



UFS3-37B417

UFS

FORK SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------|----------|
| UFS3-37B417 | 6075473 |

Other models and accessories → www.sick.com/UFS

Detailed technical data

Features

| | |
|--|--|
| Functional principle detail | Ultrasonic detection principle |
| Dimensions (W x H x D) | 20 mm x 37.4 mm x 70 mm |
| Housing design | Fork shaped |
| Fork width | 2.6 mm |
| Fork depth | 42.5 mm |
| Minimum detectable object (MDO) | Label size: 2 mm ¹⁾ Label gap: 1 mm ¹⁾ |
| Label detection | ✓ |
| Adjustment | Teach-in button, cable (Teach-in, sensitivity, light/dark switching, Teach-in dynamic) |
| Teach-in mode | 1-point teach-in 2-point teach-in Teach-in dynamic |

¹⁾ Depends on the label thickness.

Mechanics/electronics

| | |
|----------------------------|-----------------------------------|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 10 % ²⁾ |
| Current consumption | 50 mA ³⁾ |

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Signal transit time with resistive load.

⁶⁾ Output current minimal 0.03 mA.

⁷⁾ Reference voltage DC 50 V.

| | |
|--|---|
| Switching frequency | 1.1 kHz ⁴⁾ |
| Response time | 440 μs ⁵⁾ |
| Jitter | 40 μs |
| Switching output | Push-pull: PNP/NPN |
| Switching output (voltage) | Push-pull: PNP/NPN High = $U_V - < 2$ V/Low: ≤ 2 V |
| Switching mode | Light/dark switching |
| Output current I_{max} | 100 mA ⁶⁾ |
| Initialization time | 100 ms |
| Connection type | Male connector M8, 4-pin |
| Protection class | III ⁷⁾ |
| Circuit protection | U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression |
| Enclosure rating | IP65 |
| Weight | Approx. 100 g |
| Housing material | Metal, plastic, Zamak, Glass fiber reinforced plastic |
| Indication | LED indicator green: power on LED indicator, yellow: Status switching output Q |

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⁴⁾ With light/dark ratio 1:1.

⁵⁾ Signal transit time with resistive load.

⁶⁾ Output current minimal 0.03 mA.

⁷⁾ Reference voltage DC 50 V.

Communication interface

| | |
|---------------------------------|---|
| IO-Link | ✓, V1.1 |
| Data transmission rate | COM3 (230,4 kBaud) |
| Cycle time | 4 ms |
| VendorID | 26 |
| DeviceID HEX | 0x8002A6 |
| DeviceID DEC | 8389286 |
| Process data length | 16 Bit |
| Process data structure A | Bit 0 = switching signal Q_{L1} Bit 1 = switching signal Q_{L2} Bit 2 = switching signal Q_{Int1} Bit 3 = switching signal Q_{Int2} Bit 4 = alarm Q_oR Bit 5 = Teach busy Bit 6 ... 15 = measured value |
| Digital output | Q_1 |
| Number | 1 |

Ambient data

| | |
|--------------------------------------|--------------------------------|
| Ambient operating temperature | +5 °C ... +55 °C ¹⁾ |
| Ambient temperature, storage | -20 °C ... +70 °C |
| Shock load | According to EN 60068-2-27 |
| EMC | EN 60947-5-2 ²⁾ |
| UL File No. | NRKH.E191603 & NRKH7.E191603 |

¹⁾ Do not bend below 0 °C.

²⁾ The sensor complies with the Radio Safety Requirements (EMC) for the industrial sector (Radio Safety Class A). It may cause radio interference if used in a residential area.

Smart Task

| | |
|------------------------|-------------|
| Smart Task name | Base logics |
|------------------------|-------------|

