

Technical data sheet Fork photoelectric sensor

Part no.: 50146170

GS04B/P.1-120-M8.3



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- Dimensioned drawings
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- Operation and display
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Technical data

Basic data

| | |
|----------------------|--------------------------|
| Series | 04B |
| Principle of physics | Optical |
| Application | Detection of small parts |

Characteristic parameters

| | |
|------|--------------|
| MTTF | 700.42 years |
|------|--------------|

Optical data

| | |
|--------------------------|----------|
| Light source | LED, Red |
| Wavelength | 660 nm |
| Transmitted-signal shape | Pulsed |

Measurement data

| | |
|-------------------------|---------|
| Repeatability | 0.02 mm |
| Minimum object diameter | 0.5 mm |

Electrical data

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

Performance data

| | |
|----------------------|------------------------|
| Supply voltage U_B | 10 ... 30 V, DC |
| Residual ripple | 0 ... 15 %, From U_B |
| Open-circuit current | 0 ... 30 mA |
| Switching hysteresis | 100 μ m |

Outputs

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

Switching outputs

| | |
|-------------------------|---|
| Type | Digital switching output |
| Voltage type | DC |
| Switching current, max. | 100 mA |
| Switching voltage | high: $\geq(U_B - 2V)$ low: $\leq 2 V$ |

Switching output 1

| | |
|---------------------|-----------------------|
| Assignment | Connection 1, pin 4 |
| Switching element | Transistor, PNP |
| Switching principle | Light/dark switchable |

Time behavior

| | |
|---------------------|----------|
| Switching frequency | 5,000 Hz |
| Response time | 0.1 ms |
| Readiness delay | 150 ms |

Connection

| | |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

Connection 1

| | |
|--------------------|------------------------------|
| Function | Signal OUT Voltage supply |
| Type of connection | Connector |
| Thread size | M8 |
| Type | Male |
| Material | Metal |
| No. of pins | 3 -pin |

Mechanical data

| | |
|-----------------------|------------------------|
| Design | Fork |
| Mouth width | 120 mm |
| Mouth depth | 60 mm |
| Dimension (W x H x L) | 12 mm x 144 mm x 90 mm |
| Housing material | Metal |
| Metal housing | Diecast zinc |
| Lens cover material | Glass |
| Net weight | 244 g |
| Housing color | Black, RAL 9005 |
| Type of fastening | Through-hole mounting |

Operation and display

| | |
|-------------------------------------|--|
| Type of display | LED |
| Number of LEDs | 1 Piece(s) |
| Operational controls | 270° potentiometer |
| Function of the operational control | Light/dark switching Sensitivity adjustment |

Environmental data

| | |
|--------------------------------|---------------|
| Ambient temperature, operation | -25 ... 60 °C |
|--------------------------------|---------------|

