





Illustration may differ

### Ordering information

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

Other models and accessories → [www.sick.com/UFS](http://www.sick.com/UFS)



### Detailed technical data

#### Features

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

<sup>1)</sup> Depends on the label thickness.

#### Mechanics/electronics

|                            |                                   |
|----------------------------|-----------------------------------|
| <b>Supply voltage</b>      | 10 V DC ... 30 V DC <sup>1)</sup> |
| <b>Ripple</b>              | < 10 % <sup>2)</sup>              |
| <b>Current consumption</b> | 50 mA <sup>3)</sup>               |
| <b>Switching frequency</b> | 1.1 kHz <sup>4)</sup>             |
| <b>Response time</b>       | 440 μs <sup>5)</sup>              |

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

<sup>2)</sup> May not fall below or exceed  $U_V$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> Output current minimal 0.03 mA.

<sup>7)</sup> Reference voltage DC 50 V.

|   |   |
|---|---|
| <b>Jitter</b>                                     | 40 µs   |
| <b>Switching output</b>                           | PNP   |
| <b>Switching output (voltage)</b>                 | PNP: HIGH = $V_S - 3\text{ V}$ / LOW = 0 V  |
| <b>Switching mode</b>                             | Light/dark switching  |
| <b>Output current <math>I_{\text{max}}</math></b> | 100 mA <sup>6)</sup>  |
| <b>Input, teach-in (ET)</b>                       | Teach: $U < 2\text{ V}$ ; Run: $U = 10\text{ V} \dots < U_V$  |
| <b>Initialization time</b>                        | 100 ms  |
| <b>Connection type</b>                            | Cable with M12 male connector, 4-pin, 0.31 m  |
| <b>Cable diameter</b>                             | Ø 3.5 mm  |
| <b>Protection class</b>                           | III <sup>7)</sup>   |
| <b>Circuit protection</b>                         | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| <b>Enclosure rating</b>                           | IP65  |
| <b>Weight</b>                                     | Approx. 100 g   |
| <b>Housing material</b>                           | Zamak<br>Glass fiber reinforced plastic   |
| <b>Indication</b>                                 | LED indicator green: power on<br>LED indicator, yellow: Status switching output Q                                   |

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

<sup>2)</sup> May not fall below or exceed  $U_V$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> Output current minimal 0.03 mA.

<sup>7)</sup> Reference voltage DC 50 V.

## Communication interface

|                                 |  |
|---------------------------------|--|
| <b>IO-Link</b>                  | ✓, 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   |
| <b>Process data structure A</b> | Bit 0 = switching signal $Q_{L1}$<br>Bit 1 = switching signal $Q_{L2}$<br>Bit 2 = switching signal $Q_{\text{Int}1}$<br>Bit 3 = switching signal $Q_{\text{Int}2}$<br>Bit 4 = alarm QoR<br>Bit 5 = Teach busy<br>Bit 6 ... 15 = measured value |
| <b>Digital output</b>           | $Q_1$  |
| Number                          | 1  |

### Ambient data

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

<sup>1)</sup> Do not bend below 0 °C.

<sup>2)</sup> 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.

### Connection type/pinouts

|                               |  |
|-------------------------------|--|
| <b>Connection type</b>        | Cable with M12 male connector, 4-pin, 0.31 m |
| <b>Connection type Detail</b> |  |
| Cable diameter                | Ø 3.5 mm                                     |
| Conductor cross section       | 0.14 mm <sup>2</sup>                         |
| Cable material                | PVC  |
| Length of cable               | 0.265 m                                      |
| Length of male connector      | 4.5 cm                                       |
| <b>Pinouts</b>                |  |
| BN 1                          | + (L+)                                       |
| WH 2                          | MF   |
| BU 3                          | - (M)  |
| BK 4                          | Q/C  |

### Smart Task

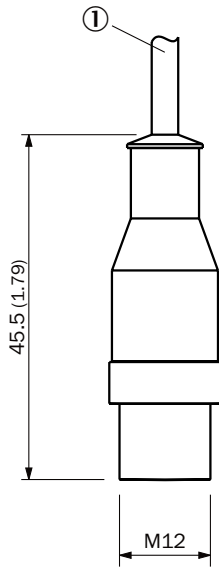
|                        |             |
|------------------------|-------------|
| <b>Smart Task name</b> | Base logics |
|------------------------|-------------|

### Classifications

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



Dimensional drawing, connection type

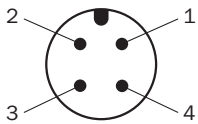


Cable with M12 male connector

① Connection (see technical data for length of cable)

### Pinouts

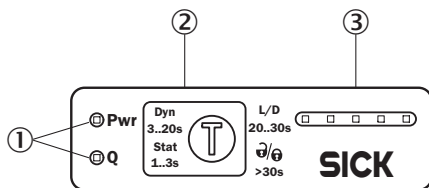
Pinouts, see table Technical data: **Connection type/pinouts**



M12 male connector, 4-pin, A-coding

### Adjustments

Display and adjustment elements








① LEDs (status display)

② Teach-in button

③ Bar graph

## Recommended accessories

Other models and accessories → [www.sick.com/UFS](http://www.sick.com/UFS)

|   | Brief description   | Type                              | Part no. |
|---|---|-----------------------------------|----------|
| <b>Connection modules</b>   |   |                                   |          |
|  | IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A   | IOLA2US-01101<br>(SiLink2 Master) | 1061790  |
| <b>Universal bar clamp systems</b>  |   |                                   |          |
|  | 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  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YF2A14-050VB3XLEAX                | 2096235  |
| <b>Sensor Integration Gateway</b>   |   |                                   |          |
|  | <ul style="list-style-type: none"> <li>• <b>Further functions:</b> Web server integrated, IIoT interface available (dual talk)</li> <li>• <b>Logic editor:</b> no</li> <li>• <b>Communication interface:</b> IO-Link, Ethernet, PROFINET, REST API, MQTT, OPC UA</li> <li>• <b>Product category:</b> IO-Link Master</li> </ul>  | SIG350-0004AP100                  | 6076871  |
|   | <ul style="list-style-type: none"> <li>• <b>Further functions:</b> Web server integrated, IIoT interface available (dual talk)</li> <li>• <b>Logic editor:</b> no</li> <li>• <b>Communication interface:</b> IO-Link, Ethernet, EtherNet/IP™, REST API, MQTT, OPC UA</li> <li>• <b>Product category:</b> IO-Link Master</li> </ul>  | SIG350-0005AP100                  | 6076923  |
|   | <ul style="list-style-type: none"> <li>• <b>Further functions:</b> Web server integrated, IIoT interface available (dual talk)</li> <li>• <b>Logic editor:</b> no</li> <li>• <b>Communication interface:</b> IO-Link, Ethernet, EtherCAT®, REST API, MQTT, OPC UA</li> <li>• <b>Product category:</b> IO-Link Master</li> </ul>   | SIG350-0006AP100                  | 6076924  |

## SICK AT A GLANCE

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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.”

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