



## Luminescence sensors LUT3, LUT3-8

LUT3-890



**Model Name** > LUT3-890  
**Part No.** > 1014058



**At a glance**

- Tough metal housing
- Sensing distance: 10, 20 or 50 mm
- Sensing distances selectable through interchangeable lenses
- Transmitter LED UV (375 nm)

**Your benefits**

- Sensitivity of the sensor can be infinitely adjusted using a potentiometer, saves time and reduces costs
- Filters ensure that background luminescence is reliably suppressed, ensuring greater process reliability
- Interchangeable lenses for different sensing distances provide flexibility



**Features**

|                                  |                         |
|----------------------------------|-------------------------|
| Sensing distance <sup>1)</sup> : | 90 mm                   |
| Light source <sup>2)</sup> :     | LED                     |
| Type of light:                   | Ultraviolet light       |
| Wave length:                     | 375 nm                  |
| Light spot size:                 | 12 mm x 12 mm           |
| Receiving filters:               | KV 418 (standard)       |
| Receiving range:                 | 450 nm ... 750 nm       |
| Adjustment:                      | Manual (potentiometer)  |
| Output function:                 | Light switching         |
| Dimensions (W x H x D):          | 30.4 mm x 53 mm x 80 mm |
| Housing design (light emission): | Rectangular             |

<sup>1)</sup> From front edge of lens    <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

**Mechanics/electronics**

|                                     |                                                                                 |
|-------------------------------------|---------------------------------------------------------------------------------|
| Ripple <sup>1)</sup> :              | < 2 Vpp                                                                         |
| Current consumption <sup>2)</sup> : | < 60 mA                                                                         |
| Switching frequency <sup>3)</sup> : | 1.5 kHz                                                                         |
| Response time <sup>4)</sup> :       | 350 µs                                                                          |
| Output type:                        | NPN: HIGH = approx. VS / LOW ≤ 2 V<br>PNP: HIGH = VS- ≤ 3 V / LOW = approx. 0 V |
| Switching mode:                     | PNP/NPN                                                                         |
| Output current I <sub>max.</sub> :  | 100 mA                                                                          |
| Connection type:                    | Connector M12, 5-pin                                                            |

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Protection class <sup>5)</sup> : | II                                                                                                        |
| Circuit protection:              | Output Q short-circuit protected<br>Interference suppression<br>VS connections reverse-polarity protected |
| Enclosure rating:                | IP 67                                                                                                     |
| Weight:                          | 400 g                                                                                                     |
| Housing material:                | Metal, Zinc diecast                                                                                       |
| Supply voltage:                  | 12 V DC ... 30 V DC <sup>6)</sup>                                                                         |
| Fieldbus interface:              | -                                                                                                         |

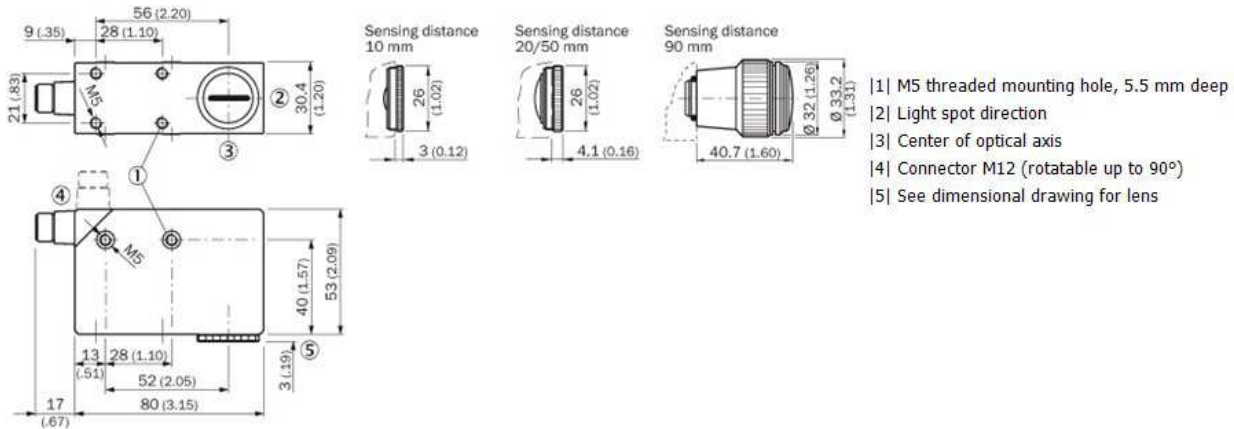
<sup>1)</sup> May not exceed or fall short of  $V_S$  tolerances    <sup>2)</sup> Without load    <sup>3)</sup> With light/dark ratio 1:1    <sup>4)</sup> Signal transit time with resistive load    <sup>5)</sup> Reference voltage DC 50 V    <sup>6)</sup>

