



Luminescence sensors LUT8

LUT8U-11331



Model Name > LUT8U-11331
Part No. > 1047047



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

| | |
|----------------------------------|-------------------------|
| Sensing distance ¹⁾ : | 50 mm |
| Operating range: | 20 mm 70 mm |
| Light source ²⁾ : | LED |
| Type of light: | Ultraviolet light |
| Wave length: | 375 nm |
| Light emission: | Long side |
| Light spot size: | 5 mm x 15 mm |
| Light spot direction: | Vertical |
| Receiving filters: | RG 665 |
| Receiving range: | 670 nm ... 750 nm |
| Adjustment: | Manual (rotary switch) |
| Output function: | Light switching |
| Dimensions (W x H x D): | 30.4 mm x 53 mm x 80 mm |
| Housing design (light emission): | Rectangular |

¹⁾ From front edge of lens ²⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

| | |
|-------------------------------------|---|
| Ripple ¹⁾ : | < 5 Vpp |
| Power consumption ²⁾ : | < 100 mA |
| Switching frequency ³⁾ : | 2.5 kHz |
| Response time ⁴⁾ : | 200 µs |
| Output type: | NPN: HIGH = approx. VS / LOW ≤ 2 V PNP: HIGH = VS- ≤ 3 V / LOW = approx. 0 V |
| Switching mode: | PNP/NPN |
| Analog output QA: | 0 mA ... 13 mA |
| Output current I _{max} .: | 100 mA |
| Connection type: | Connector M12, 5-pin |
| Protection class ⁵⁾ : | II |
| Circuit protection: | Output Q short-circuit protected Interference suppression 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 ⁶⁾ |
| Fieldbus interface: | - |

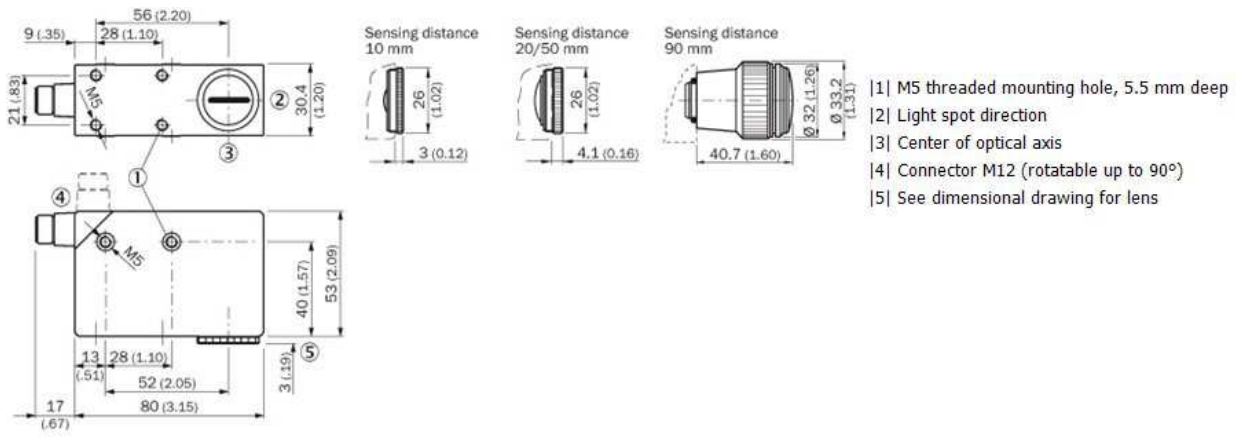
¹⁾ May not exceed or fall short of V_S tolerances ²⁾ Without load ³⁾ With light/dark ratio 1:1 ⁴⁾ Signal transit time with resistive load ⁵⁾ Reference voltage DC 50 V ⁶⁾

