



## Luminescence sensors LUT9

LUT9U-11306



**Model Name** > **LUT9U-11306**  
**Part No.** > **1046712**



#### At a glance

- Simple teach-in
- Operating range up to 250 mm
- Version with IO-Link for remote monitoring
- Bar graph display provides information about the luminescence intensity
- High speed (6.5 kHz), standard (2.5 kHz), high resolution (500 Hz) models
- Additional optical filters suppress background luminescence
- Fiber-optic cable connection (with 20 mm lens)
- Switching and analog output

#### Your benefits

- Simple sensitivity adjustment via teach-in for optimum adaptation to the application
- Long sensing distance tolerance leads to less mechanical height adjustments of the sensor on the machine
- Using IO-Link, the sensor can be configured and monitored by the central control system, enabling simple, cost-effective diagnostics and data collection
- Bar graph display provides continual process control through easy visualization of the luminescence intensity
- Filters ensure that background luminescence is reliably suppressed, ensuring greater process reliability
- Interchangeable lenses for different sensing distances and the second light exit provide flexibility
- High detection reliability ensures the process and reduces downtime
- Select speed or high resolution, making it ideal for any application.



#### Features

|                                              |                                                     |
|----------------------------------------------|-----------------------------------------------------|
| Dimensions (L x W x H):                      | 80 mm x 30.4 mm x 53 mm                             |
| Sensing distance <sup>1)</sup> :             | 50 mm                                               |
| Operating range:                             | 20 mm 70 mm                                         |
| Light source <sup>2)</sup> , <sup>3)</sup> : | UV-LED                                              |
| Light emission:                              | Long side                                           |
| Light spot size:                             | 5 mm x 15 mm                                        |
| Light spot direction:                        | Vertical                                            |
| Receiving filters:                           | KV 418 (standard)                                   |
| Receiving range:                             | 450 nm ... 750 nm                                   |
| Adjustment:                                  | Static 2-point teach-in with manual fine adjustment |
| Output function <sup>4)</sup> :              | Light switching                                     |

1) From front edge of lens 2) Average service life of 100,000 h at  $T_A = +25\text{ °C}$  3) Wave length: 375 nm 4) L/D switching via teach-in or IO-Link

## Mechanics/electronics

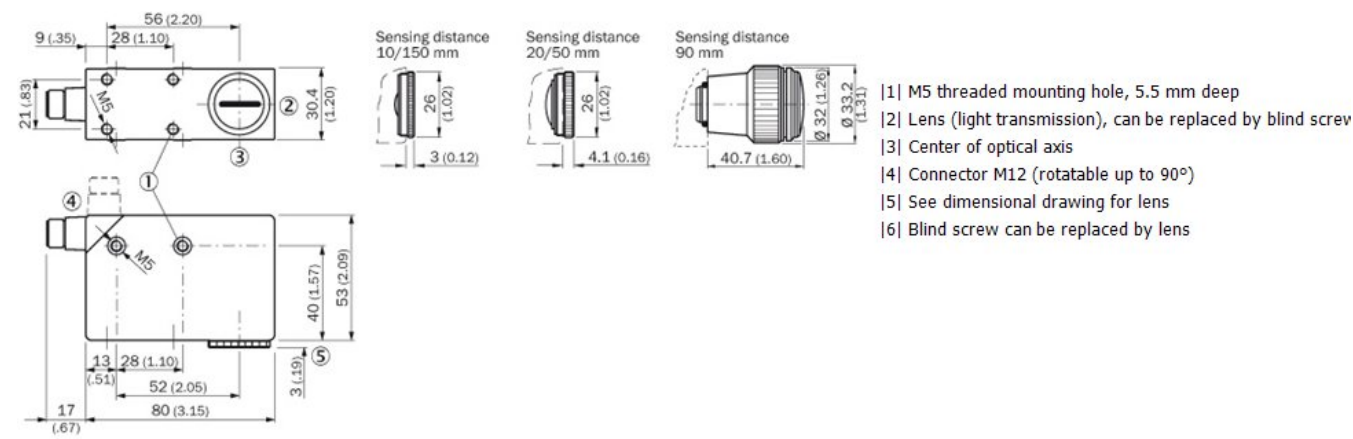
|                                      |                                                                                                            |
|--------------------------------------|------------------------------------------------------------------------------------------------------------|
| Supply voltage $V_s$ <sup>1)</sup> : | DC 10 V ... 30 V                                                                                           |
| Ripple <sup>2)</sup> :               | < 5 Vpp                                                                                                    |
| Power consumption <sup>3)</sup> :    | < 100 mA                                                                                                   |
| Switching frequency <sup>4)</sup> :  | 500 Hz<br>2.5 kHz<br>6.5 kHz, Adjustable                                                                   |
| Response time <sup>5)</sup> :        | 1 ms<br>200 µs<br>75 µs                                                                                    |
| Output type:                         | NPN: HIGH = approx. $V_S$ / LOW $\leq 2\text{ V}$<br>PNP: HIGH = $V_S - \leq 2\text{ V}$ / LOW approx. 0 V |
| Switching mode:                      | PNP/NPN                                                                                                    |
| Analog output QA:                    | 0 mA ... 13 mA                                                                                             |
| Output current $I_{max.}$ :          | 100 mA                                                                                                     |
| Time delay:                          | 0 ms / 10 ms / 20 ms, Adjustable                                                                           |
| Connection type:                     | Connector M12, 5-pin (standard)                                                                            |
| Protection class <sup>6)</sup> :     | II                                                                                                         |
| Circuit protection:                  | Output Q short-circuit protected<br>Interference suppression<br>VS connections reverse-polarity protected  |
| Enclosure rating:                    | IP 67                                                                                                      |
| Weight:                              | Ca. 400 g                                                                                                  |
| Housing material:                    | Zinc diecast                                                                                               |

