



# UF

The clear choice for detecting transparent labels

**FORK SENSORS**

**SICK**  
Sensor Intelligence.



### Technical data overview

<b>Functional principle</b>	Ultrasonic detection principle
<b>Fork width</b>	3 mm
<b>Fork depth</b>	69 mm
<b>MDO</b>	Gap between Labels / Size of labels: 2 mm <sup>1)</sup>
<b>Switching frequency</b>	1.2 kHz <sup>2)</sup> 1.5 kHz <sup>2)</sup>
<b>Response time</b>	300 µs <sup>3)</sup> 250 µs <sup>3)</sup>
<b>Connection type</b>	Male connector M8, 4-pin
<b>IO-Link functions</b>	--
<b>Advanced functions</b>	--

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

<sup>2)</sup> With light/dark ratio 1:1, typical, depending on material and speed.

<sup>3)</sup> Signal transit time with resistive load.

### Product description

The UF ultrasonic sensors reliably detects labels and materials, regardless of printed design, transparency or surface characteristics. Unlike optical sensors, the UF3 relies on damping – a process where the thickness of a material determines the degree to which the sensor absorbs sound waves. A high level of positioning accuracy and stable response times make the fork sensor suitable for nearly any environment. Due to its small, compact metal housing, the UF can be used in harsh conditions and where space is limited. As a result, the UF3 can distinguish between labels located just 2 mm apart from one another on an adhesive tape. Applications include detecting transparent labels on transparent substrates, detecting labels with different printed designs or differentiating between single- and two-ply materials.

### 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 teach-in button, or plus/minus buttons
- Rugged, IP 65 aluminum housing

### Your benefits

- Great flexibility: UF identifies labels reliably - regardless of whether they are transparent, opaque or printed
- Fast response times enable precise detection – even at high web speeds
- Teach-in function enables quick and easy commissioning
- The aluminum housing meets all requirements for use in harsh industrial conditions
- High process reliability: Ultrasonic technology prevents false detection, which may be caused by ambient light or shiny surfaces

### Fields of application

Detection of transparent, opaque, or printed labels  
Double sheet detection

## Ordering information

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

- **Adjustment:** Plus/minus button

Fork width	Fork depth	Switching output	Connection type Detail	Type	Part no.
3 mm	69 mm	PNP, NPN	Male connector M8, 4-pin	UF3-70B410	6034888
				UFN3-70B413	6049678

- **Adjustment:** Plus/minus button, cable

Fork width	Fork depth	Switching output	Connection type Detail	Type	Part no.
3 mm	69 mm	NPN	Male connector M8, 4-pin	UFN3-70N415	6049680
		PNP	Male connector M8, 4-pin	UFN3-70P415	6049679

- **Adjustment:** Teach-in button

Fork width	Fork depth	Switching output	Connection type Detail	Type	Part no.
3 mm	69 mm	PNP, NPN	Male connector M8, 4-pin	UFN3-70B417	6058742

- **Adjustment:** Teach-in button, cable

Fork width	Fork depth	Switching output	Connection type Detail	Type	Part no.
3 mm	69 mm	NPN	Male connector M8, 4-pin	UFN3-70N417	6058744
		PNP	Male connector M8, 4-pin	UFN3-70P417	6058743

## 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)