



## Luminescence sensors LUT8

LUT8U-11301



**Model Name** > LUT8U-11301  
**Part No.** > 1047043



#### 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 <sup>1)</sup> :	50 mm
Operating range:	20 mm 70 mm
Light source <sup>2)</sup> :	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:	KV 418 (standard)
Receiving range:	450 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

<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> :	< 5 Vpp
Power consumption <sup>2)</sup> :	< 100 mA
Switching frequency <sup>3)</sup> :	2.5 kHz
Response time <sup>4)</sup> :	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 <sub>max</sub> :	100 mA
Connection type:	Connector M12, 5-pin
Protection class <sup>5)</sup> :	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 <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>

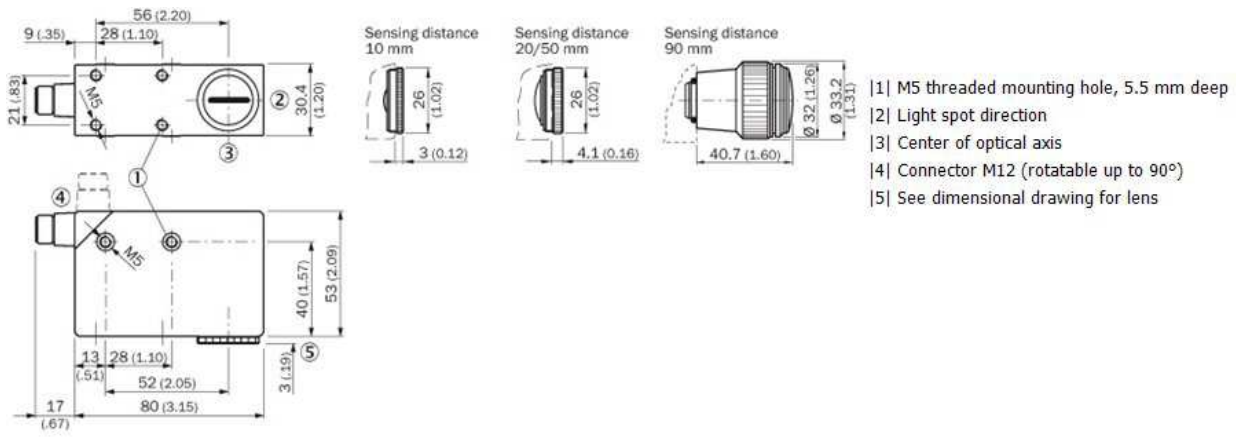
Limit values; operation in short-circuit protected network max. 8 A

#### Ambient data

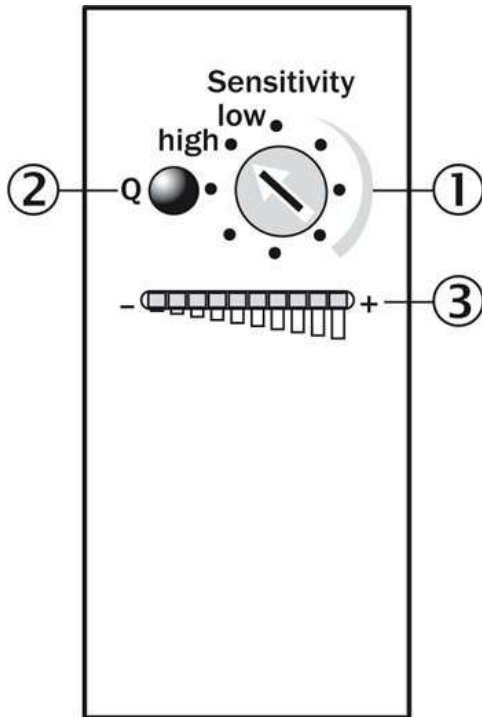
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Shock load:	According to IEC 60068
Ambient operating temperature:	-10 °C ... +55 °C
Ambient storage temperature:	-25 °C ... +75 °C

## Dimensional drawing



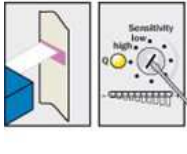
## Adjustments



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

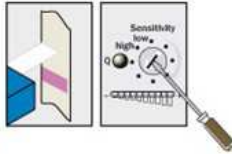
# Bedienhinweis

## 1. Position mark



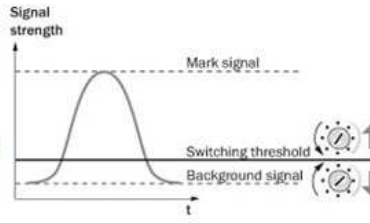
Turn "Sensitivity" rotary switch clockwise until yellow LED illuminates.

## 2. Position background



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

## Sensitivity setting

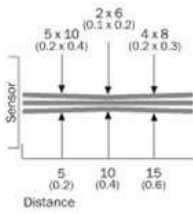


### Note

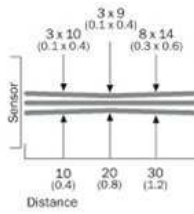
The bar graph display shows the luminescence intensity (regardless of switching threshold setting). Adjustments are intended for luminescence background suppression.

# Light spot size

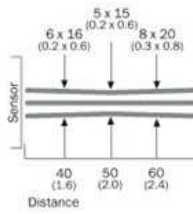
### Sensing distance 10 mm



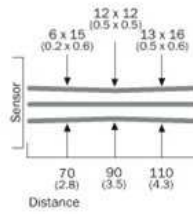
### Sensing distance 20 mm



### Sensing distance 50 mm

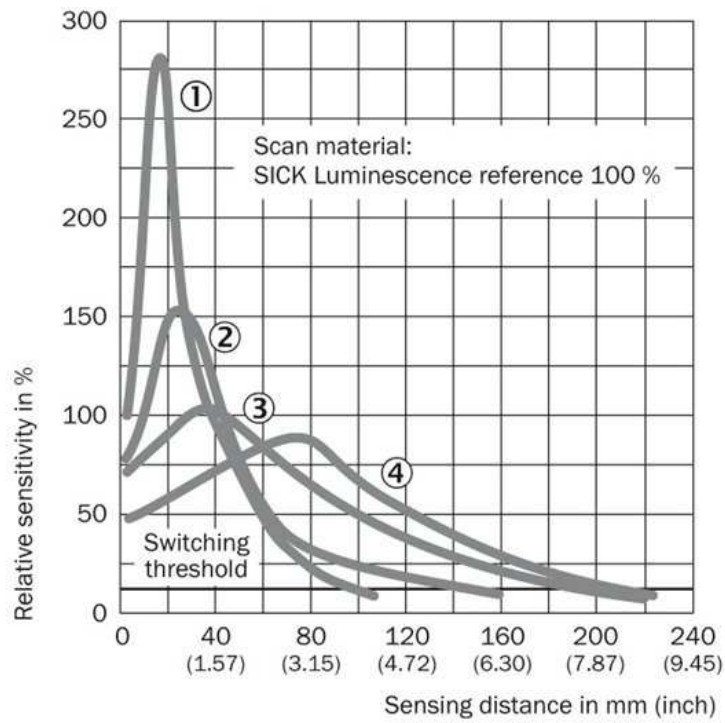


### Sensing distance 90 mm



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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