1) Limit values: operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of  $V_S$  tolerances 3) Without load 4) With light/dark ratio 1:1, no time delay 5) Signal transit time with resistive load 6) Reference voltage DC 50 V

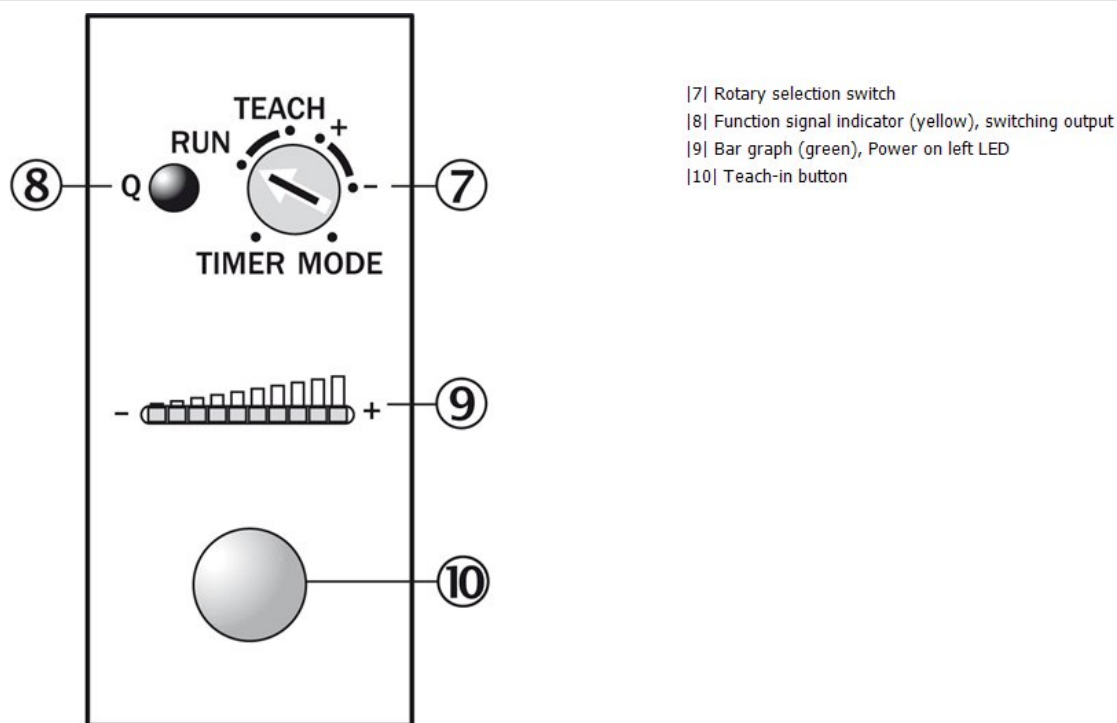
## Ambient data

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Ambient temperature: | Operation: -10 ... 55 °C, Storage: -25 ... 75 °C |
| Shock load:          | According to IEC 60068                           |

