



## Luminescence sensors LUT8

LUT8U-11321



**Model Name** > **LUT8U-11321**  
**Part No.** > **1047046**



#### At a glance

- Tough metal housing
- Simple sensitivity adjustment in 8 stages
- Bar graph display provides information about the luminescence intensity
- Sensing distances selectable through interchangeable lenses
- Additional optical filters suppress background luminescence
- Fiber-optic cable connection (with 20 mm lens)
- Switching and analog output

#### Your benefits

- An 8-step rotary switch easily adjusts to accurately determine the switching output position for different materials
- 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 provide flexibility



#### 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:                           | RG 610                  |
| Receiving range:                             | 610 nm ... 750 nm       |
| Adjustment:                                  | Manual (rotary switch)  |
| Output function:                             | Light switching         |

<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   <sup>3)</sup> Wave length: 375 nm

#### Mechanics/electronics

|                                   |                  |
|-----------------------------------|------------------|
| Supply voltage Vs <sup>1)</sup> : | DC 12 V ... 30 V |
| Ripple <sup>2)</sup> :            | < 5 Vpp          |
| Power consumption <sup>3)</sup> : | < 100 mA         |

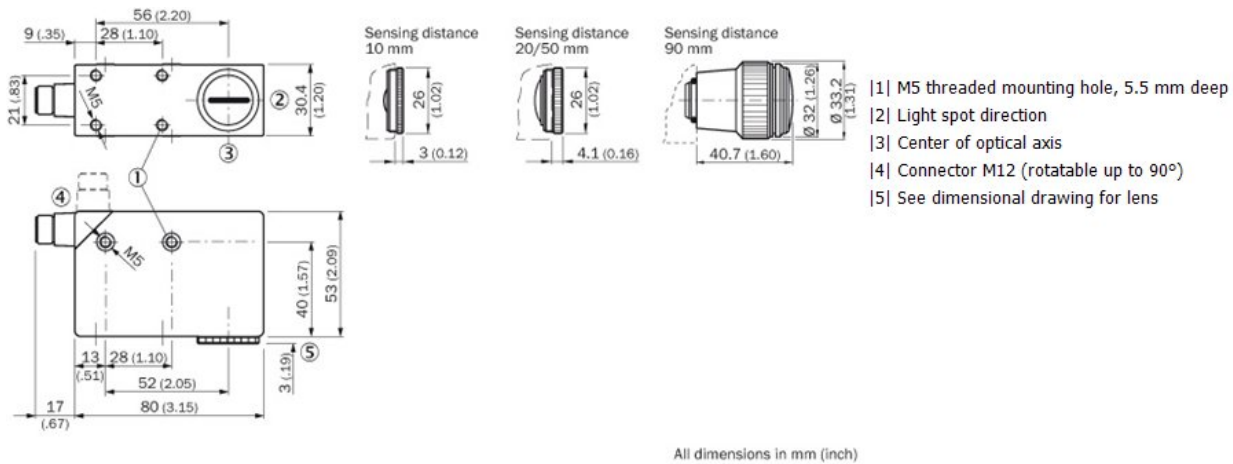
|                                     |                                                                                                           |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Switching frequency <sup>4)</sup> : | 2.5 kHz                                                                                                   |
| Response time <sup>5)</sup> :       | 200 µs                                                                                                    |
| Output type:                        | NPN: HIGH = approx. VS / LOW ≤ 2 V<br>PNP: HIGH = VS- ≤ 3 V / LOW = approx. 0 V                           |
| Switching mode:                     | PNP/NPN                                                                                                   |
| Analog output QA:                   | 0 mA ... 13 mA                                                                                            |
| Output current I <sub>max</sub> :   | 100 mA                                                                                                    |
| Connection type:                    | Connector M12, 5-pin                                                                                      |
| 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                                                                                              |

<sup>1)</sup> Limit values: operation in short-circuit protected network max. 8 A   
<sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances   
<sup>3)</sup> Without load   
<sup>4)</sup> With light/dark ratio 1:1   
<sup>5)</sup> Signal transit time with resistive load   
<sup>6)</sup> Reference voltage DC 50 V

