



Luminescence sensors LUT1

LUT1B-12205



Model Name > LUT1B-12205
Part No. > 1027497



At a glance

- Infinite switching threshold adjustment using touch-sensitive keypad
- Long sensing distances up to 150 mm
- Transmitter LED UV (375 nm) or blue (470 nm)
- Fast switching speed 600 Hz or 6 kHz

Your benefits

- Robust metal housing is reliable and ideal for tough environment conditions
- High detection reliability ensures the process: Blue transmitter LED excites red luminophores especially well. The UV LED is well-suited for blue, green or yellow marks.
- Visible light spot of the LUT1B version makes accurate alignment easy



Features

| | |
|----------------------------------|-------------------------|
| Dimensions (L x W x H): | 47.5 mm x 23 mm x 70 mm |
| Sensing distance ¹⁾ : | 80 mm |
| Operating range: | 60 mm 100 mm |
| Light source ^{2), 3)} : | Blue LED |
| Light emission: | Long side |
| Light spot size: | 20 mm x 50 mm |
| Receiving filters: | OG 590 |
| Receiving range: | 590 nm ... 750 nm |
| Adjustment: | Manual ("+"/"-" button) |
| Output function: | Light switching |

¹⁾ From front edge of lens ²⁾ Average service life of 100,000 h at T_A = +25 °C ³⁾ Wave length: 470 nm

Mechanics/electronics

| | |
|---|--|
| Supply voltage V _s ¹⁾ : | DC 10 V ... 30 V |
| Ripple ²⁾ : | < 5 Vpp |
| Power consumption ³⁾ : | < 40 mA |
| Switching frequency ⁴⁾ : | 600 Hz |
| Response time ⁵⁾ : | 850 µs |
| Output type: | PNP: HIGH = V _S - ≤ 2 V / LOW approx. 0 V |
| Switching mode: | PNP |
| Analog output QA: | 0.5 mA ... 10 mA ⁶⁾ |
| Output current I _{max.} : | 200 mA |

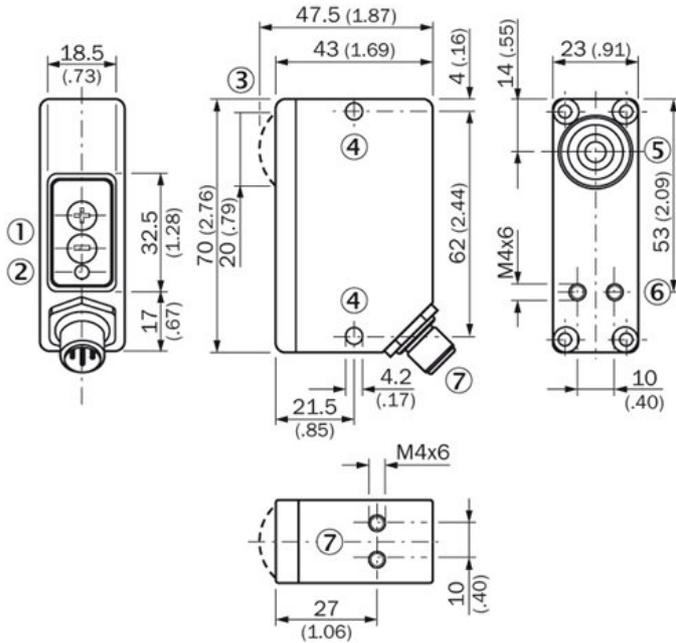
| | |
|----------------------------------|---|
| Connection type: | Connector M12, 5-pin |
| Protection class ⁷⁾ : | III |
| Circuit protection: | Output Q short-circuit protected Interference suppression VS connections reverse-polarity protected |
| Enclosure rating: | IP 67 |
| Weight: | Ca. 240 g |
| 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⁾ Only LUT1B-12205 ⁷⁾ Reference voltage DC 50 V

Ambient data

| | |
|----------------------|--|
| Ambient temperature: | Operation: -20 ... 60 °C Storage: -40 ... 70 °C |
| Shock load: | According to IEC 60068 |

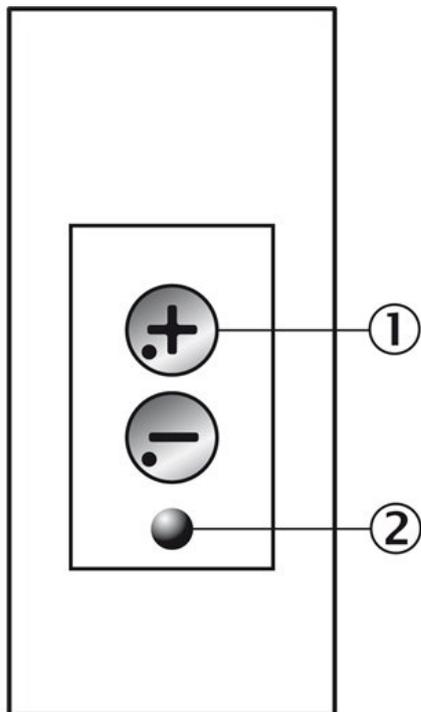
Dimensional drawing



- [1] Control elements
- [2] LED signal strength indicator
- [3] Lens planar to surface for LUT1B-12205
- [4] Mounting hole
- [5] Optical axis
- [6] Threaded mounting hole
- [7] Connector M12

