



LUT3-890

LUT3

LUMINESCENCE SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|----------|----------|
| LUT3-890 | 1014058 |

Other models and accessories → www.sick.com/LUT3

Detailed technical data

Features

| | |
|-------------------------------|-------------------------|
| Dimensions (W x H x D) | 30.4 mm x 53 mm x 80 mm |
| Sensing distance | ≤ 90 mm ¹⁾ |
| Housing design | Large |
| Light source | LED, UV ²⁾ |
| Wave length | 375 nm |
| Light spot size | 12 mm x 12 mm |
| Receiving filters | ≤ 420 nm ³⁾ |
| Receiving range | 450 nm ... 750 nm |
| Adjustment | Potentiometer |
| Output function | Light switching |

¹⁾ From leading edge of lens.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

³⁾ Filter blocks shorter wavelengths to suppress background luminescence.

Mechanics/electronics

| | |
|----------------------------|-----------------------------------|
| Supply voltage | 12 V DC ... 30 V DC ¹⁾ |
| Ripple | < 2 V _{pp} ²⁾ |
| Current consumption | < 60 mA ³⁾ |
| Switching frequency | 1.5 kHz ⁴⁾ |

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_y tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Signal transit time with resistive load.

⁶⁾ Reference voltage DC 50 V.

| | |
|---|---|
| Response time | 350 μ s ⁵⁾ |
| Switching output | PNP, NPN |
| Switching output (voltage) | PNP: HIGH = $V_S - \leq 3$ V / LOW = approx. 0 V NPN: HIGH = approx. U_V / LOW ≤ 2 V |
| Switching mode | Light switching |
| Analog output | 0.5 mA ... 10 mA |
| Output current I_{max}. | 100 mA |
| Connection type | Male connector M12, 5-pin |
| Protection class | II ⁶⁾ |
| Circuit protection | U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression |
| Enclosure rating | IP67 |
| Weight | 400 g |
| Housing material | Zinc diecast |

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not fall below or exceed U_V tolerances.

3) Without load.

4) With light/dark ratio 1:1.

5) Signal transit time with resistive load.

6) Reference voltage DC 50 V.

Ambient data

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

Certificates

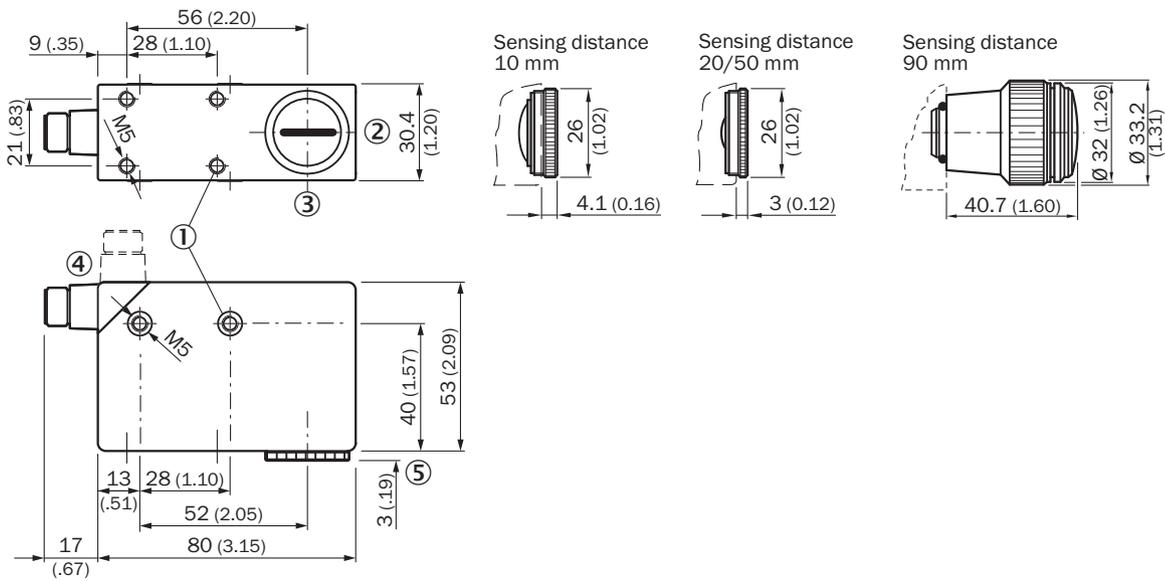
| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| Photobiological safety (IEC EN 62471) | ✓ |

