

L318B.Y1

Throughbeam photoelectric sensors

en 02-2015/09 50127463

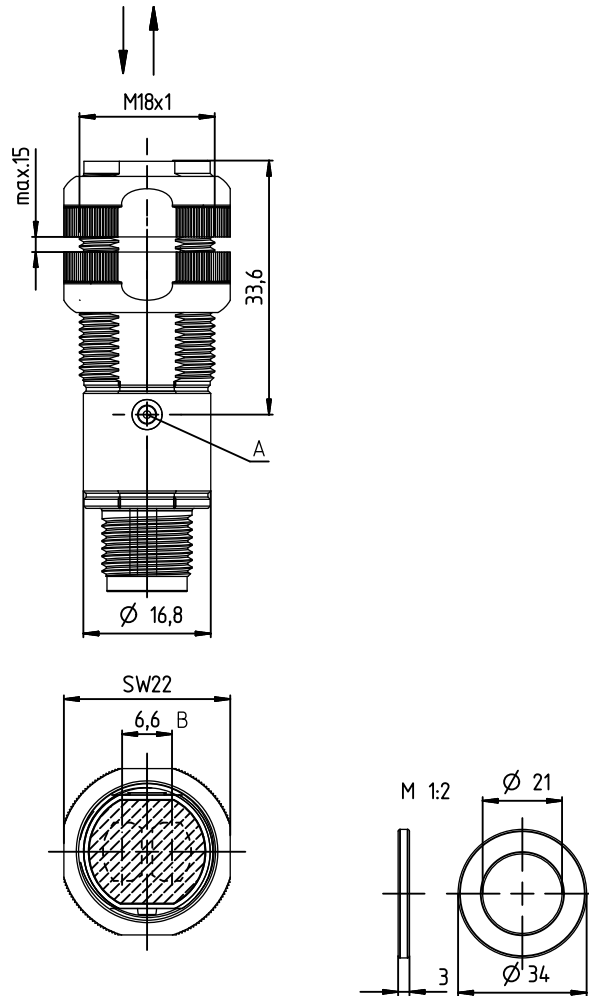


0 ... 14.2m



- Throughbeam photoelectric sensor with clearly visible red light and high function reserve
- Fast alignment through *brightVision*[®]
- Simple fine adjustment via *omni-mount*
- Embedded mounting option
- Robust plastic housing acc. to IP 67 for industrial application
- Deactivation output for testing and inter-linking of the sensor
- Complementary outputs for light/dark switching

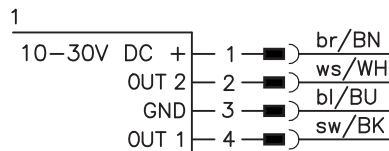
Dimensioned drawing



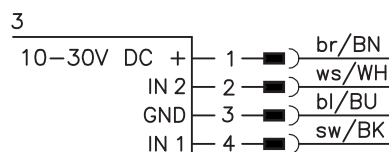
- A Indicator diode
- B Optical axis

Electrical connection

Receiver



Transmitter



Accessories:

(available separately)

- Mounting systems (BT 318, BT 318-ARH)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)

We reserve the right to make changes • DS_L318B.Y1_en_50127463.fm



Specifications

Optical data

| | |
|--|---------------------------|
| Typ. operating range limit ¹⁾ | 0 ... 14.2m |
| Operating range ²⁾ | 0 ... 9.5m |
| Light source | LED (modulated light) |
| Wavelength | 620nm (visible red light) |

Timing

| | |
|-----------------------|---------|
| Switching frequency | 500Hz |
| Response time | 1 ms |
| Delay before start-up | ≤ 300ms |

Electrical data

| | |
|---------------------------------------|--|
| Operating voltage U_B ³⁾ | 10 ... 30VDC |
| Residual ripple | ≤ 15% of U_B |
| Open-circuit current | ≤ 15mA |
| Switching output | 2 PNP transistor outputs pin 2: PNP dark switching, pin 4: PNP light switching |
| Switching input | 2 deactivation inputs pin 2: transmitter active when not connected or with HIGH signal pin 4: transmitter active when not connected or with LOW signal |
| Signal voltage high/low | ≥ ($U_B - 2V$) ≤ 2V |
| Output current | max. 100mA ⁴⁾ |

Indicators

| | |
|----------------------|--------------------------------------|
| Green LED | ready |
| Yellow LED | light path free |
| Yellow LED, flashing | light path free, no function reserve |

Mechanical data

| | |
|-----------------|----------------------|
| Housing | plastic |
| Optics cover | plastic |
| Weight | 20g |
| Connection type | M12 connector, 4-pin |