Classifications

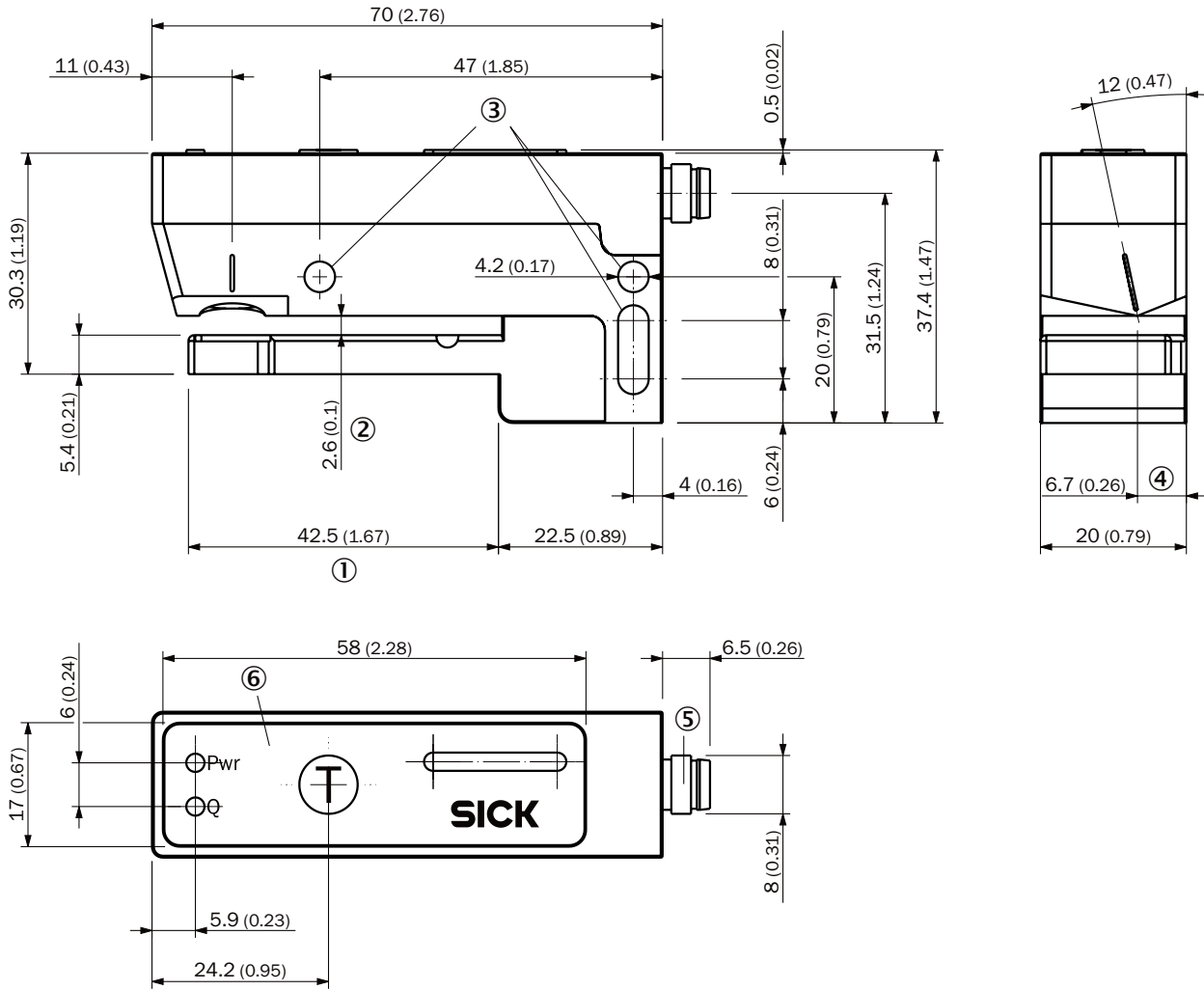
| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270909 |
| ECLASS 5.1.4 | 27270909 |
| ECLASS 6.0 | 27270909 |
| ECLASS 6.2 | 27270909 |
| ECLASS 7.0 | 27270909 |
| ECLASS 8.0 | 27270909 |
| ECLASS 8.1 | 27270909 |
| ECLASS 9.0 | 27270909 |
| ECLASS 10.0 | 27270909 |
| ECLASS 11.0 | 27270909 |
| ECLASS 12.0 | 27270909 |
| ETIM 5.0 | EC002720 |
| ETIM 6.0 | EC002720 |
| ETIM 7.0 | EC002720 |
| ETIM 8.0 | EC002720 |
| UNSPSC 16.0901 | 39121528 |

Connection/Pin assignment

| | |
|------------------------|--------------------------|
| Connection type | Male connector M8, 4-pin |
| Pin assignment | |
| BN 1 | + (L+) |
| WH 2 | MF |
| BU 3 | - (M) |
| BK 4 | Q/C |

Dimensional drawing (Dimensions in mm (inch))

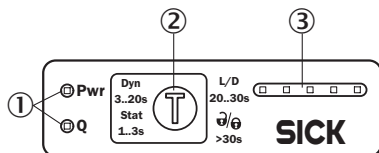
Dimensional drawing, sensor



- ① Fork depth
- ② Fork width
- ③ Fixing hole
- ④ Detection axis
- ⑤ Connection
- ⑥ Display and adjustment elements

Adjustments

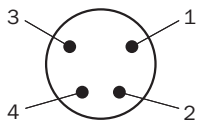
Display and adjustment elements



- ① LEDs (status display)
- ② Teach-in button
- ③ Bar graph

Pin assignment




Connection type. see table: Connection/PIN assignment



Male connector, M8, 4-pin, uncoded

Recommended accessories

Other models and accessories → www.sick.com/UFS

| | Brief description | Type | Part no. |
|---|--|--------------------------------|----------|
| Connection modules | | | |
|  | IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A | IOLA2US-01101 (SiLink2 Master) | 1061790 |
| Universal bar clamp systems | | | |
|  | WFS mounting rod, straight, including 2 x fixing screws, Aluminum | BEF-M12GF-A | 2059414 |
|  | Bar clamp for bar diameter of 12 mm (fixing the mounting rod), Aluminum, 2 screws M6 x 30, 2 spring discs | BEF-RMC-D12 | 5321878 |
| Plug connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U14-050VA3XLEAX | 2095889 |
| Sensor Integration Gateway | | | |
|  | <ul style="list-style-type: none"> • Further functions: Web server integrated, IIoT interface available (dual talk) • Logic editor: no • Communication interface: IO-Link, Ethernet, PROFINET, REST API, MQTT, OPC UA • Product category: IO-Link Master | SIG350-0004AP100 | 6076871 |
| | <ul style="list-style-type: none"> • Further functions: Web server integrated, IIoT interface available (dual talk) • Logic editor: no • Communication interface: IO-Link, Ethernet, EtherNet/IP™, REST API, MQTT, OPC UA • Product category: IO-Link Master | SIG350-0005AP100 | 6076923 |
| | <ul style="list-style-type: none"> • Further functions: Web server integrated, IIoT interface available (dual talk) • Logic editor: no • Communication interface: IO-Link, Ethernet, EtherCAT®, REST API, MQTT, OPC UA • Product category: IO-Link Master | SIG350-0006AP100 | 6076924 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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