Certifications

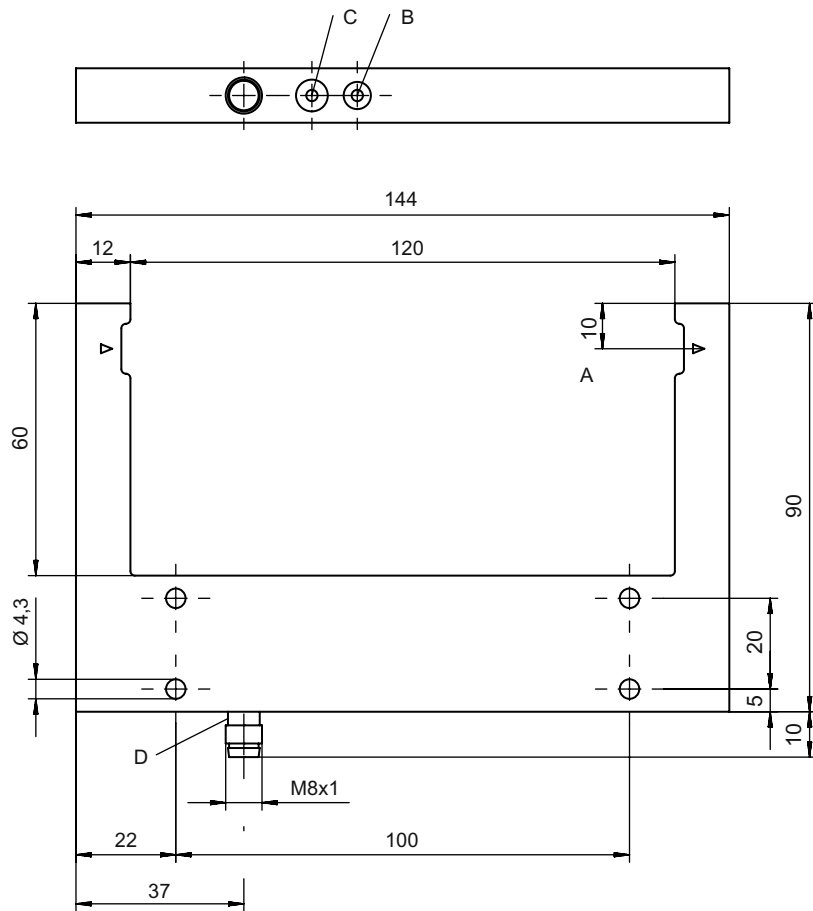
| | |
|----------------------|--|
| Degree of protection | IP 67 |
| Protection class | III |
| Approvals | c UL US |
| Standards applied | IEC 60947-5-2, DIN EN ISO 1389-1:2016 appendix C,D |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| ECLASS 5.1.4 | 27270909 |
| ECLASS 8.0 | 27270909 |
| ECLASS 9.0 | 27270909 |
| ECLASS 10.0 | 27270909 |
| ECLASS 11.0 | 27270909 |
| ECLASS 12.0 | 27270909 |
| ECLASS 13.0 | 27270909 |
| ECLASS 14.0 | 27270909 |
| ECLASS 15.0 | 27270909 |
| ECLASS 16.0 | 27270909 |
| ETIM 5.0 | EC002720 |
| ETIM 6.0 | EC002720 |
| ETIM 7.0 | EC002720 |
| ETIM 8.0 | EC002720 |
| ETIM 9.0 | EC002720 |
| ETIM 10.0 | EC002720 |
| UNSPSC 26.08 | 39121528 |

Dimensioned drawings

All dimensions in millimeters



- A Optical axis
- B Sensitivity adjustment
- C Light/dark switching
- D LED indicator

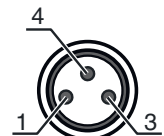
Electrical connection

Connection 1

| | |
|--------------------|----------------|
| Function | Signal OUT |
| | Voltage supply |
| Type of connection | Connector |
| Thread size | M8 |
| Type | Male |
| Material | Metal |
| No. of pins | 3 -pin |

Pin Pin assignment

| | |
|---|-------|
| 1 | V+ |
| 3 | GND |
| 4 | OUT 1 |



Operation and display


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

Part number code

Part designation: AAA04B/C.D-EEE-FFF


| | |
|---------------|---|
| AAA04B | Operating principle / construction GS04B: Optical fork sensor, LED light source GSL04B: Optical fork sensor, laser light source |
| C | Switching output / Function P: PNP transistor output, dark switching N: NPN transistor output, dark switching 1: IO-Link / light switching (NPN) / dark switching (PNP) |
| D | Equipment 1: 270° potentiometer |
| EEE | Mouth width [mm] Mouth width in millimeters |
| FFF | Electrical connection M8.3: M8 connector, 3-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

Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|---|----------|-------------------|------------------|---|
|  | 50130832 | KD U-M8-3A-V1-050 | Connection cable | Application: Chemical resistant Connection 1: Connector, M8, Axial, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC |
|  | 50130862 | KD U-M8-3W-V1-050 | Connection cable | Application: Chemical resistant Connection 1: Connector, M8, Angled, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC |

Accessories

Note



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