



**Part no.: 50122711**  
**LE328/2N-M12**  
**Throughbeam photoelectric sensor**  
**receiver**



Figure can vary

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Part no.: 50122711 – LE328/2N-M12 – Throughbeam photoelectric sensor

## Technical data

| <b>Basic data</b>                   |   |
|-------------------------------------|---|
| Series                              | 328   |
| Operating principle                 | Throughbeam principle                                   |
| Device type                         | Receiver  |
| <b>Optical data</b>                 |   |
| Operating range                     | Guaranteed operating range                              |
| Operating range                     | 0 ... 10 m  |
| Operating range limit               | Typical operating range                                 |
| Operating range limit               | 0 ... 15 m  |
| <b>Electrical data</b>              |   |
| Protective circuit                  | Polarity reversal protection<br>Short circuit protected |
| <b>Performance data</b>             |   |
| Supply voltage $U_B$                | 10 ... 30 V , DC , Incl. residual ripple                |
| Residual ripple                     | 0 ... 15 % , From $U_B$                                 |
| Open-circuit current                | 0 ... 15 mA   |
| <b>Outputs</b>                      |   |
| Number of digital switching outputs | 2 Piece(s)  |
| <b>Switching outputs</b>            |   |
| Voltage type                        | DC  |
| Switching current, max.             | 100 mA  |
| Switching voltage                   | High: $\geq(U_B-2V)$<br>Low: $\leq 2V$                  |
| <b>Switching output 1</b>           |   |
| Assignment                          | Connection 1, pin 4                                     |
| Switching element                   | Transistor , NPN  |
| Switching principle                 | Light switching   |
| <b>Switching output 2</b>           |   |
| Assignment                          | Connection 1, pin 2                                     |
| Switching element                   | Transistor , NPN  |
| Switching principle                 | Dark switching  |
| <b>Timing</b>                       |   |
| Switching frequency                 | 500 Hz  |
| Response time                       | 1 ms  |
| Readiness delay                     | 300 ms  |
| <b>Connection</b>                   |   |
| <b>Connection 1</b>                 |   |
| Type of connection                  | Connector   |
| Function                            | Signal OUT<br>Voltage supply                            |
| Thread size                         | M12   |
| Type                                | Male  |
| Material                            | Plastic   |
| No. of pins                         | 4 -pin  |
| Encoding                            | A-coded   |

**Part no.: 50122711 – LE328/2N-M12 – Throughbeam photoelectric sensor****Mechanical data**

|                     |  |
|---------------------|--|
| Thread size         | M18 x 1 mm                             |
| Dimension (Ø x L)   | 18 mm x 46 mm                          |
| Housing material    | Plastic<br>Stainless steel , V2A , ABS |
| Lens cover material | Plastic                                |
| Net weight          | 20 g                                   |
| Housing color       | Black<br>Silver                        |

**Operation and display**

|                 |            |
|-----------------|------------|
| Type of display | LED        |
| Number of LEDs  | 1 Piece(s) |

**Environmental data**

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -40 ... 60 °C |
| Ambient temperature, storage   | -40 ... 70 °C |

**Certifications**

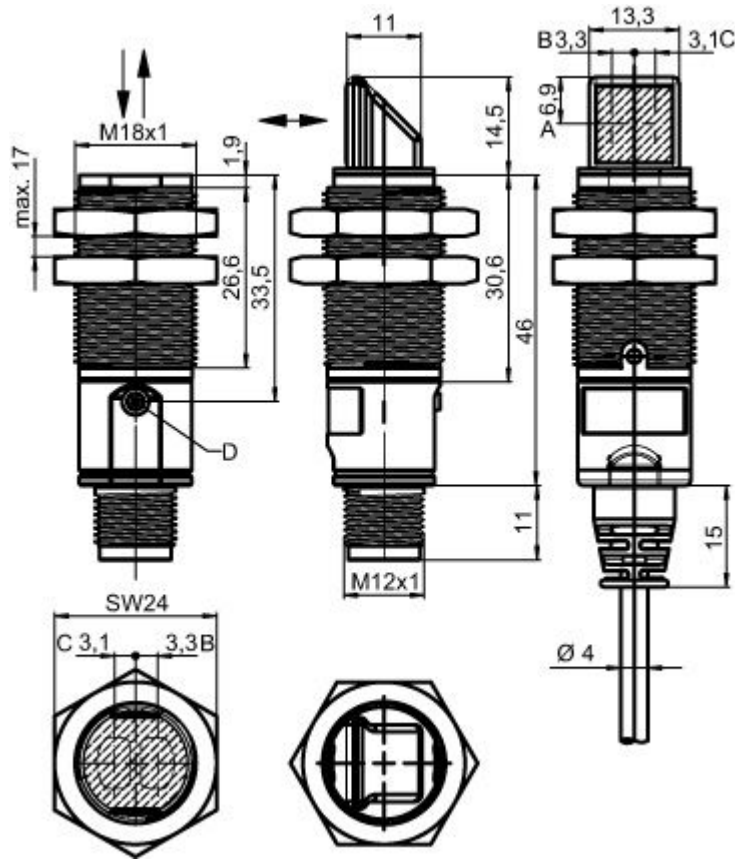
|                      |               |
|----------------------|---------------|
| Degree of protection | IP 67         |
| Protection class     | III           |
| Certifications       | c UL US       |
| Standards applied    | IEC 60947-5-2 |

**Classification**

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| eCl@ss 8.0            | 27270901 |
| eCl@ss 9.0            | 27270901 |
| ETIM 5.0              | EC002716 |
| ETIM 6.0              | EC002716 |

