

Technical data sheet Fork photoelectric sensor

Part no.: 50152660

GSM04/2.K0-1000

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For illustration purposes only



Technical data

Basic data

| | |
|----------------------|-----------------------------------|
| Series | 04 |
| Mounting type | K-type |
| Principle of physics | Optical |
| Application | Detection of small parts (opaque) |

Characteristic parameters

| | |
|------|-----------|
| MTTF | 942 years |
|------|-----------|

Optical data

| | |
|--------------------------|---------------|
| Light source | LED, Infrared |
| Wavelength | 940 nm |
| Transmitted-signal shape | Pulsed |

Measurement data

| | |
|---------------------|-----------------|
| Repeatability | < 0.01 mm |
| Minimum object size | 0,8 mm x 1,2 mm |

Electrical data

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

Performance data

| | |
|----------------------|------------------------|
| Supply voltage U_B | 5 ... 24 V, DC |
| Residual ripple | 0 ... 10 %, From U_B |
| Open-circuit current | 0 ... 15 mA |
| Switching hysteresis | 50 μ m |

Outputs

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

Switching outputs

| | |
|-------------------------|--------------------------|
| Type | Digital switching output |
| Voltage type | DC |
| Switching current, max. | 50 mA |
| Switching voltage | high: $\geq(U_B-2V)$ |
| | low: $\leq 2 V$ |

Switching output 1

| | |
|---------------------|---------------------------|
| Assignment | Connection 1, conductor 3 |
| Switching element | Transistor, NPN |
| Switching principle | Light/dark switchable |

Time behavior

| | |
|---|------------|
| Switching frequency | 3,000 Hz |
| Response time with interrupted light beam | 20 μ s |
| Response time with uninterrupted light beam | 80 μ s |

Connection

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

Connection 1

| | |
|----------------------|----------------------|
| Function | Signal OUT |
| | Voltage supply |
| Type of connection | Cable |
| Cable length | 1,000 mm |
| Sheathing material | PVC |
| Number of conductors | 4 -wire |
| Wire cross section | 0.09 mm ² |

Mechanical data

| | |
|-----------------------|------------------------|
| Design | Fork |
| Mouth width | 6 mm |
| Mouth depth | 8.5 mm |
| Dimension (W x H x L) | 25.4 mm x 7 mm x 21 mm |
| Housing material | Plastic |
| Plastic housing | PC-ABS |
| Lens cover material | Plastic |
| Net weight | 15 g |
| Housing color | Black |
| Type of fastening | Through-hole mounting |

Operation and display

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

Environmental data

| | |
|--------------------------------|---------------|
| Ambient temperature, operation | -25 ... 55 °C |
| Ambient temperature, storage | -30 ... 80 °C |

