



### Model Number

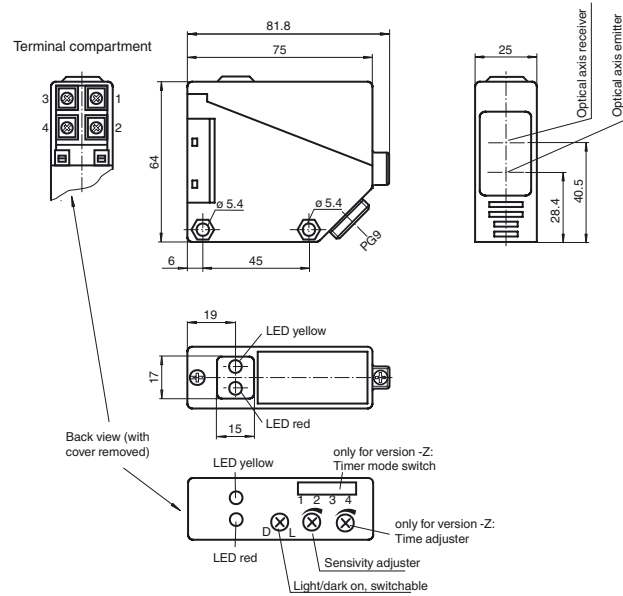
**RL39-55/30/35/40a/116/126a**

Retroreflective sensor  
with terminal compartment

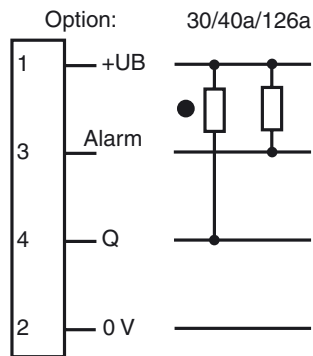
### Features

- Visible red light
- Light/dark ON, switchable
- Degree of protection IP67

### Dimensions



### Electrical connection



○ = Light on  
● = Dark on

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

|                           |                                |
|---------------------------|--------------------------------|
| Effective detection range | 0 ... 17 m                     |
| Reflector distance        | 0.1 ... 17 m                   |
| Threshold detection range | 20 m                           |
| Reference target          | H50 reflector                  |
| Light source              | LED red                        |
| Light type                | modulated visible red light    |
| Polarization filter       | no                             |
| Ambient light limit       | IEC / EN 60947-5-2 , 10000 Lux |

**Functional safety related parameters**

|                                |       |
|--------------------------------|-------|
| MTTF <sub>d</sub>              | 800 a |
| Mission Time (T <sub>M</sub> ) | 20 a  |
| Diagnostic Coverage (DC)       | 0 %   |

**Indicators/operating means**

|                    |                                                              |
|--------------------|--------------------------------------------------------------|
| Function indicator | LED yellow: switching state<br>LED red: pre-fault indication |
| Control elements   | Sensing range adjuster, light-on/dark-on changeover switch   |

**Electrical specifications**

|                                |                |                |
|--------------------------------|----------------|----------------|
| Operating voltage              | U <sub>B</sub> | 10 ... 30 V DC |
| Ripple                         |                | 10 %           |
| No-load supply current         | I <sub>0</sub> | ≤ 20 mA        |
| Time delay before availability | t <sub>v</sub> | ≤ 300 ms       |

**Output**

|                             |                                                                                   |          |
|-----------------------------|-----------------------------------------------------------------------------------|----------|
| Pre-fault indication output | 1 NPN, active when falling short of the stability control                         |          |
| Switching type              | light/dark on                                                                     |          |
| Signal output               | 1 NPN output, short-circuit protected, reverse polarity protected, open collector |          |
| Switching voltage           | max. 30 V DC                                                                      |          |
| Switching current           | max. 200 mA , resistive load                                                      |          |
| Voltage drop                | U <sub>d</sub>                                                                    | ≤ 3 V    |
| Switching frequency         | f                                                                                 | ≤ 300 Hz |
| Response time               |                                                                                   | ≤ 1.5 ms |

**Ambient conditions**

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 55 °C (-13 ... 131 °F) |
| Storage temperature | -40 ... 70 °C (-40 ... 158 °F) |

**Mechanical specifications**

|                      |                                                 |
|----------------------|-------------------------------------------------|
| Housing width        | 25 mm                                           |
| Housing height       | 64 mm                                           |
| Housing depth        | 75 mm                                           |
| Degree of protection | IP67                                            |
| Connection           | terminal compartment PG9, ≤ 2.5 mm <sup>2</sup> |
| Material             |                                                 |
| Housing              | PBT                                             |
| Optical face         | PMMA                                            |
| Mass                 | approx. 100 g                                   |

**General information**

|                   |                          |
|-------------------|--------------------------|
| Scope of delivery | Mounting aid , Reflector |
|-------------------|--------------------------|

**Compliance with standards and directives**

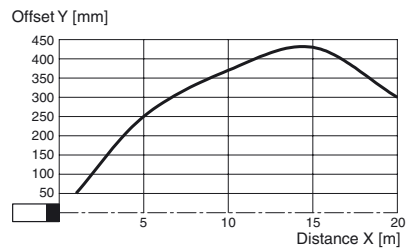
|                           |                                                      |
|---------------------------|------------------------------------------------------|
| Directive conformity      | EMC Directive 2004/108/EC                            |
| EMC Directive 2004/108/EC | EN 60947-5-2:2007+A1:2012 IEC 60947-5-2:2007+A1:2012 |
| Standard conformity       |                                                      |
| Product standard          | EN 60947-5-2:2007<br>IEC 60947-5-2:2007              |

**Approvals and certificates**

|              |                                                              |
|--------------|--------------------------------------------------------------|
| CCC approval | CCC approval / marking not required for products rated ≤36 V |
| Approvals    | CE                                                           |

## Curves/Diagrams

## Characteristic response curve



Permissible distance (offset)  
between optical axis and  
retro-reflector.

