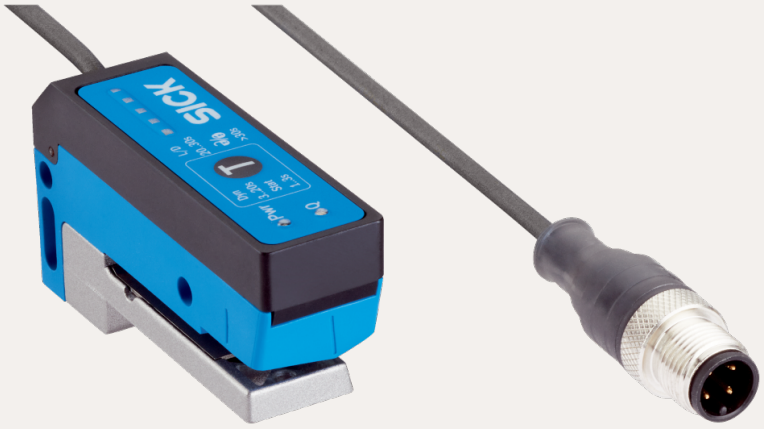
SICK.COM



DATA SHEET

# UFS3-37P517

UFS
Fork sensors

SICK Sensor Intelligence



Illustration may differ

# FORK SENSORS

# UFS3-37P517

## ORDERING INFORMATION

| Type | part no. |
|---|---|
| UFS3-37P517 | 6075477 |

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 | PNP |
| Switching output (voltage) | PNP: HIGH = $V_S$ - 3 V / LOW = 0 V |
| Switching mode | Light/dark switching |
| Output current $I_{max.}$ | 100 mA [5] |
| Input, teach-in (ET) | Teach: U < 2 V: Run: U = 10 V ... < $U_V$ |
| Protection class | III [6] |
| Circuit protection | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| Connection type | Cable with plug, M12, 4-pin, 0.31 m |
| Connection type Detail | |
| Length of male connector | 4.5 cm |
| Length of cable | 0.265 m |
| Cable material | PVC |
| Cable diameter | Ø 3.5 mm |
| Conductor cross section | 0.14 mm² |
| 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 |
| 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.

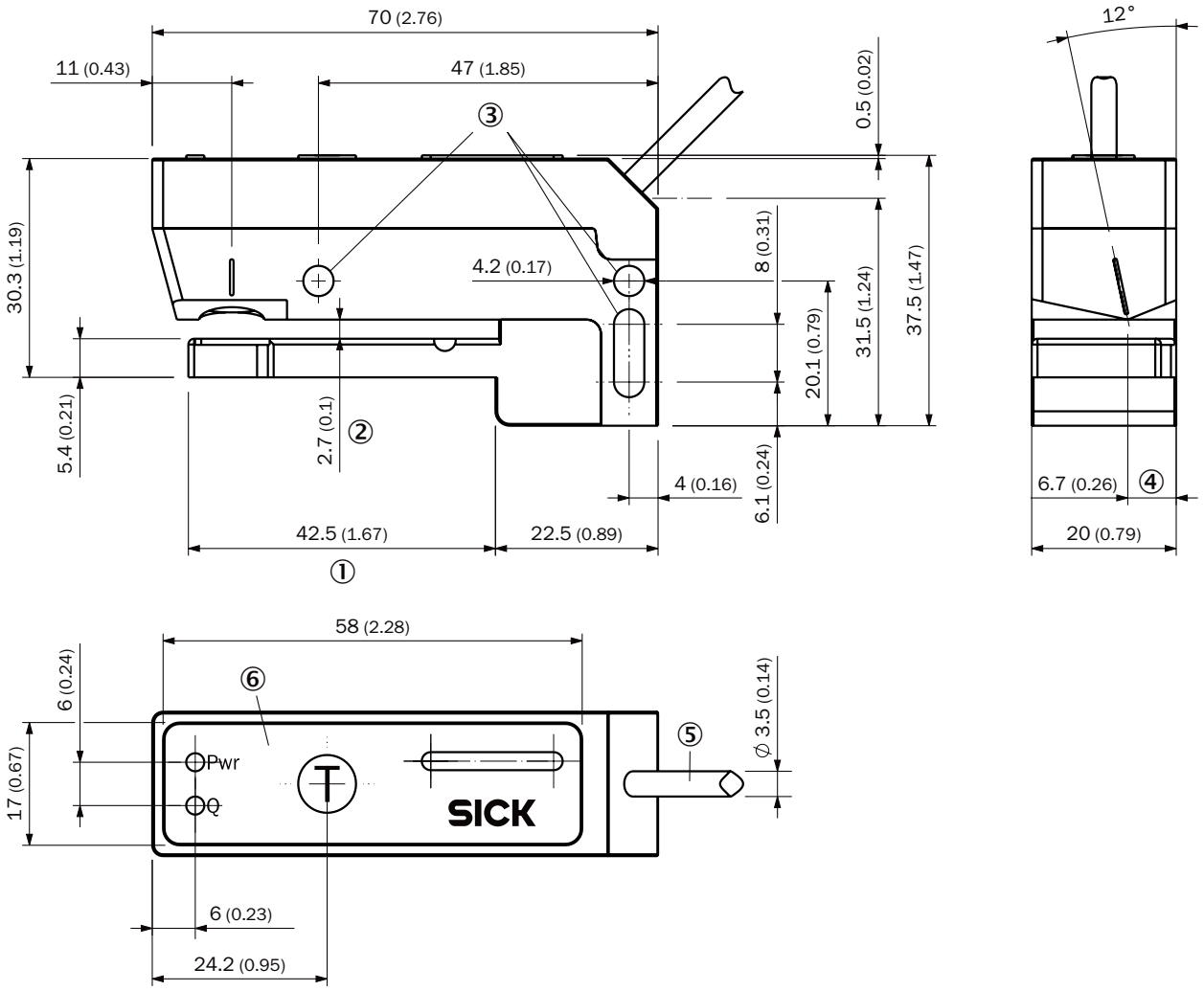
## SMART TASK

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

## CERTIFICATES

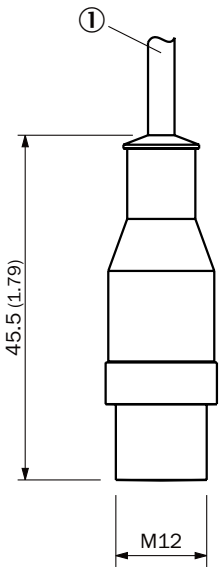
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate |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

**DIMENSIONAL DRAWING, SENSOR**



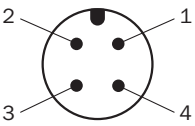

Dimensions in mm (inch)
① Fork depth
② Fork width
③ fixing hole
④ Detection axis
⑤ connection (see technical data for length of cable)
⑥ display and adjustment elements

**DIMENSIONAL DRAWING, CONNECTION TYPE**



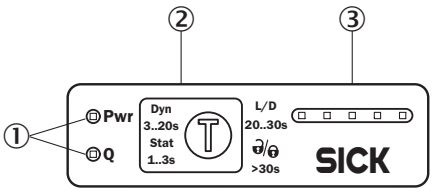

Dimensions in mm (inch)
Cable with M12 male connector
① connection (see technical data for length of cable)

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




M12 male connector, 4-pin, A-coding

**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/6075477

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# SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK

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