## Dimensioned drawings

All dimensions in millimeters

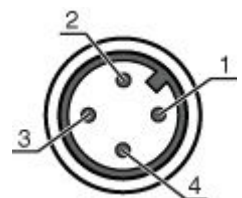


- A Vertical position of the optical axis  
 B Optical axis (transmitter)  
 C Optical axis (receiver)  
 D Indicator diode

## Electrical connection

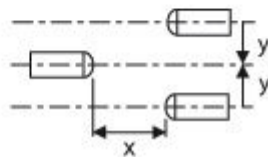
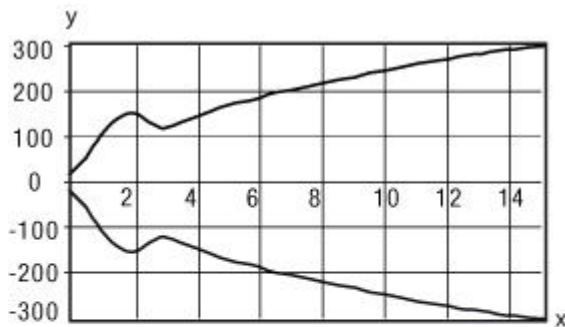
| Connection 1       |                              |
|--------------------|------------------------------|
| Type of connection | Connector                    |
| Function           | Signal OUT<br>Voltage supply |
| Thread size        | M12                          |
| Type               | Male                         |
| Material           | Plastic                      |
| No. of pins        | 4 -pin                       |
| Encoding           | A-coded                      |

| Pin | Pin assignment |
|-----|----------------|
| 1   | V+             |
| 2   | OUT 2          |
| 3   | GND            |
| 4   | OUT 1          |



## Diagrams

Typ. response behavior




x Distance [m]  
y Misalignment [mm]

## Operation and display

LEDs

| LED | Display                  | Meaning               |
|-----|--------------------------|-----------------------|
| 1   | Green, continuous light  | Operational readiness |
|     | Yellow, continuous light | Light path free       |
|     | Yellow, flashing         | No function reserve   |

## Suitable transmitters

|   | Part no. | Designation  | Article                                      | Description   |
|---|----------|--------------|--|---|
|  | 50122702 | LS328/9D-M12 | Throughbeam photoelectric sensor transmitter | Special design: Deactivation input<br>Operating range limit: 0 ... 15 m<br>Light source: LED, Red<br>Supply voltage: DC<br>Deactivation inputs: 2 Piece(s)<br>Connection: Connector, M12, Plastic, 4 -pin |

## Part number code

Part designation: XXX328BY-AAAF.BB/CC-DDD

## Part no.: 50122711 – LE328/2N-M12 – Throughbeam photoelectric sensor

|        |   |
|--------|---|
| XXX328 | <b>Operating principle:</b><br>PRK: retro-reflective photoelectric sensor with polarization filter<br>ET: energetic diffuse reflection sensor<br>FT: diffuse reflection sensor with fading<br>LE: throughbeam photoelectric sensor receiver<br>LS: throughbeam photoelectric sensor transmitter   |
| Y      | <b>Light type:</b><br>n/a: red light<br>I: infrared light   |
| AAAF   | <b>Pre-set range (optional):</b><br>n/a: operating range acc. to data sheet<br>XXXX: pre-set range [mm]   |
| BB     | <b>Equipment:</b><br>n/a: axial optics<br>W: 90° angular optics<br>3: teach-in via button   |
| CC     | <b>Switching output / function (OUT1 = pin 4, OUT2 = pin 2)::</b><br>4: PNP transistor output, light switching<br>P: PNP transistor output, dark switching<br>2: NPN transistor output, light switching<br>N: NPN transistor output, dark switching<br>9: input for transmitter deactivation (deactivation with HIGH signal)<br>D: input for transmitter deactivation (deactivation with LOW signal)<br>X: pin not used |
| DDD    | <b>Electrical connection:</b><br>n/a: cable, standard length 2000 mm, 4-wire<br>M12: M12 connector, 4-pin (plug)  |

### Note

A list with all available device types can be found on the Leuze electronic website at [www.leuze.com](http://www.leuze.com).

## Notes

### Observe intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

### For UL applications:



- For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

- Sum of the output currents for both outputs, 50 mA for ambient temperatures > 40 °C


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## Accessories


### Connection technology - Connection cables

|   | Part no. | Designation        | Article          | Description  |
|---|----------|--------------------|------------------|--|
|  | 50130652 | KD U-M12-4A-V1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC  |
|  | 50130690 | KD U-M12-4W-V1-050 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC |


### Mounting technology - Mounting brackets

|  | Part no. | Designation | Article          | Description  |
|--|----------|-------------|------------------|--|
|  | 50113548 | BT D18M.5   | Mounting bracket | Diameter, inner: 18 mm<br>Design of mounting device: Angle, L-shape<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Rigid<br>Material: Stainless steel |

### Mounting technology - Rod mounts

|   | Part no. | Designation  | Article         | Description  |
|---|----------|--------------|-----------------|--|
|  | 50117490 | BTU D18M-D12 | Mounting system | Design of mounting device: Mounting system<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal |

### Mounting technology - Other

|   | Part no. | Designation | Article   | Description   |
|---|----------|-------------|-----------|---|
|  | 50121904 | BT318B-OM   | Fastening | Design of mounting device: Mounting clamp<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Swiveling, Adjustable, Turning<br>Material: Plastic |