microsonic
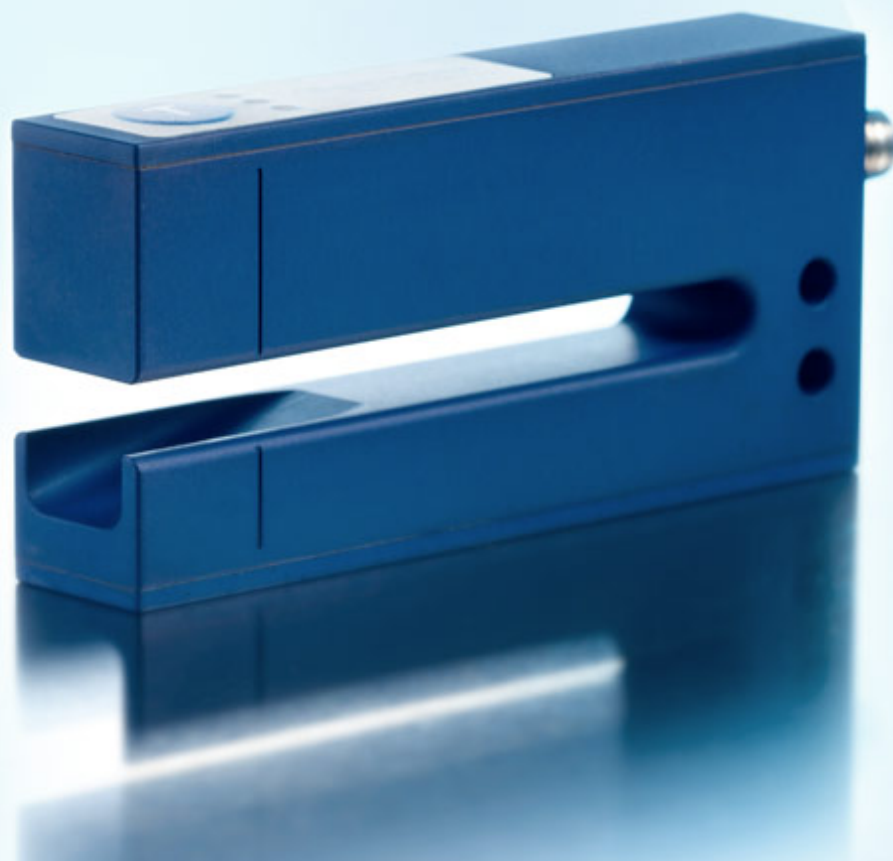

온라인 카타로그에서 적절하고 정확한 품명을 찾으실 수 있습니다.

esf-1/CF

에 전가되는 전류 2016-04-21

The esf-1 fork sensor can detect labels reliably even at high label speeds.

하이라이트

> 3 Teach-in methods > for the detection of labels even outside the standard

> Response time < 300 µs: > for use at high web speeds

> Housing in fork format with very compact dimensions

> Quick Teach

BASICS

> Label and splice sensor as a fork sensor

> 2 switching outputs > for label/ splice detection and web break monitoring

> 3 LEDs and 1 button on the top of the housing

> Teach-in optionally via button or pin 5

> LinkControl > as optional assistance for installation and commissioning

특성

The functional principle

Labels are guided through the fork. An ultrasonic transmitter in the lower leg of the fork beams a fast sequence of pulses through the backing material. The sound pulses cause the backing material to vibrate such that a greatly attenuated sound save is beamed from the opposite side. The receiver in the upper leg of the fork receives this sound wave.

The backing material transmits a different signal level from the label. This signal difference is evaluated by the esf-1. The signal difference between the backing material and the label can be very slight. To ensure a reliable distinction, the esf-1 has to learn the label.
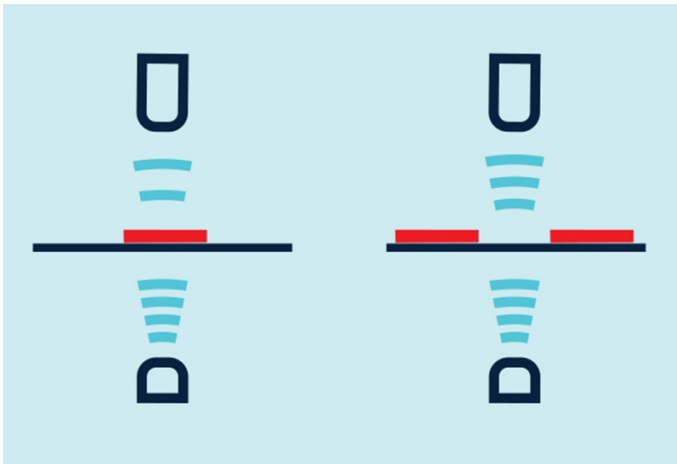
*Backing material with a label provides an attenuated signal level*

The esf-1

can reliably detect high-transparency, reflective materials as well as metallised labels and labels of any colour. The measurement cycle time automatically self-adjusts to the sound power required. For thin labels and backing materials, the esf-1 can work at its maximum speed, with a response time of < 300 μs.

To be able to detect special labels, for example labels with punches or perforations, there are three different Teach-in methods available.

