



# UFS3-37N117

UFS

**FORK SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
UFS3-37N117	6075481

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

Detailed technical data

Features

Functional principle	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 <sup>1)</sup> Label gap: 1 mm <sup>1)</sup>
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

<sup>1)</sup> 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 <sub>L1</sub>

	Bit 1 = switching signal $Q_{L2}$ Bit 2 = switching signal $Q_{Int1}$ Bit 3 = switching signal $Q_{Int2}$ Bit 4 = alarm $QoR$ Bit 5 = Teach busy Bit 6 ... 15 = measured value
Digital output	$Q_1$
Number	1

## Electronics

Supply voltage	10 V DC ... 30 V DC <sup>1)</sup>
Ripple	< 10 % <sup>2)</sup>
Current consumption	50 mA <sup>3)</sup>
Switching frequency	1.1 kHz <sup>4)</sup>
Response time	$\leq 440 \mu s$ <sup>5)</sup>
Jitter	40 $\mu s$
Switching output	NPN
Switching output (voltage)	NPN: HIGH = $V_S$ / LOW $\leq 3 V$
Switching mode	Light/dark switching
Output current $I_{max}$	100 mA <sup>6)</sup>
Input, teach-in (ET)	Teach: $U < 2 V$ ; Run: $U = 10 V \dots < U_V$
Initialization time	100 ms
Protection class	III <sup>7)</sup>
Circuit protection	$U_V$ connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP65

<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.

## Mechanics

Housing material	Zamak Glass fiber reinforced plastic
Display	LED indicator green: power on LED indicator, yellow: Status switching output Q
Connection type	Cable open end, 4-wire, 2 m
Cable diameter	$\varnothing 3.5 \text{ mm}$
Weight	Approx. 100 g

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 open end, 4-wire, 2 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	2 m
<b>Pinouts</b>	
BN	+ (L+)
WH	MF <sub>In/Out</sub>
BU	- (M)
BK	Q/C

Smart Task

<b>Smart Task name</b>	Base logics
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Certificates

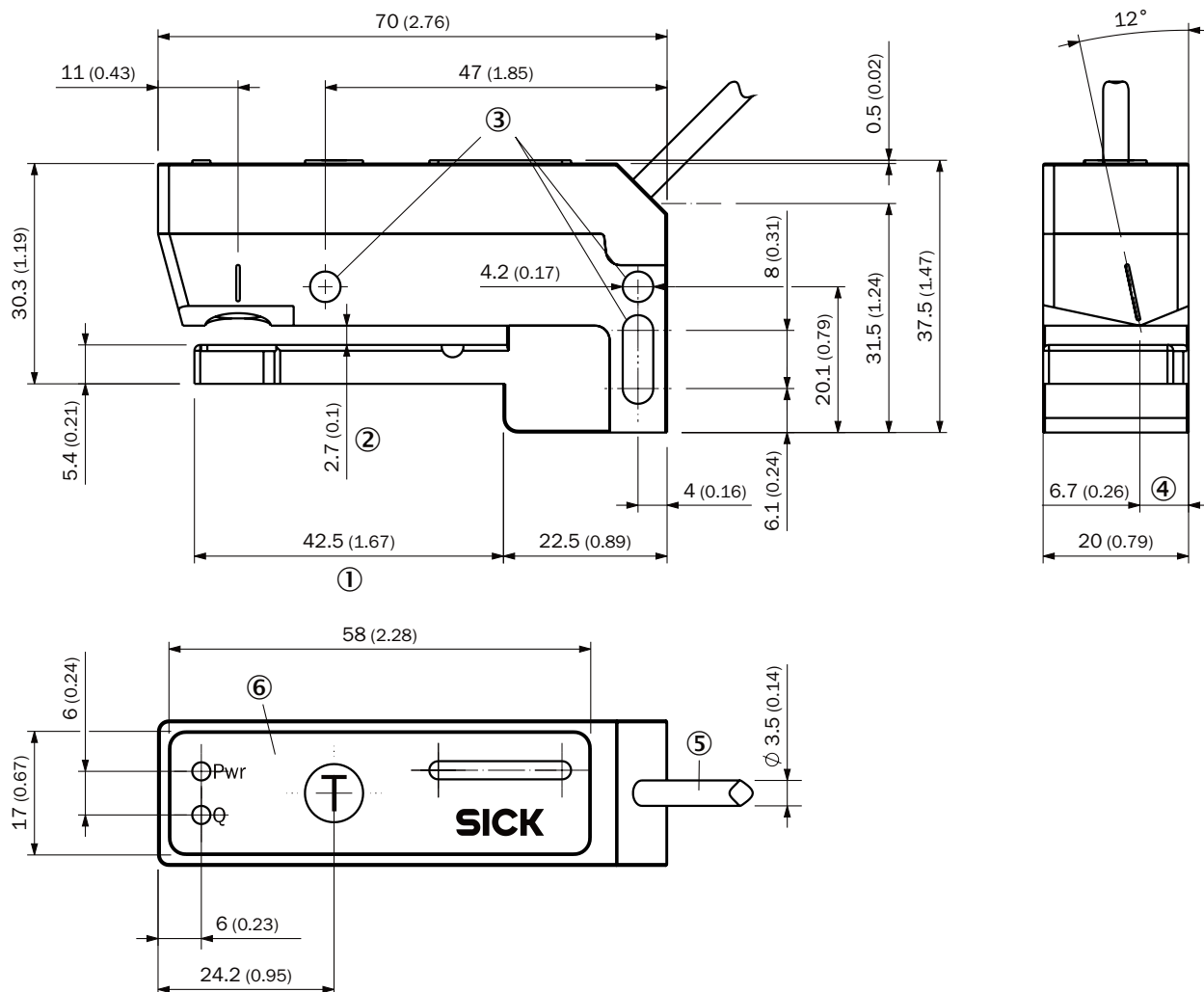
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China-RoHS</b>	✓
<b>cULus certificate</b>	✓
<b>IO-Link</b>	✓

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

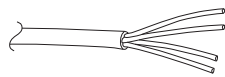
## Dimensional drawing, sensor



Dimensions in mm (inch)

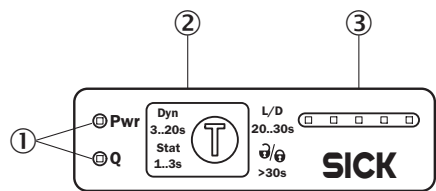
- ① Fork depth
- ② Fork width
- ③ fixing hole
- ④ Detection axis
- ⑤ connection (see technical data for length of cable)
- ⑥ display and adjustment elements

Pinouts, see table Technical data: <b>Connection type/pinouts</b>



Cable with flying leads, 4-wire, AWG26 0.15 mm<sup>2</sup>


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.
Mounting systems			
	<ul style="list-style-type: none"><li>• <b>Description:</b> WFS mounting rod, straight, including 2 x fixing screws</li><li>• <b>Material:</b> Steel</li><li>• <b>Details:</b> Aluminum</li></ul>	BEF-M12GF-A	2059414

	Brief description	Type	part no.
network devices			
		IOLA2US-01101 (SiLink2 Master)	1061790
		SIG350-0004AP100	6076871
		SIG350-0005AP100	6076923
		SIG350-0006AP100	6076924
connectors and cables			
	<ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li><li>• <b>Description:</b> Unshielded</li><li>• <b>Connection systems:</b> Screw-type terminals</li><li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li></ul>	STE-1204-G	6009932

## 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](http://www.sick.com)