



Fork sensors UF, UFnext

UFN3-70N415



Model Name > [UFN3-70N415](#)
Part No. > [6049680](#)



At a glance

- Detection of transparent, opaque or printed labels
- Unaffected by metallic foils and labels
- Fast response time of 250 µs
- Simple and accurate adjustment via "+"/"-"-buttons or teach-in
- Rugged, IP 65 aluminum housing

Your benefits

- Reliable label detection, regardless if labels are transparent, opaque or have a printed design, ensuring greater flexibility with one sensor
- Fast response times enable precise detection - even at high web speeds
- The aluminum housing meets all requirements for use in harsh industrial conditions
- Setting the switching threshold using the +/- push buttons or teach-in
- Ultrasonic technology prevents false detection, which may be caused by ambient light or shiny surfaces



Features

Functional principle:	Ultrasonic detection principle
Fork width:	3 mm
Fork depth:	69 mm
Label detection:	✓
Adjustment:	Dynamic teach-in Static teach-in
Output function:	Light/darkswitching, selectable via button
Housing design (light emission):	Fork shaped
Minimum detectable object (MDO):	Size of labels: 2 mm, Gap between labels: 2 mm ¹⁾
Dimensions (W x H x D):	18 mm x 47.5 mm x 92.5 mm

¹⁾ Depends on the label thickness

Mechanics/electronics

Residual ripple ¹⁾ :	< 10 %
Power consumption ²⁾ :	40 mA
Switching frequency ³⁾ :	1.5 kHz
Response time ⁴⁾ :	250 µs
Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V
Switching mode:	NPN

Output current I _{max} . ⁵⁾ :	100 mA
Input, teach-in (ET):	Run: U < 2 V Teach: U > 7 V ... < U _V
Initialization time:	100 ms
Protection class ⁶⁾ :	III
Circuit protection:	Output Q short-circuit protected Interference suppression
Enclosure rating:	IP 65
Weight:	95 g
Housing material:	Aluminum, Metal
Supply voltage:	10 V DC ... 30 V DC ⁷⁾
Fieldbus interface:	-

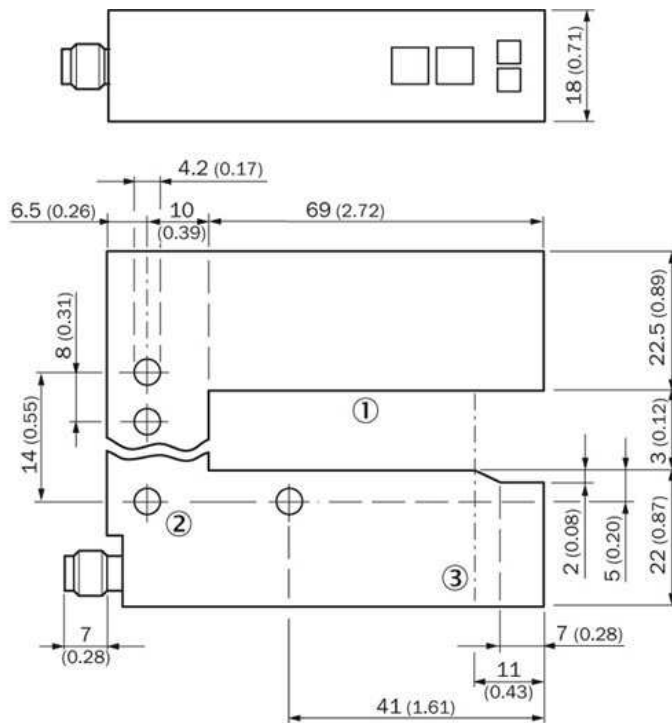
¹⁾ May not exceed or fall short of V_S tolerances ²⁾ Without load ³⁾ With light/dark ratio 1:1, typical, dependent on material and speed ⁴⁾ Signal transit time with resistive load ⁵⁾ Output current minimal 0.03 mA ⁶⁾ Reference voltage DC 50 V ⁷⁾ Limit values, reverse-polarity protected, operation in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

Ambient data

Shock load:	According to EN 60068-2-27
EMC:	EN 60947-5-2 ¹⁾
Ambient temperature operation:	+5 °C ... +55 °C ²⁾
Ambient storage temperature:	-20 °C ... +70 °C

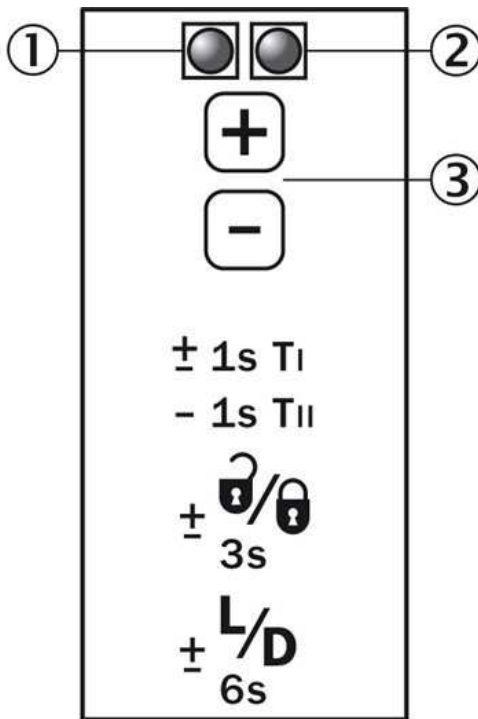
¹⁾ The UFN complies with the Radio Safety Requirements (EMC) for the industrial sector (Radio Safety Class A).
It may cause radio interference if used in residential areas. ²⁾ Do not bend below 0 °C

Dimensional drawing



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

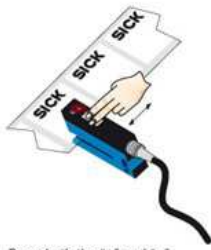
Adjustments



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

Bedienhinweis

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



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

**2. Move multiple labels
through the fork sensor**



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.



Press both the "+" and "-" buttons together (3 seconds) to lock the device and prevent unintentional actuation.



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.

Australia

Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com