A) Learn both backing material and label dynamically

During the Teach-in process, the backing material and its labels are guided through the fork at a constant speed. The esf-1 sensor automatically learns the signal level for the labels and for the gaps between the labels. This is the standard Teach-in for labels.
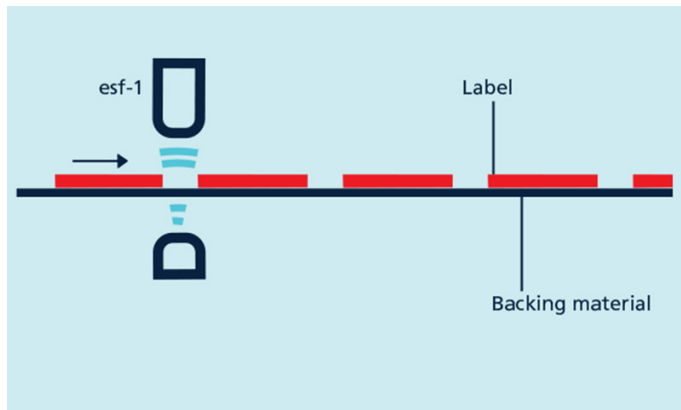
esf-1 as label sensor

B) Separate Teach-in for backing material and labels

The signal level difference for the backing material and labels might be very slight. In order to still scan labels with very little difference in signals, Teach-in for the signal levels is done separately: Teach-in is first done for the backing material and then for the label on it. The switching threshold then lies between these two signal levels.

C) Learn web material only

Web material is generally processed from a roll. The splice to be detected is hidden somewhere in the roll. There is a separate Teach-in method available for this purpose, in which only the sheeting is learned. The esf-1 detects the level difference at the splice and sets its output.
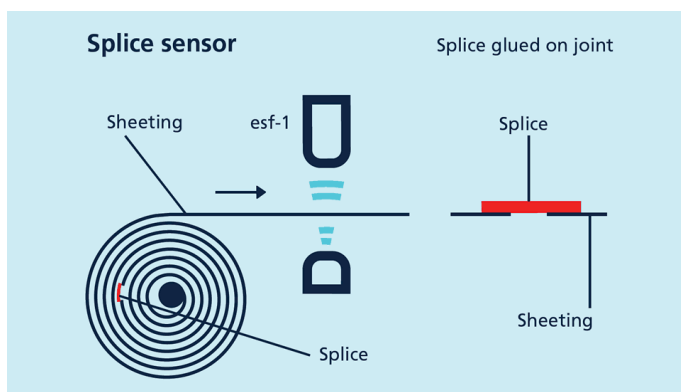

esf-1 as splice sensor

The Teach-in procedure

can optionally be carried out with the button on the top of the housing or with pin 5 on the unit's connector.

For QuickTeach

the esf-1 learns the material for the duration that the button is pushed or pin 5 is controlled.

With LinkControl

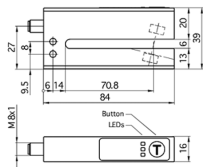the esf-1 can optionally be parameterised. Measured values can also be shown graphically.
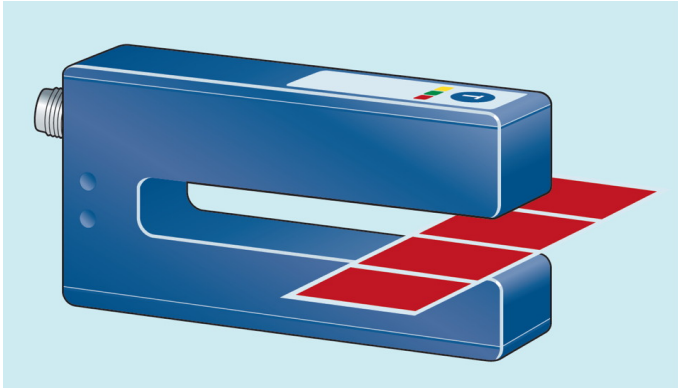
Labels are guided through the fork. The esf-1 reacts to the signal difference between the backing material and the label.

microsonic esf-1 ultrasonic label and splice sensors

esf-1/CF

1 x Push-Pull

동작거리	sheeting with weights of < 20 g/m² up to >> 400 g/m², metal-laminated sheets and films up to 0.2 mm thick, self-adhesive films, labels on backing material
디자인	포크 형
동작 모드	label/splice detection

초음파 사양

측정값	진폭 계산을 가진 펄스 작동
전송 주파수	500 kHz

전기적인 데이터
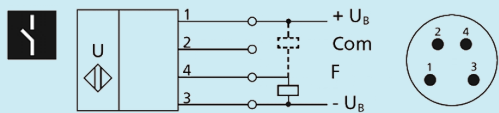
동작 전압	20 - 30 V d.c., 역극성 보호
무부하 소비전류	≤ 50 mA
연결 타입	4-pin M8 규격 플러그

esf-1/CF

출력1	Schaltausgang Push-Pull, U_B-3 V, -U_B+3 V,I_{max} = 100 mA
응답속도	300 µs up to 2,25 ms, dependent on the material
선지연 유용성	< 300 ms

입력

입력1	com 입력

하우징

포크 폭	6 mm
포크 깊이	67 mm
재질	산화처리 알루미늄
초음파 송신기	폴리우레탄 폼, 글라스-에폭시 수지
EN60529에 따르는 보호등급	IP 65
동작온도	+5°C to +60°C
보관온도	-40°C to +85°C
무게	90 g

기술 특징/ 특성

제어	1 푸쉬버튼
세팅을 위한 범위	Teach-in via push-button Teach-in via com input on pin 2 LCA-2 with LinkControl
표시기	1 x LED green: working, 1 x LED yellow: label/splice detected, 1 x LED red: web break

문서 (Download)

핀 할당	

주문번호	**esf-1/CF**

microsonic   esf-1 ultrasonic label and splice sensors