Environmental data

| | |
|-----------------------------------|--|
| Ambient temp. (operation/storage) | -40°C ... +60°C/-40°C ... +70°C |
| Protective circuit ⁵⁾ | 2, 3 |
| VDE safety class | III |
| Degree of protection | IP 67 |
| Light source | exempt group (in acc. with EN 62471) |
| Standards applied | IEC 60947-5-2 |
| Certifications | UL 508, C22.2 No.14-13 ³⁾ ⁶⁾ |

- 1) Typ. operating range limit: max. attainable range without function reserve
- 2) Operating range: recommended range with function reserve
- 3) For UL applications: for use in class 2 circuits according to NEC only
- 4) Sum of the output currents for both outputs, 50mA when ambient temperatures > 40°C
- 5) 2=polarity reversal protection, 3=short circuit protection for all outputs
- 6) 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)

Tables

| | | |
|---|-----|------|
| 0 | 9.5 | 14.2 |
|---|-----|------|

| | |
|--------------------------|--------------------------------|
| <input type="checkbox"/> | Operating range [m] |
| <input type="checkbox"/> | Typ. operating range limit [m] |

Remarks

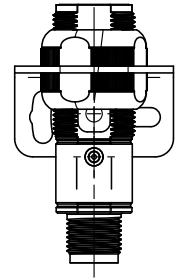
Operate in accordance with intended use!

- ↪ 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 the intended use.

Mounting options

Standard mounting

Alignment of the supplied mounting nuts with flat side towards the mounting sheet.
Mounting bracket BT D18M.5 is recommended for standard mounting.

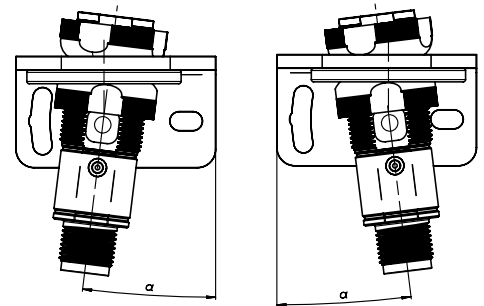


omni-mount

omni-mount makes fine adjustment of the sensors possible in a very simple and economical manner. For this type of mounting, the mounting nuts are used with the round side towards the mounting device. The mounting sheet must have a bore hole of approx. 21 mm in diameter. The special molding of the mounting nuts together with the spacer disc included in the delivery contents allows form-locking fastening of the sensors at different adjustment angles. The maximum possible tilt angle depends on the thickness of the mounting sheet. Mounting bracket BT D21M is recommended for *omni-mount*.

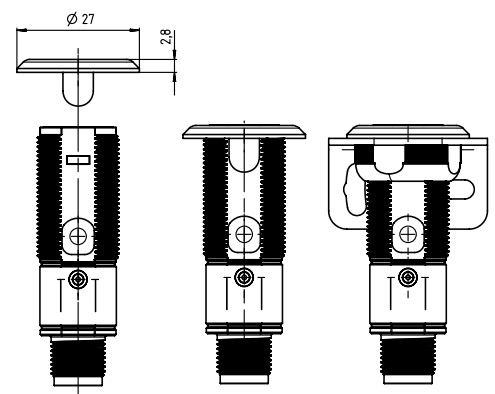
| Mounting sheet thickness | Max. adjustment angle |
|--------------------------|-----------------------|
| 2 mm | +/- 5° |
| 4 mm*) | +/- 8° |

*) Corresponds to the thickness of the BT D21M mounting bracket



Embedded mounting

Embedded mounting, e.g. into a materials handling belt, is possible via the BT 318P-LS mounting support. The supports can be used either for fastening the axial sensors or for sensors with 90° optics.



Order guide

The sensors listed here are preferred types; current information at www.leuze.com.

| | | | Designation | Part no. |
|--|--|---|---------------|----------|
| Sensors with axial optics | | | | |
| Transmitter | With M12 connector | With integrated diaphragm, 2 deactivation inputs (pin 4 = IN1, pin 2 = IN2) | LS318B.Y1 | 50126605 |
| Receiver | With M12 connector | Pin 4: PNP light switching, pin 2: PNP dark switching | LE318B/4P-M12 | 50116847 |
| Set | With M12 connector | Set consisting of: transmitter LS318B.Y1 (50126605) and receiver LE318B/4P-M12 (50116847) | Set L318B.Y1 | 50128862 |
| Accessories for optimum fastening | | | | |
| | Support for embedded mounting | Collective packaging with 10 supports | BT 318P-LS | 50117258 |
| Accessories | Mounting bracket for standard mounting | | BT D18M.5 | 50113548 |
| | Mounting bracket for omni-mount | | BT D21M | 50117257 |