

Illustration may differ



Ordering information

Type	Part no.
UFN3-70P415	6049679

Other models and accessories → www.sick.com/UF

Detailed technical data

Features

Functional principle	Ultrasonic detection principle
Dimensions (W x H x D)	18 mm x 47.5 mm x 92.5 mm
Housing design (light emission)	Fork shaped
Fork width	3 mm
Fork depth	69 mm
Minimum detectable object (MDO)	Gap between Labels / Size of labels: 2 mm ¹⁾
Label detection	✓
Adjustment	Plus/minus button (Teach-in, sensitivity, light/dark switching) Cable (Teach-in dynamic)
Teach-in mode	2-point teach-in Teach-in dynamic

¹⁾ Depends on the label thickness.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 10 % ²⁾
Current consumption	40 mA ³⁾
Switching frequency	1.5 kHz ⁴⁾
Response time	250 μs ⁵⁾
Switching output	PNP
Switching output (voltage)	PNP: HIGH = U _V ≤ 2 V / LOW approx. 0 V

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

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1, typical, depending on material and speed.

⁵⁾ Signal transit time with resistive load.

⁶⁾ Output current minimal 0.03 mA.

⁷⁾ Reference voltage DC 50 V.

Switching mode	Light/dark switching
Output current I_{max}	100 mA ⁶⁾
Input, teach-in (ET)	Teach: U > 7 V ... < U _v Run: U < 2 V
Initialization time	100 ms
Connection type	Male connector M8, 4-pin
Protection class	III ⁷⁾
Circuit protection	Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP65
Weight	95 g
Housing material	Metal, Aluminum

- 1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
 2) May not exceed or fall below U_v tolerances.
 3) Without load.
 4) With light/dark ratio 1:1, typical, depending on material and speed.
 5) Signal transit time with resistive load.
 6) Output current minimal 0.03 mA.
 7) Reference voltage DC 50 V.

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⁾
UL File No.	NRKH.E191603 & NRKH7.E191603

- 1) Do not bend below 0 °C.
 2) The UFN complies with the Radio Safety Requirements (EMC) for the industrial sector (Radio Safety Class A). It may cause radio interference if used in residential areas.

Classifications

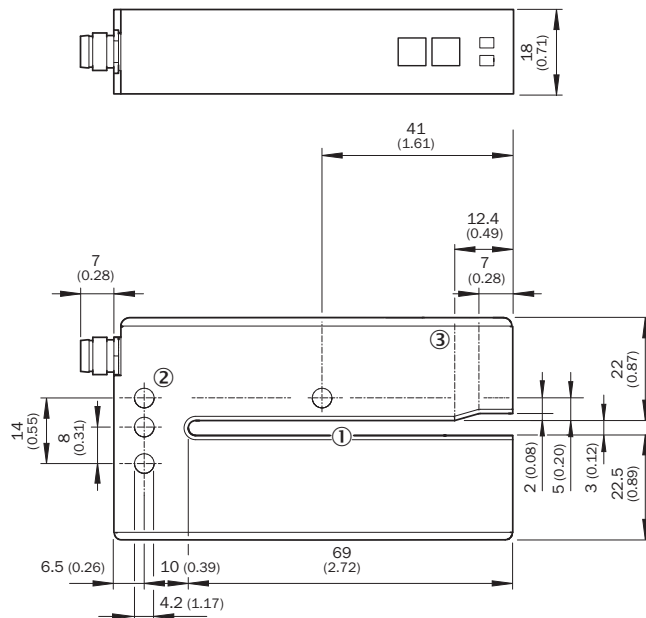
ECl@ss 5.0	27270909
ECl@ss 5.1.4	27270909
ECl@ss 6.0	27270909
ECl@ss 6.2	27270909
ECl@ss 7.0	27270909
ECl@ss 8.0	27270909
ECl@ss 8.1	27270909
ECl@ss 9.0	27270909
ECl@ss 10.0	27270909
ECl@ss 11.0	27270909
ETIM 5.0	EC002720
ETIM 6.0	EC002720
ETIM 7.0	EC002720
ETIM 8.0	EC002720

UNSPSC 16.0901

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Dimensional drawing (Dimensions in mm (inch))

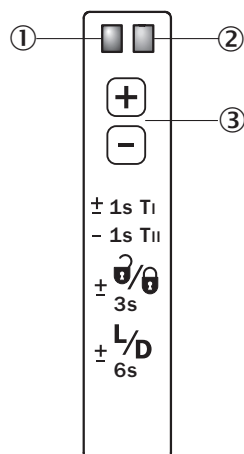
UFnext - Plus/minus buttons



- ① Fork opening: fork width 3 mm, forks depth 69 mm
- ② Mounting hole, Ø 4.2 mm
- ③ Detection axis

Adjustments

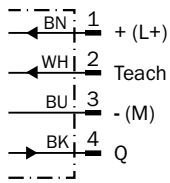
Adjustment: teach-in via plus/minus buttons (WFxx-B416)



- ① Function signal indicator (yellow), switching output
- ② Function indicator (red)
- ③ “+”/“-” buttons and function button

Connection diagram

Cd-092

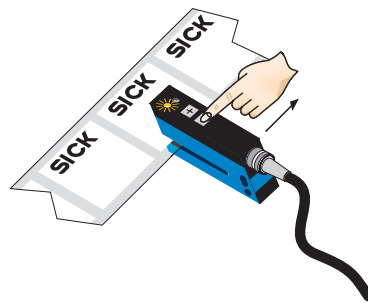
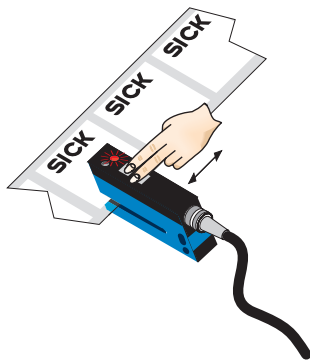


Concept of operation

Teach-in dynamic via plus/minus buttons

1. Position label or substrate in the active area of the fork sensor

2. Move multiple labels through the fork sensor



Press both the “+” and “-” buttons together, hold > 1 s and then release the teach-in buttons. The red LED flashes.

Press “-” button, teach-in process is finished.

Notes

Switching threshold adaptation:

Only, the first teach-in procedure after switching on is permanently stored. Teach-in can be repeated cyclically. Switching output also during teach-in active.

+ Once teach-in process is complete, the switching threshold can be adjusted at any time using the “+” or “-” button. To make minor adjustments, press the “+” or “-” button once. To configure settings quickly, keep the “+” or “-” button pressed for longer.



$\frac{0}{3s}$ Press both the “+” and “-” buttons together (3 seconds) to lock the device and prevent unintentional actuation.

$\frac{L/D}{6s}$ Press both the “+” and “-” buttons together (6 seconds) to define the switching function (light/dark switching). Standard setting: Q = light switching.

Teach-in (static): Setting the switching threshold without movements of label, cf. operating instruction.

Recommended accessories

Other models and accessories → www.sick.com/UF

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Cable: unshielded	STE-0804-G	6037323

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.

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