

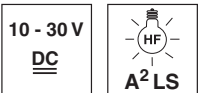
LRT 8

Luminescence scanner

en 02-2012/08 50118345

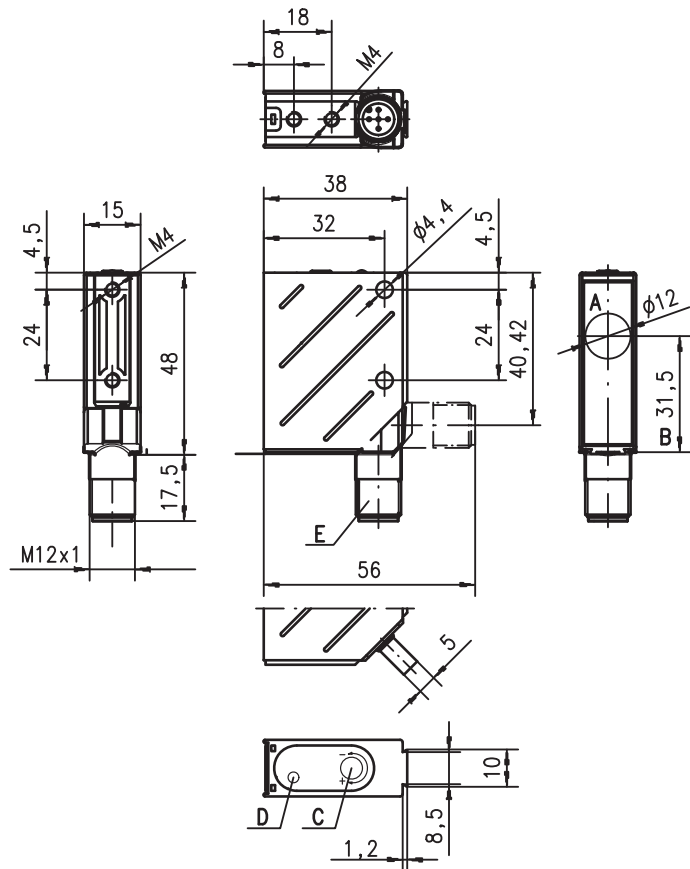


0 ... 500 mm



- Detection of luminescent objects and markings
- Various filterings
- Various light-spot sizes
- High switching frequency

Dimensioned drawing



- A** Transmitter and receiver
- B** Optical axis
- C** Operational control
- D** Indicator diodes
- E** 90° turning connector

Electrical connection



Accessories:

(available separately)

- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Mounting systems
- Control guard
- Diaphragms

We reserve the right to make changes • DS_LRT8_en_50118345.fm

Specifications

Optical data

| | |
|---|--|
| Typ. scanning range limit ¹⁾ | see tables |
| Typ. scanning range ²⁾ | see tables |
| Light spot diameter | see diagram |
| Light source | LED |
| Wavelength | 370nm (UV light) or 470nm (blue light) |
| Average life ³⁾ | 50,000h |

Timing

| | |
|-----------------------|---------|
| Switching frequency | 1500Hz |
| Response time | 0.33ms |
| Delay before start-up | ≤ 100ms |

Electrical data

| | |
|-------------------------|--|
| Operating voltage U_B | 10 ... 30VDC |
| Residual ripple | ≤ 15% of U_B |
| Open-circuit current | ≤ 35mA (10mA) |
| Switching output | PNP and NPN transistor output |
| Function | light switching (dark switching at + U_B on PIN 5) |
| Signal voltage high/low | ≥ ($U_B - 2V$) ≤ 2V |
| Output current | max. 100mA |
| Sensitivity | adjustable with 12-turn potentiometer |

Indicators

| | |
|------------|-----------------|
| LED yellow | object detected |
|------------|-----------------|

Mechanical data

| | |
|--------------------------|----------------------|
| Housing | metal |
| Optics cover | glass |
| Weight (connector/cable) | 70g/140g |
| Connection type | M12 connector, 5-pin |

Environmental data

| | |
|-----------------------------------|--|
| Ambient temp. (operation/storage) | -20°C ... +60°C/-40°C ... +70°C |
| Protective circuit ⁴⁾ | 2, 3 |
| VDE safety class ⁵⁾ | II, all-insulated |
| Protection class ⁶⁾ | IP 67, IP 69K ⁷⁾ |
| Eye safety | 370nm: in acc. with EN 62471: exempt group 470nm: in acc. with EN 62471: risk group 1 |
| Standards applied | IEC 60947-5-2 |