Certifications

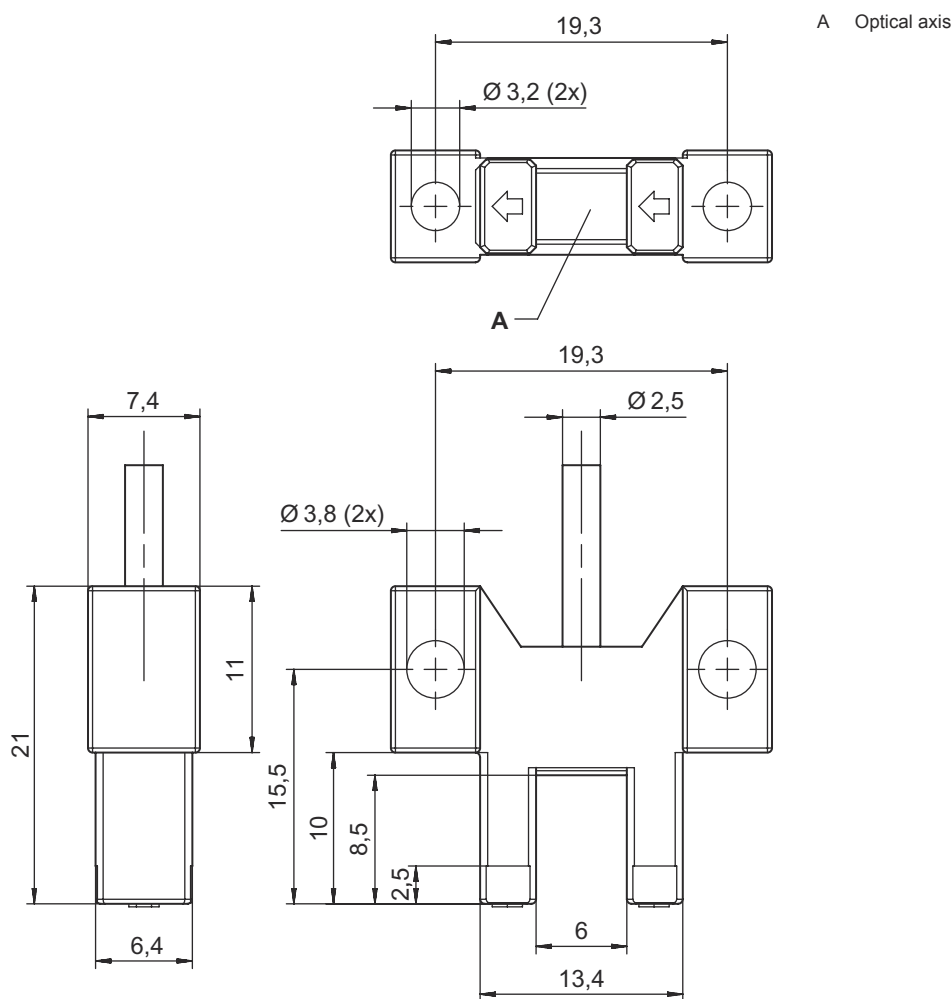
| | |
|----------------------|---------------|
| Degree of protection | IP 64 |
| Protection class | III |
| Standards applied | IEC 60947-5-2 |

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 |
| ETIM 5.0 | EC002720 |
| ETIM 6.0 | EC002720 |
| ETIM 7.0 | EC002720 |
| ETIM 8.0 | EC002720 |
| ETIM 9.0 | EC002720 |
| ETIM 10.0 | EC002720 |

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

| | |
|----------------------|----------------------|
| Function | Signal OUT |
| | Voltage supply |
| Type of connection | Cable |
| Cable length | 1,000 mm |
| Sheathing material | PVC |
| Cable color | Black |
| Number of conductors | 4 -wire |
| Wire cross section | 0.09 mm ² |

Conductor color

Conductor assignment

| | |
|-------|-----|
| Brown | V+ |
| Blue | GND |
| Black | OUT |
| White | IN |

Operation and display

| LED | Display | Meaning |
|-----|-----------------------|--|
| 1 | Red, continuous light | Light beam interrupted (light switching) |
| | Off | Light beam not interrupted (light switching) |
| | Off | Light beam not interrupted (dark switching) |
| | Red, continuous light | Light beam interrupted (dark switching) |

Part number code

Part designation: AAAAA/BCC.DE-FFFF

| | |
|--------------|---|
| AAAAA | Operating principle / construction GSM02: miniature fork through-beam photoelectric sensor, aperture 6 mm, aperture depth 5.7 mm GSM04: miniature fork through-beam photoelectric sensor, aperture 6 mm, aperture depth 8.5 mm GSM06: Miniature fork throughbeam photoelectric sensor, slot width 6 mm, slot depth 8.5 (integrated connector) |
| CC | Switching output / Function 4: PNP transistor output, light switching (input = U_B)/dark switching (input = open) 2: NPN transistor output, light switching (input = U_B)/dark switching (input = open) |
| D | Assembly type L: L-Type F: F-Type T: T-Type R: R-Type K: K-Type Y: Y-Type U: U-Type |
| E | LED display when the light beam is not interrupted 1: Red continuous light 0: Off |
| FFFF | Electrical connection N/a: Connector (2 mm pitch), 4-pin 1000: PVC cable, standard length 1000 mm, 4-wire |

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.

NOTE

- Do not connect the input (IN) to ground (GND) in dark switching mode
- Max. tightening torque for nuts 0.5 Nm.