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270908 |
| ECLASS 5.1.4 | 27270908 |
| ECLASS 6.0 | 27270908 |
| ECLASS 6.2 | 27270908 |
| ECLASS 7.0 | 27270908 |
| ECLASS 8.0 | 27270908 |
| ECLASS 8.1 | 27270908 |
| ECLASS 9.0 | 27270908 |

| | |
|-----------------------|----------|
| ECLASS 10.0 | 27270908 |
| ECLASS 11.0 | 27270908 |
| ECLASS 12.0 | 27270908 |
| ETIM 5.0 | EC001822 |
| ETIM 6.0 | EC001822 |
| ETIM 7.0 | EC001822 |
| ETIM 8.0 | EC001822 |
| UNSPSC 16.0901 | 39121528 |

Dimensional drawing

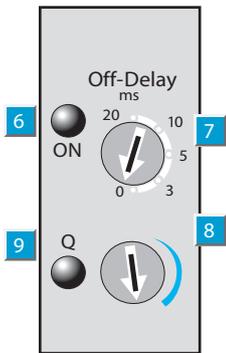


- Dimensions in mm (inch)
- ① M5 threaded mounting hole, 5.5 mm deep
 - ② Light spot direction
 - ③ Center of optical axis
 - ④ Connector M12 (rotatable up to 90°)
 - ⑤ see dimensional drawings of lenses

Pinouts

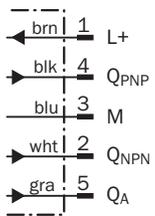


Adjustments

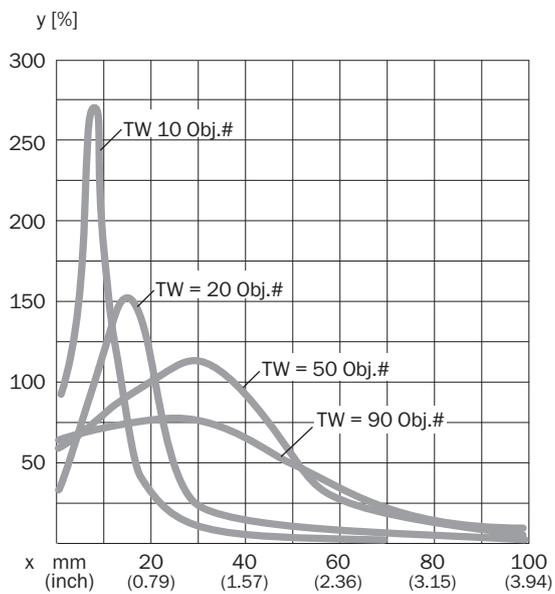


- ⑥ Operating indicator
- ⑦ time delay selector switch
- ⑧ sensitivity control
- ⑨ Output indicator

Connection diagram



Sensing distance



Recommended accessories

Other models and accessories → www.sick.com/LUT3

| | Brief description | Type | part no. |
|---|---|-------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> Description: Plate G for universal clamp bracket Material: Steel Details: Steel, zinc coated Items supplied: Universal clamp (2022726), mounting hardware Usable for: W34, LUT3, KT5-2, KT10, CS8, W24-2, KT8, KT8 | BEF-KHS-G01 | 2022464 |
|  | <ul style="list-style-type: none"> Description: Plate K for universal clamp bracket Material: Steel Details: Steel, zinc coated Items supplied: Universal clamp (2022726), mounting hardware Usable for: W11-2, W12-3, W14-2, W18-3, W23-2, W24-2, W27-3, W30, W32, W34, W36, PL50A, PL80A, P250, UC12, LUT3, KT2, KT5-2, KT8, CS8, DT2, DS30, DS40, W12-2 Laser, W16, W26, KT5 | BEF-KHS-K01 | 2022718 |
| reflectors and optics | | | |
|  | <ul style="list-style-type: none"> Description: Writing chalk, red fluorescence | LUM-KLK | 1002959 |
|  | <ul style="list-style-type: none"> Description: Thick chalk, red fluorescent, 12 units | LUM-FT | 1004460 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com