SICK.COM




DATA SHEET

# UFS3-37B417

UFS
Fork sensors

SICK Sensor Intelligence



Illustration may differ

# FORK SENSORS

# UFS3-37B417

## ORDERING INFORMATION

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

Further device versions and accessories at www.sick.com/UFS

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| Functional principle | Ultrasonic detection principle |
| Housing design | Fork shaped |
| Dimensions (W x H x D) | 20 mm x 37.4 mm x 70 mm |
| Fork width | 2.6 mm |
| Fork depth | 42.5 mm |
| Label detection | ✓ |
| Minimum detectable object (MDO) | Label size: 2 mm [1]<br>Label gap: 1 mm [1] |
| Display | LED indicator green: power on<br>LED indicator, yellow: Status switching output Q |
| Adjustment | Teach-in button, cable (Teach-in, sensitivity, light/dark switching, Teach-in dynamic) |
| Teach-in mode | 1-point teach-in<br>2-point teach-in<br>Teach-in dynamic |

[1] Depends on the label thickness.

### INTERFACES

| | | |
|---|---|---|
| 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 $Q_{L1}$<br>Bit 1 = switching signal $Q_{L2}$<br>Bit 2 = switching signal $Q_{Int1}$<br>Bit 3 = switching signal $Q_{Int2}$<br>Bit 4 = alarm QoR |

| | |
|---|---|
| | Bit 5 = Teach busy<br>Bit 6 ... 15 = measured value |
| Digital output | $Q_1$ |
| Number | 1 |

## ELECTRONICS

| | |
|---|---|
| Supply voltage | 10 V DC ... 30 V DC [1] |
| Ripple | < 10 % [2] |
| Current consumption | 50 mA [3] |
| Initialization time | 100 ms |
| Switching frequency | 1.1 kHz [4] |
| Response time | ≤ 440 µs |
| 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 [5] |
| Protection class | III [6] |
| Circuit protection | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| Connection type | Male connector M8, 4-pin |
| Pinouts | |
| BN 1 | + (L+) |
| WH 2 | $MF_{In/Out}$ |
| BU 3 | - (M) |
| BK 4 | Q/C |

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

[2] May not fall below or exceed $U_V$ tolerances.

[3] Without load.

[4] With light/dark ratio 1:1.

[5] Minimum output current 0.3 mA.

[6] Reference voltage DC 50 V.

## MECHANICS

| | |
|---|---|
| Housing material | Zamak<br>Glass fiber reinforced plastic |
| Weight | Approx. 100 g |

## 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] |
| Enclosure rating | IP65 |

[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.

| | |
|---|---|
| UL File No. | NRKH.E191603 & NRKH7.E191603 |

[1] Do not bend below 0 °C.

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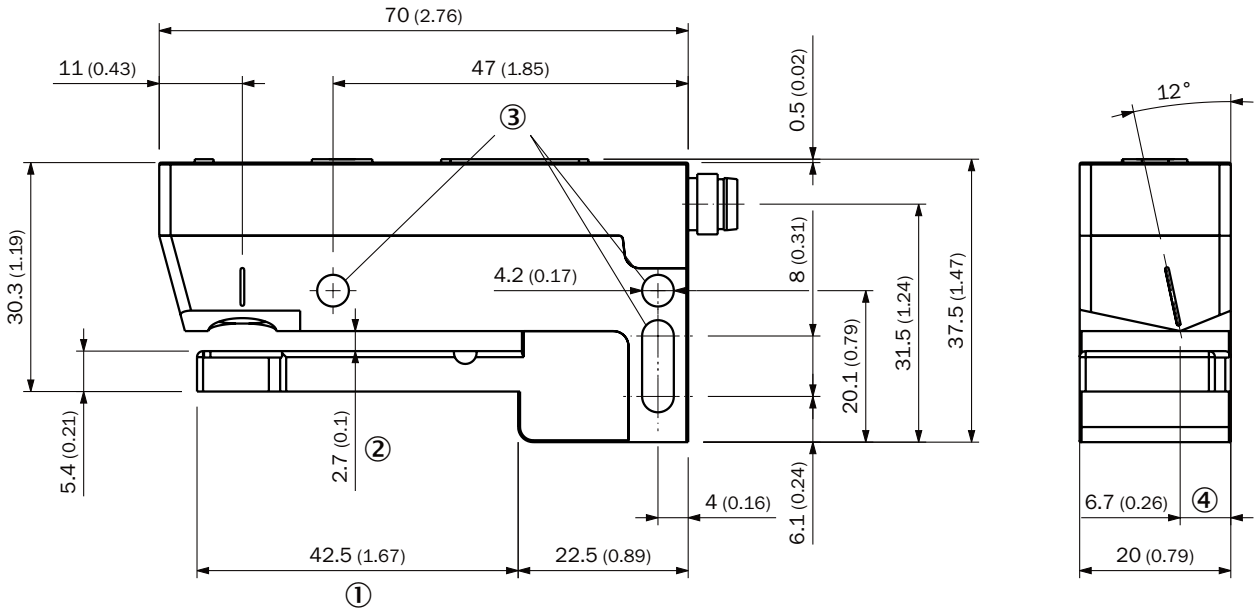
## SMART TASK

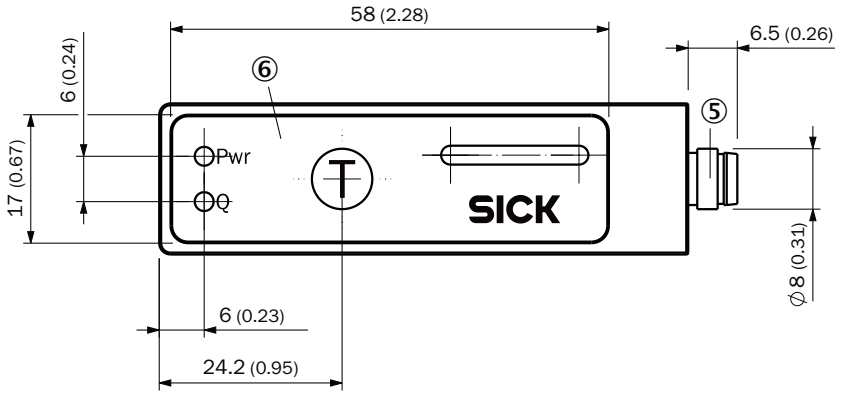
| | |
|---|---|
| Smart Task name | Base logics |

## CERTIFICATES

| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

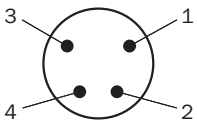
**DIMENSIONAL DRAWING, SENSOR**



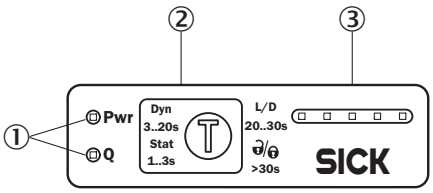

Dimensions in mm (inch)
① Fork depth
② Fork width
③ fixing hole
④ Detection axis
⑤ Connection
⑥ display and adjustment elements

**PINOUTS, SEE TABLE TECHNICAL DATA: ELECTRONICS**




Male connector, M8, 4-pin, uncoded

**DISPLAY AND ADJUSTMENT ELEMENTS**




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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6075473

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