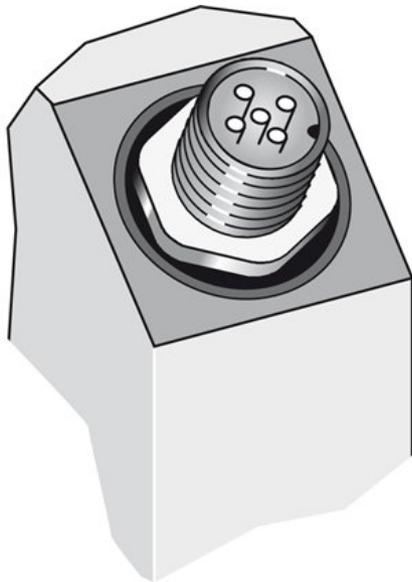
All dimensions in mm (inch)

Adjustments

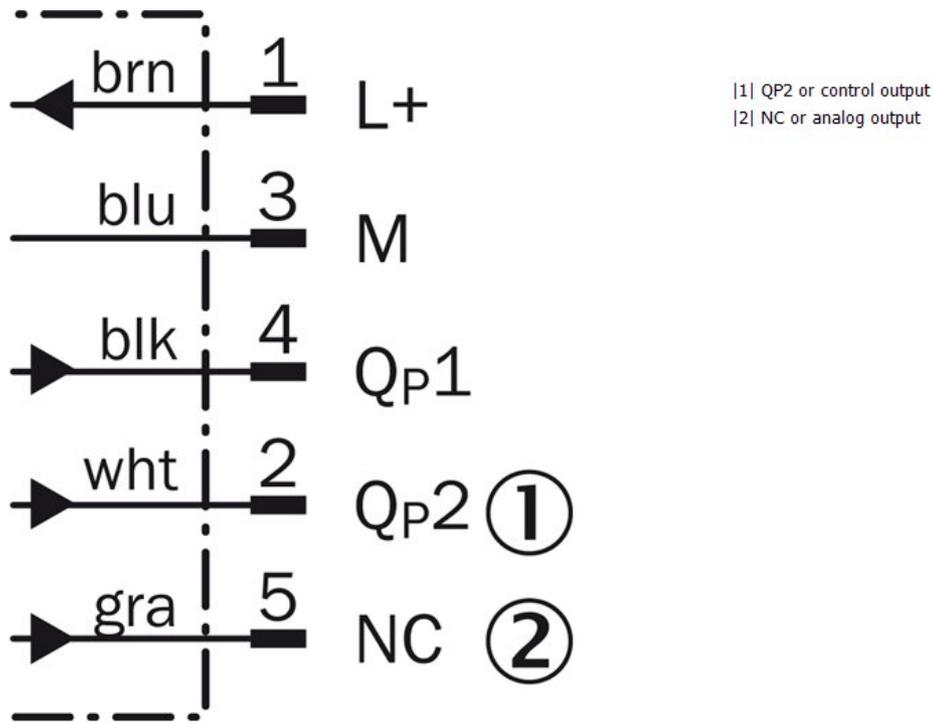


- |1| Control elements
- |2| LED signal strength indicator

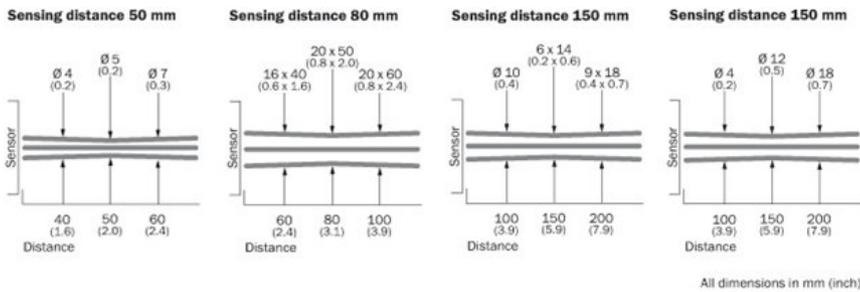
Connection type



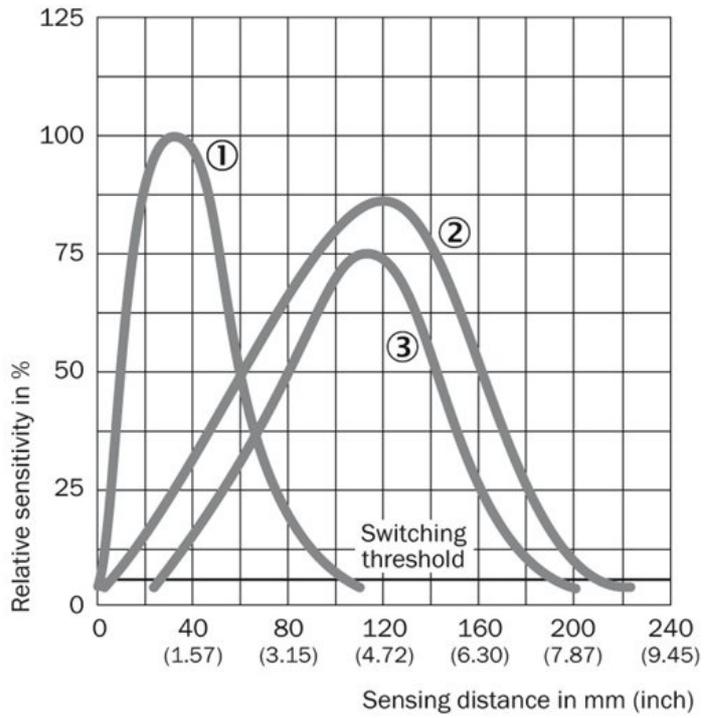
Connection diagram



Light spot size



Sensing distance



- [1] LUT1B sensing distance 50 mm; scan material: acryl orange
- [2] LUT1B sensing distance 150 mm; scan material: acryl orange
- [3] LUT1U sensing distance 150 mm; scan material: SICK Luminescence reference 100 %

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