Dimensional drawing

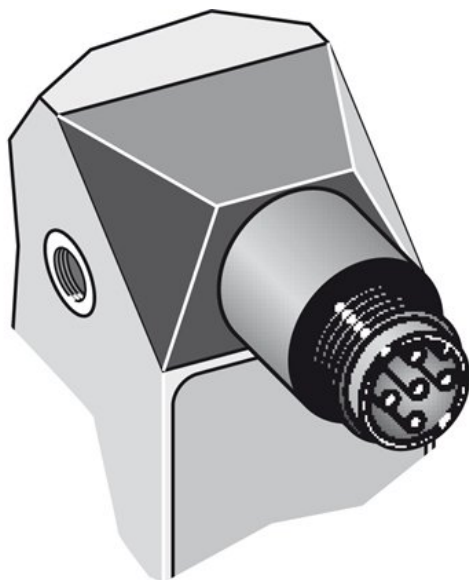


Adjustments



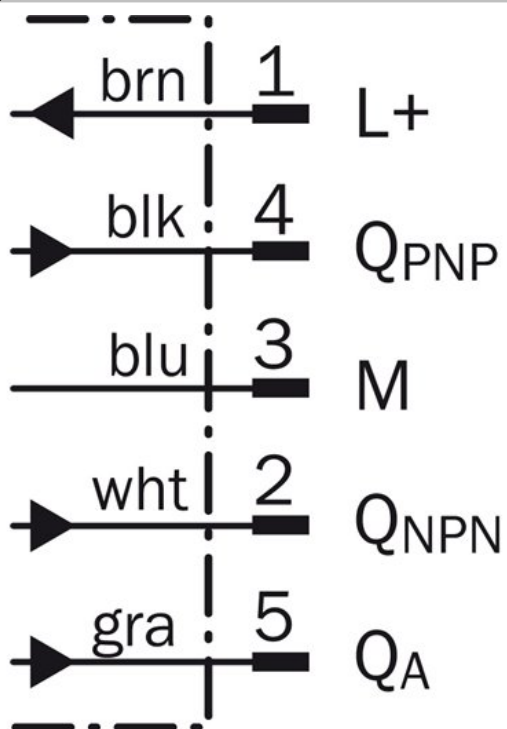
## Connection type

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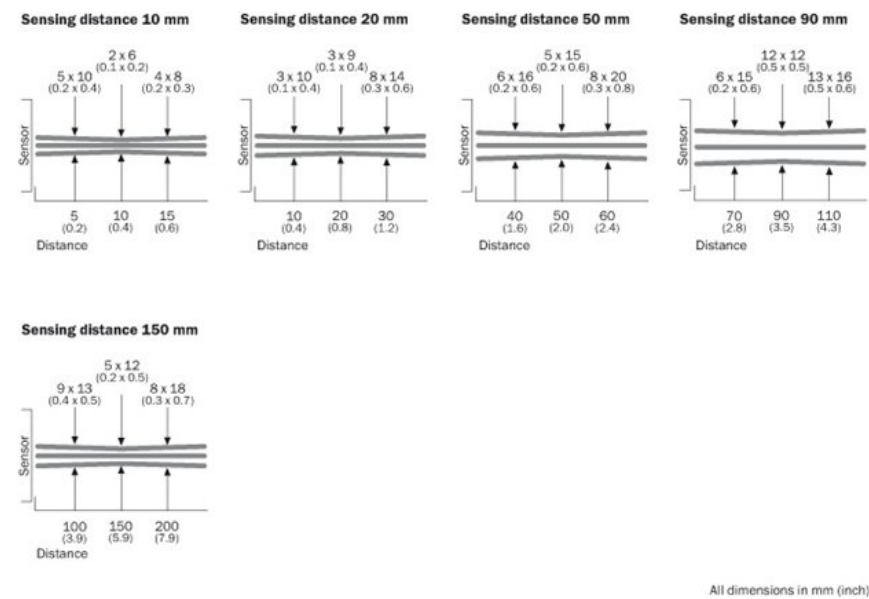


## Connection diagram

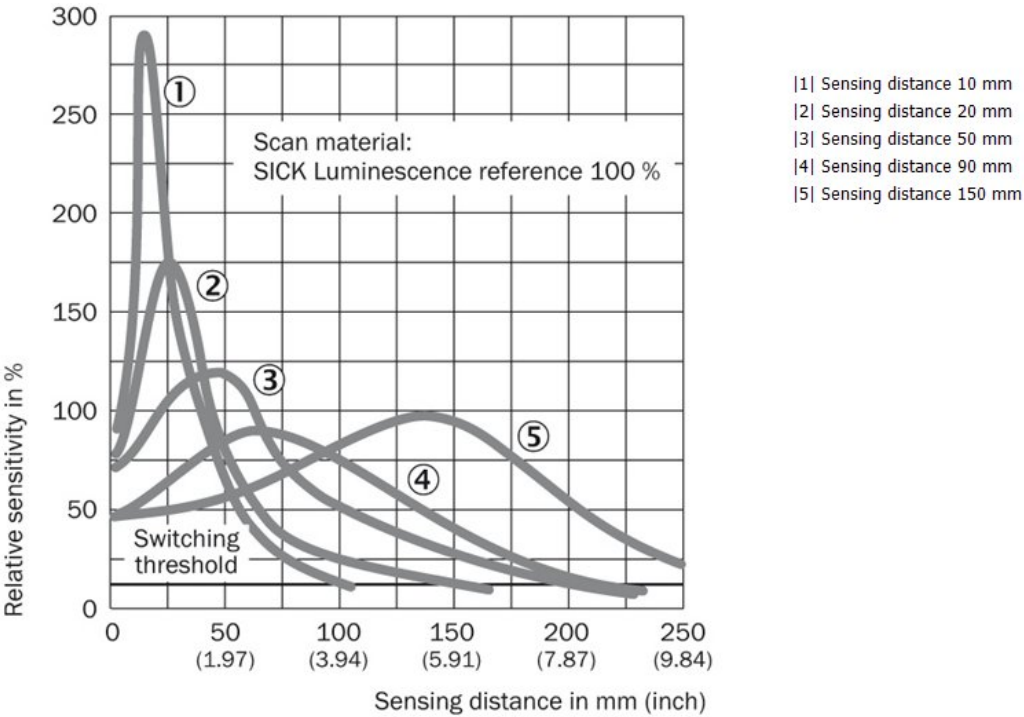
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Light spot size



Sensing distance



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