

Technical data sheet

Throughbeam photoelectric sensor receiver

Part no.: 50140155

LE412B/P

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For illustration purposes only



Technical data

Basic data

| | |
|---------------------|-----------------------|
| Series | 412B |
| Operating principle | Throughbeam principle |
| Device type | Receiver |

Optical data

| | |
|-----------------------|----------------------------|
| Operating range | 0 ... 10 m |
| Operating range | Guaranteed operating range |
| Operating range limit | Typical operating range |
| Operating range limit | 0 ... 10 m |

Electrical data

| | |
|--------------------|---|
| Protective circuit | Polarity reversal protection Short circuit protected |
|--------------------|---|

Performance data

| | |
|----------------------|--|
| Supply voltage U_B | 10 ... 36 V, DC, Incl. residual ripple |
| Residual ripple | 0 ... 20 %, From U_B |
| Open-circuit current | 0 ... 15 mA |

Outputs

| | |
|-------------------------------------|------------|
| Number of digital switching outputs | 1 Piece(s) |
|-------------------------------------|------------|

Switching outputs

| | |
|-------------------------|--------|
| Voltage type | DC |
| Switching current, max. | 200 mA |

Switching output 1

| | |
|---------------------|-----------------|
| Switching element | Transistor, PNP |
| Switching principle | Dark switching |

Time behavior

| | |
|---------------------|----------|
| Switching frequency | 1,000 Hz |
| Response time | 0.5 ms |
| Readiness delay | 20 ms |

Connection

Connection 1

| | |
|----------------------|------------------------------|
| Function | Signal OUT Voltage supply |
| Type of connection | Cable |
| Cable length | 2,000 mm |
| Sheathing material | PVC |
| Cable color | Black |
| Number of conductors | 3 -wire |
| Wire cross section | 0,34 mm ² |

Mechanical data

| | |
|---------------------|---------------|
| Thread size | M12 x 1 mm |
| Dimension (Ø x L) | 12 mm x 51 mm |
| Housing material | Metal |
| Metal housing | Chromed brass |
| Lens cover material | Glass |
| Net weight | 100 g |
| Housing color | Silver |

Operation and display

| | |
|-----------------|------------|
| Type of display | LED |
| Number of LEDs | 2 Piece(s) |

Environmental data

| | |
|--------------------------------|---------------|
| Ambient temperature, operation | -25 ... 55 °C |
|--------------------------------|---------------|

Certifications

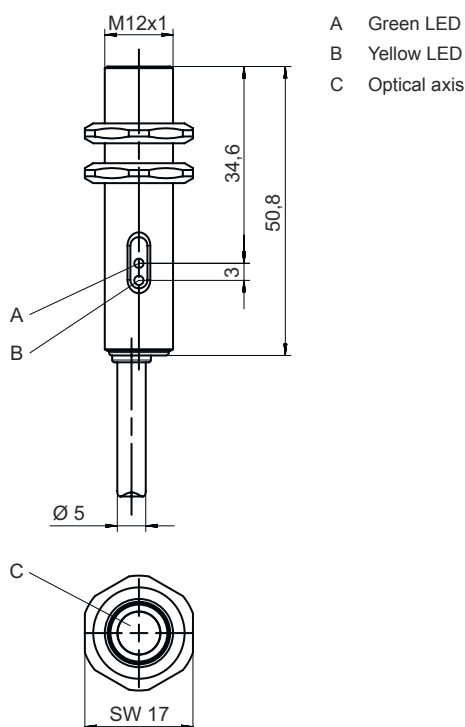
| | |
|----------------------|---------------|
| Degree of protection | IP 67 |
| Protection class | III |
| Certifications | c UL US |
| Standards applied | IEC 60947-5-2 |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| ECLASS 5.1.4 | 27270901 |
| ECLASS 8.0 | 27270901 |
| ECLASS 9.0 | 27270901 |
| ECLASS 10.0 | 27270901 |
| ECLASS 11.0 | 27270901 |
| ECLASS 12.0 | 27270901 |
| ECLASS 13.0 | 27270901 |
| ECLASS 14.0 | 27270901 |
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| ETIM 9.0 | EC002716 |

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

| | |
|----------------------|----------------------|
| Function | Signal OUT |
| | Voltage supply |
| Type of connection | Cable |
| Cable length | 2,000 mm |
| Sheathing material | PVC |
| Cable color | Black |
| Number of conductors | 3 -wire |
| Wire cross section | 0.34 mm ² |

Conductor color


Conductor assignment

| | |
|-------|-------|
| Brown | V+ |
| Black | OUT 1 |
| Blue | GND |

Operation and display

| LED | Display | Meaning |
|-----|--------------------------|---|
| 1 | Green, continuous light | Function reserve |
| 2 | Yellow, continuous light | Switching output/switching state active |

Suitable transmitters

| | Part no. | Designation | Article | Description |
|--|----------|-------------|--|---|
|  | 50140153 | LS412B/D | Throughbeam photoelectric sensor transmitter | Special version: Deactivation input Operating range limit: 0 ... 10 m Light source: LED, Red Supply voltage: DC Deactivation inputs: 1 Piece(s) Connection: Cable, 2,000 mm, 3 -wire |

Part number code

Part designation: AAA412BGG.H/ii-K

| | |
|----------------|---|
| AAA412B | Operating principle / construction LS412B: Throughbeam photoelectric sensor transmitter LE412B: Throughbeam photoelectric sensor receiver ET412B: Energetic diffuse reflection sensor PRK412B: Retro-reflective photoelectric sensor with polarization filter |
| GG | Light source n/a: LED L2: laser class 2 |
| H | Operating range adjustment 1: 270° potentiometer |
| ii | Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2) 2: NPN transistor output, light switching N: NPN transistor output, dark switching 4: PNP transistor output, light switching P: PNP transistor output, dark switching D: Deactivation input (deactivation with low signal) X: pin not used |
| K | Electrical connection n/a: cable, standard length 2000 mm, 3-wire M12: M12 connector, 4-pin (plug) |

Note



A list with all available device types can be found on the Leuze website at 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.

Accessories**Mounting technology - Mounting brackets**

| | Part no. | Designation | Article | Description |
|--|-----------------|--------------------|------------------|--|
|  | 50113549 | BT D12M.5 | Mounting bracket | Diameter, inner: 12 mm Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Stainless steel |

Note

↪ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.