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DATA SHEET

UFS3-37N515

UFS
Fork sensors

SICK Sensor Intelligence



Illustration may differ

FORK SENSORS

UFS3-37N515

ORDERING INFORMATION

Type	part no.
UFS3-37N515	6075487

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] Label gap: 1 mm [1]
Display	LED indicator green: power on LED indicator, yellow: Status switching output Q
Adjustment	Plus/minus 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

[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} 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 [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	NPN
Switching output (voltage)	NPN: HIGH = V_S / LOW ≤ 3 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 Output Q short-circuit protected 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 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.

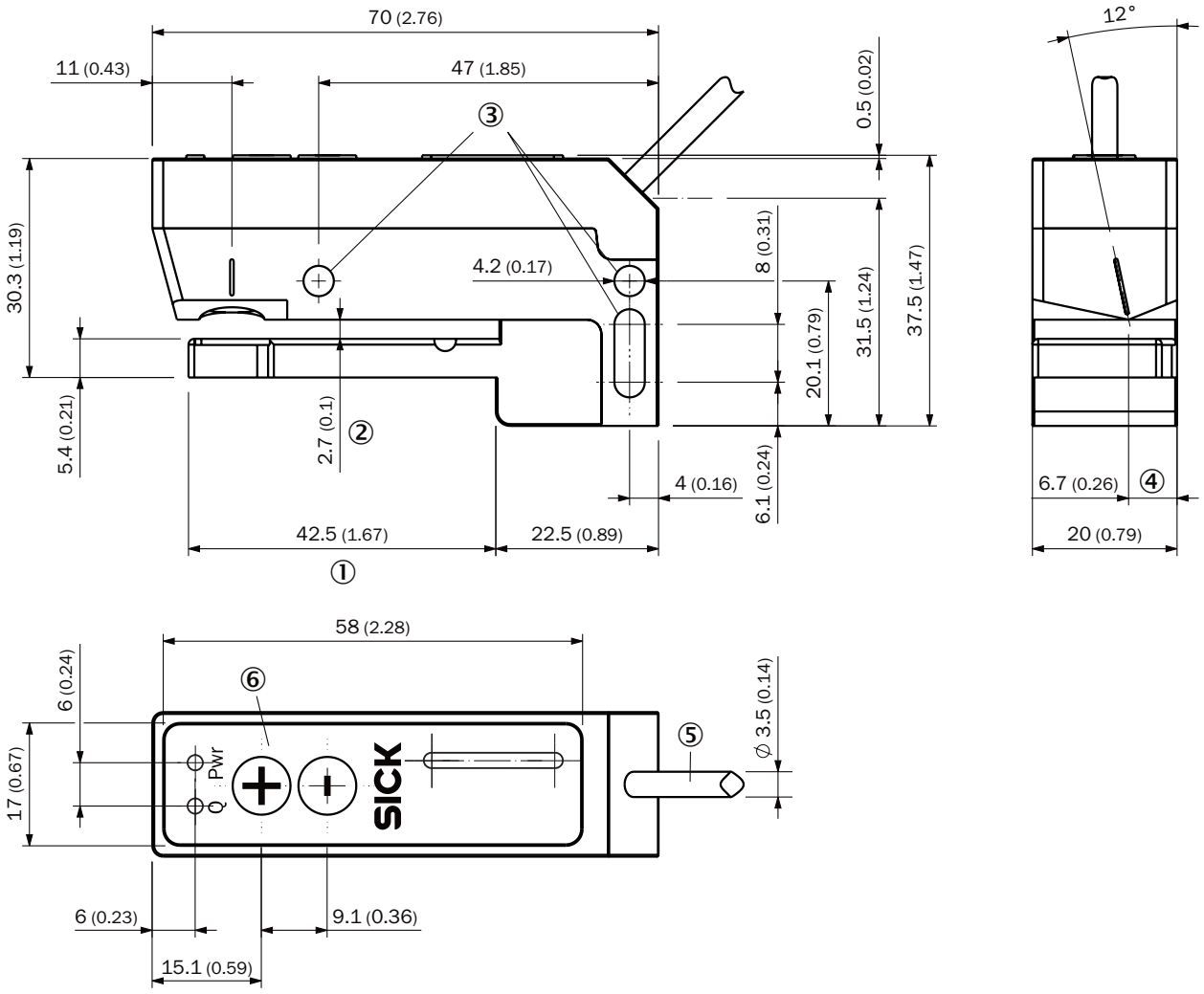
SMART TASK

Smart Task name	Base logics

CERTIFICATES

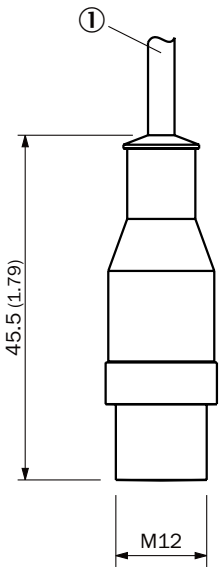
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓
IO-Link certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)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

DIMENSIONAL DRAWING, SENSOR



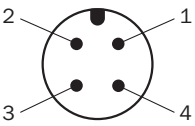
Dimensions in mm (inch)
① Fork depth
② Fork width
③ fixing hole
④ Detection axis
⑤ connection (see technical data for length of cable)
⑥ display and adjustment elements

DIMENSIONAL DRAWING, CONNECTION TYPE



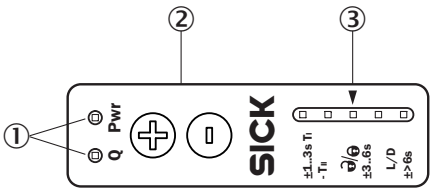
Dimensions in mm (inch)
Cable with M12 male connector
① connection (see technical data for length of cable)

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/6075487

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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

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