Mounting bracket: mounting aid for sensors in the RL* series |
|  | OMH-22 | Mounting aid for RL* series |
|  | OMH-RLK29-HW | Mounting bracket for rear wall mounting |


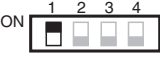
Timer functions



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 | |

Light-on/dark-on changeover switch

| | |
|---|----------|
|  | Dark on |
|  | Light on |