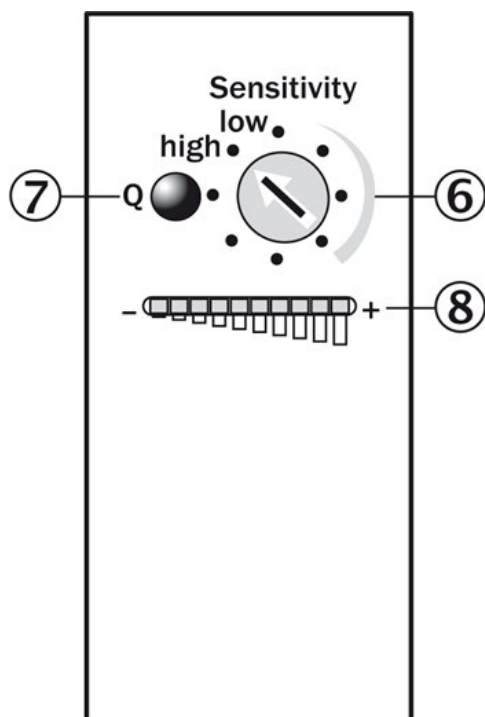
## Ambient data

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

## Dimensional drawing



## Adjustments

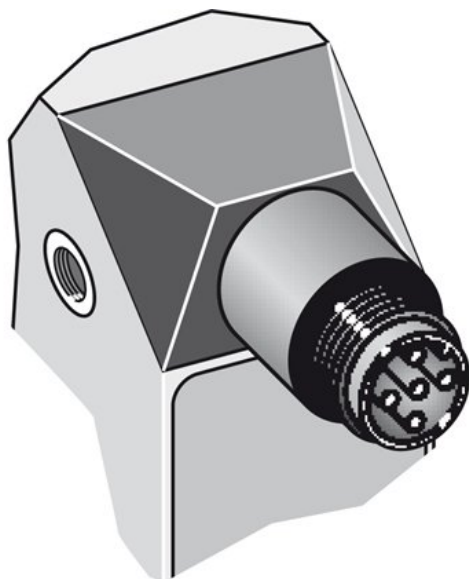


|6| Rotary selection switch

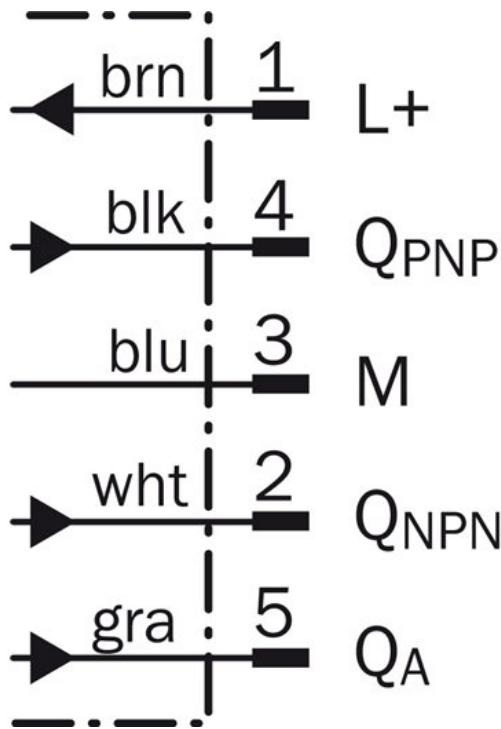
|7| Function signal indicator (yellow), switching output

|8| Bar graph (green), Power on left LED

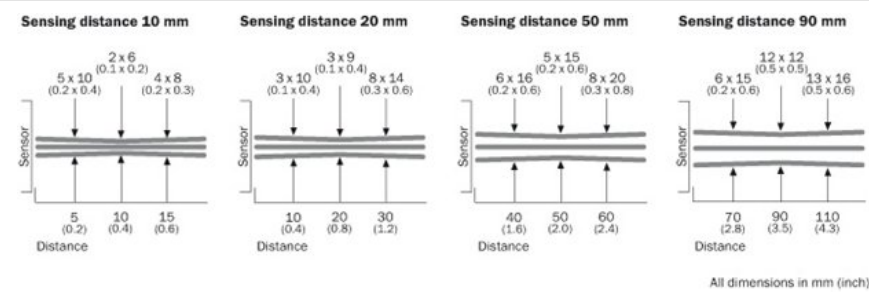
## Connection type



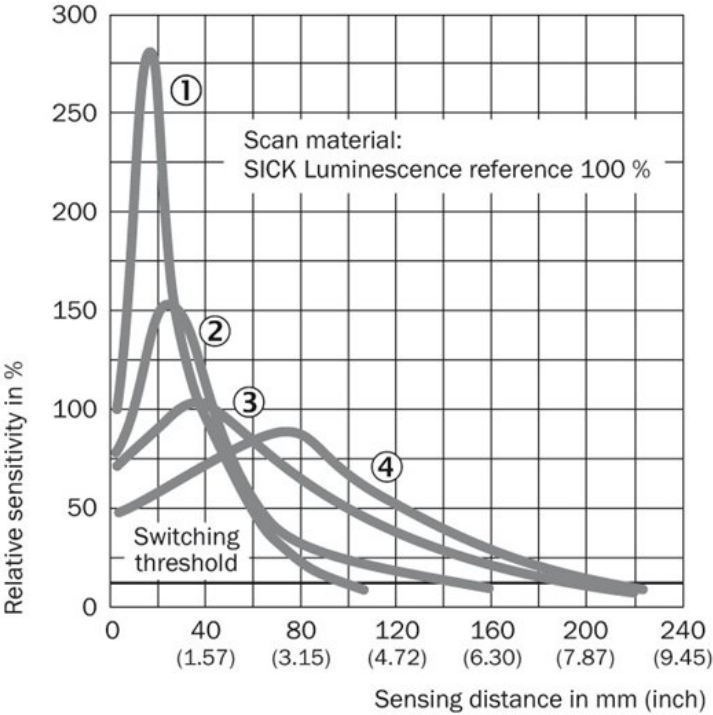
Connection diagram



Light spot size



Sensing distance



- |1| Sensing distance 10 mm
- |2| Sensing distance 20 mm
- |3| Sensing distance 50 mm
- |4| Sensing distance 90 mm

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