Limit values; operation in short-circuit protected network max. 8 A

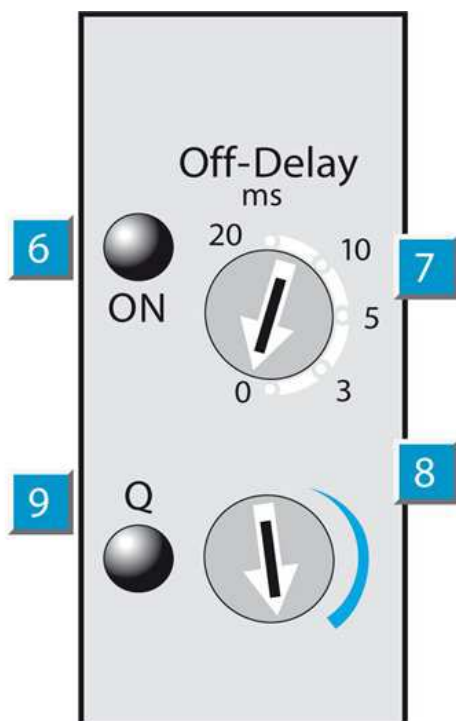
### Ambient data

|                                |                              |
|--------------------------------|------------------------------|
| Shock load:                    | According to IEC 60068       |
| Ambient operating temperature: | -10 °C ... +55 °C            |
| Ambient storage temperature:   | -25 °C ... +75 °C            |
| UL File No.:                   | NRKH.E181493 & NRKH7.E181493 |

### Dimensional drawing



## Adjustments

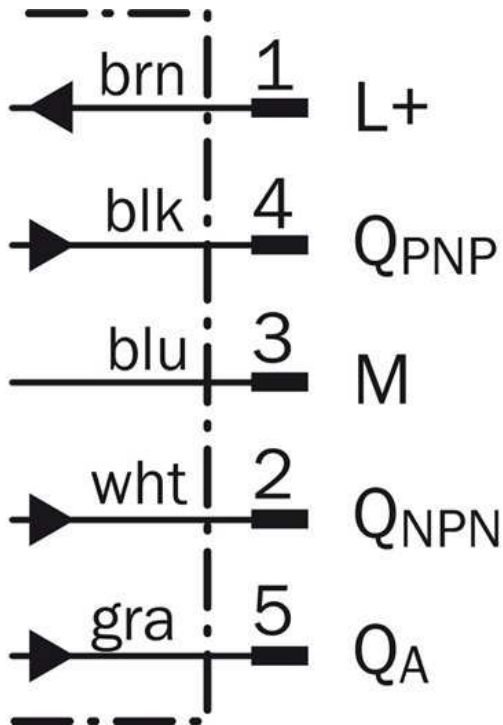


- |6| Operating indicator
- |7| time delay selector switch
- |8| Sensitivity adjustment
- |9| Output indicator

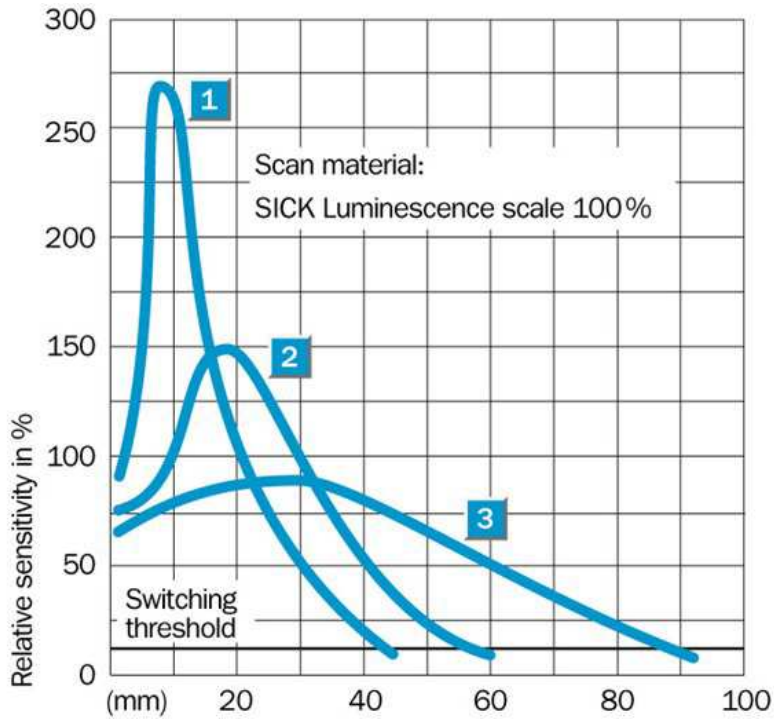
## Connection type



## Connection diagram



## Characteristic curve



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