Options

L/D input

| | |
|----------------------|---------------------------|
| Dark/light switching | $U_B/0V$ or not connected |
| L/D delay | < 0.5ms |

- 1) Typ. scanning range limit: max. scanning range attainable on objects with maximum size and luminescence effect
- 2) Typ. operational scanning range: max. scanning range attainable on typical objects (see table)
- 3) At +25°C
- 4) 2=polarity reversal protection, 3=short circuit protection for all outputs
- 5) Rating voltage 250VAC
- 6) In stop position of the turning connector (turning connector locked)
- 7) IP 69K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives, acids and bases are not part of the test

Order guide

| Selection table | | | Order code → | | | | |
|-------------------------|---------------------------------------|---------------|--|---|---|--|--|
| Equipment ↓ | | | LRT 8/24.10-150-S12 Part no. 50119033 | LRT 8/24.16-80-S12 Part no. 50116732 | LRT 8/24.04-50-S12 Part no. 50041840 | LRT 8/24.04-100-S12 Part no. 50109343 | LRT 8/24.14-150-S12 Part no. 50119032 |
| Filtering for detecting | blue | 400 ... 750nm | | | | | |
| | red | 590 ... 750nm | ● | ● | | | |
| | yellow | 550 ... 750nm | | ● | | | |
| | green | 520 ... 750nm | | | | | |
| Transmitter | UV | 370nm | | ● | ● | ● | ● |
| | blue | 470nm | ● | | | | |
| Hysteresis | Standard | | ● | ● | | | ● |
| | Large | | | | ● | ● | |
| Target application | Detection of all visible luminescence | | | | ● | ● | ● |
| | Detection of white paper | | | | ● | ● | ● |
| | Detection of yellow print marks | | | ● | | | |
| | Detection of green print marks | | | | | | |
| | Detection of red marks on wood | | | ● | | | |
| Light spot | Large | | | | ● | ● | |
| | Small | | ● | ● | | | ● |

Tables

Scanning range limit

| Sensor | Typ. scanning range limit |
|---------------------|---------------------------|
| LRT 8/24.00-50-... | 0 ... 100mm |
| LRT 8/24.04-50-... | 0 ... 100mm |
| LRT 8/24.16-80-... | 0 ... 120mm |
| LRT 8/24.04-100-... | 0 ... 300mm |
| LRT 8/24.14-150-... | 0 ... 500mm |
| LRT 8/24.10-150-... | 0 ... 500mm |

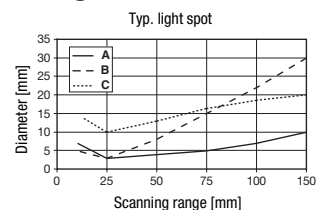
Scanning range

| Sensor | Object (white paper) | typ. scanning range |
|-------------|----------------------|---------------------|
| LRT8/24... | 10mm x 10mm | 0 ... 70mm |
| | 20mm x 20mm | 0 ... 100mm |
| | 50mm x 50mm | 0 ... 150mm |
| .04-50-... | 10mm x 10mm | 0 ... 100mm |
| | 20mm x 20mm | 0 ... 150mm |
| | 50mm x 50mm | 0 ... 220mm |
| .04-100-... | 10mm x 10mm | 0 ... 200mm |
| | 20mm x 20mm | 0 ... 300mm |
| | 50mm x 50mm | 0 ... 400mm |

| Sensor | Lyra chalk RED, bar (5mm x 30mm) on | typ. scanning range |
|-------------|-------------------------------------|---------------------|
| LRT8/24... | Wood, light, wet | 0 ... 80mm |
| | OSB | 0 ... 60mm |
| | Paper, black | 0 ... 40mm |
| | Paper, white | 0 ... 60mm |
| .00-50-... | Piece of chalk | 0 ... 130mm |
| | Wood, light, wet | 0 ... 350mm |
| | OSB | 0 ... 300mm |
| | Paper, black | 0 ... 150mm |
| .10-150-... | Paper, white | 0 ... 300mm |
| | Piece of chalk | 0 ... 500mm |

| Sensor | Yellow mark (10mm x 30mm) on | typ. scanning range |
|------------|------------------------------|---------------------|
| LRT8/24... | Paper, light | 0 ... 100mm |
| .16-80-... | Paper, dark | 0 ... 40mm |

Diagrams



- A LRT 8/24.12...-S12, LRT 8/24.16...-S12
- B LRT 8/24.0...-S12
- C LRT 8/24.10...-S12

Remarks

- **Approved purpose:**
This product may only be used by qualified personnel and must only be used for the approved purpose. This sensor is not a safety sensor and is not to be used for the protection of persons.