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

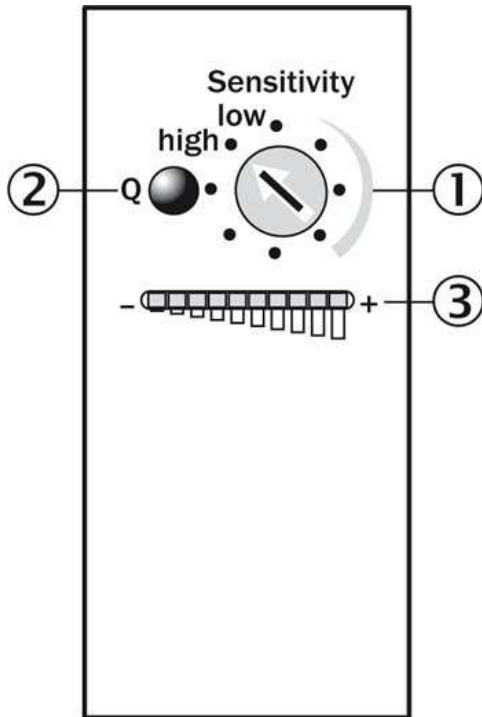
Ambient data

| | |
|--------------------------------|------------------------|
| Shock load: | According to IEC 60068 |
| Ambient operating temperature: | -10 °C ... +55 °C |
| Ambient storage temperature: | -25 °C ... +75 °C |

Dimensional drawing



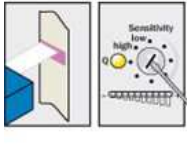
Adjustments



- 1| Rotary selection switch
- 2| Function signal indicator (yellow), switching output
- 3| Bar graph (green), Power on left LED

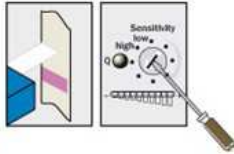
Bedienhinweis

1. Position mark



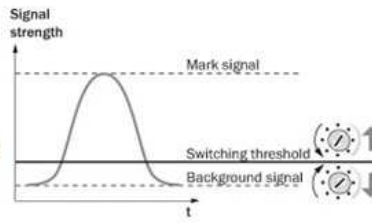
Turn "Sensitivity" rotary switch clockwise until yellow LED illuminates.

2. Position background



If yellow LED illuminates, turn "Sensitivity" rotary switch counter-clockwise until the yellow LED just goes out.

Sensitivity setting

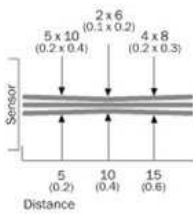


Note

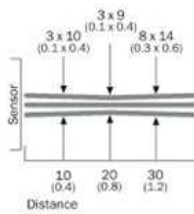
The bar graph display shows the luminescence intensity (regardless of switching threshold setting). Adjustments are intended for luminescence background suppression.

Light spot size

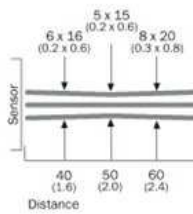
Sensing distance 10 mm



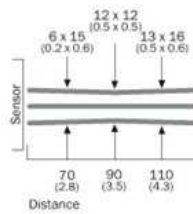
Sensing distance 20 mm



Sensing distance 50 mm

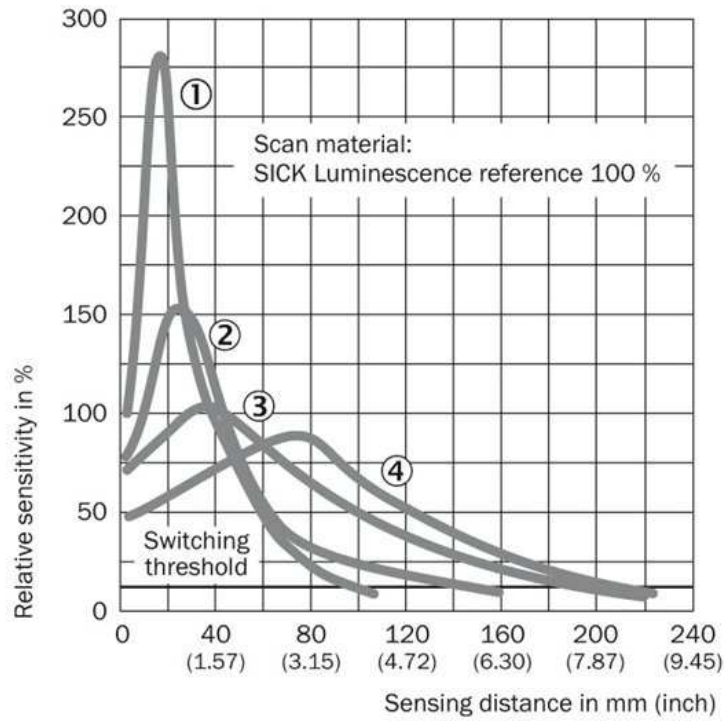


Sensing distance 90 mm



All dimensions in mm (inch)

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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