# UFS3-37B417S01

UFS

**FORK SENSORS**

**SICK**
Sensor Intelligence.

# UFS3-37B417S01 | UFS
## FORK SENSORS



Illustration may differ

## Ordering information

| Type | part no. |
|------|----------|
| UFS3-37B417S01 | 6085611 |

Other models and accessories ➜ 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 (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

| | | |
|---|---|---|
| Digital output | | $Q_1$, $Q_2$ |
| | Number | 2 |

### Electronics

| | |
|---|---|
| Supply voltage | 10 V DC ... 30 V DC [1] |

[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.

| | |
|---|---|
| **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/NPN |
| **Switching output (voltage)** | PNP: HIGH = $V_S$ - 3 V / LOW = 0 V, NPN: HIGH = $V_S$ / LOW ≤ 3 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 | Q NPN |
| BU 3 | - (M) |
| BK 4 | Q PNP |

[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 |
| **Ambient temperature, storage** | –20 °C ... +70 °C |
| **Shock load** | According to EN 60068-2-27 |
| **EMC** | EN 60947-5-2 [1] |
| **Enclosure rating** | IP65 |
| **UL File No.** | NRKH.E191603 & NRKH7.E191603 |

[1] 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.
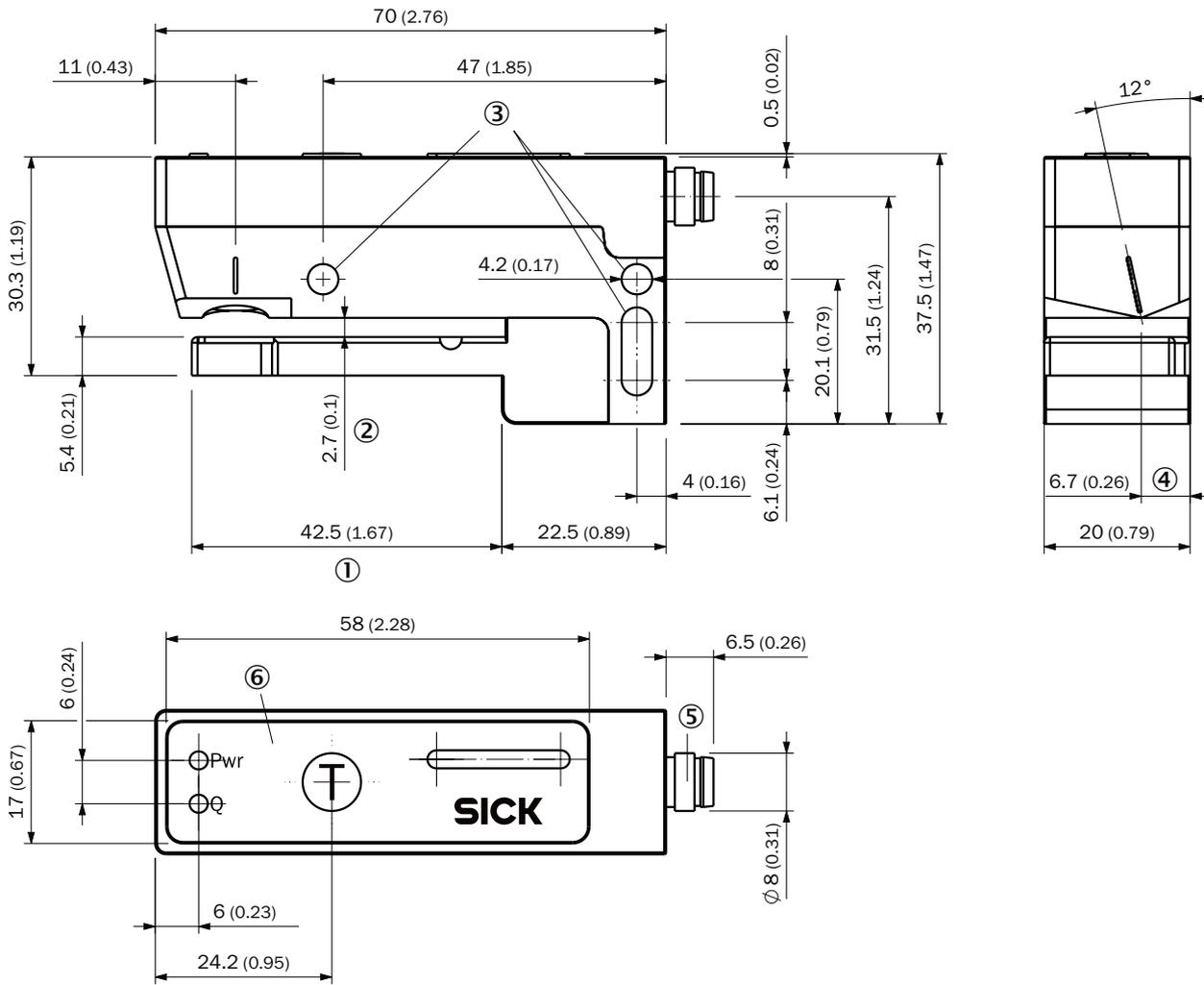
## Certificates

| | |
|---|---|
| **EU declaration of conformity** | ✓ |
| **UK declaration of conformity** | ✓ |

| | |
|---|---|
| **ACMA declaration of conformity** | ✓ |
| **Moroccan declaration of conformity** | ✓ |
| **China RoHS** | ✓ |

## 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 |

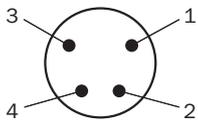## Dimensional drawing, sensor

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

## Recommended accessories

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

| Brief description | | Type | part no. |
|---|---|---|---|
| **Mounting systems** | | | |
|  | • **Description:** WFS mounting rod, straight, including 2 x fixing screws<br>• **Material:** Steel<br>• **Details:** Aluminum | BEF-M12GF-A | 2059414 |

## 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:

Contacts and other locations –**www.sick.com**

SICK AG  |  Waldkirch  |  Germany  |  www.sick.com

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