



Clearly better!

Transparent label detection with  
UF Ultrasonic Fork Sensor

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## High performance in compact format.

Transparent, reflective or metallic labels; white, opaque or coloured substrates; thin foils, foils on foils, paper on paper – modern labelling machines are confronted by countless material and surface variants. The solution from SICK: the UF ultrasonic fork sensor, for ultrasonic detection. Advantage: it is not the surface, but the material thickness that is measured and reliably detected.

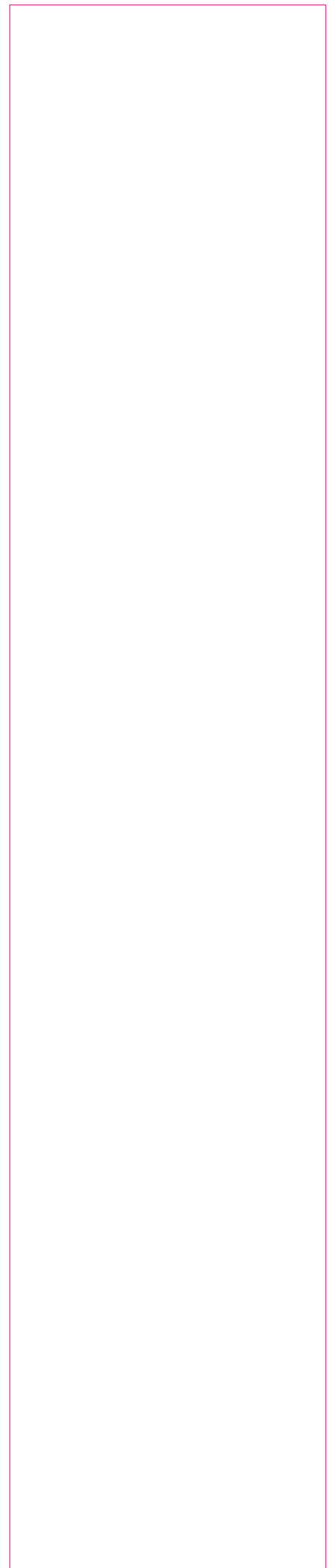
The new UF fork sensors detect even the most difficult label surfaces, as well as RFID labels – regardless of the printing and material structure. Their compact housings make UF fork sensors the ideal all-rounders for many applications and every conceivable mounting situation.

LABEL  
DETECTION

DOUBLE-SHEET  
DETECTION

STICKY TAPE  
DETECTION





## Labels with style need sensors with flair.

Our consumer world demands high-quality product labelling. Conspicuous labels provide the final brand message before purchase, and represent the brand in the consumer's household. SICK's new UF ultrasonic fork sensors were developed to detect "difficult" labels:

### Label:

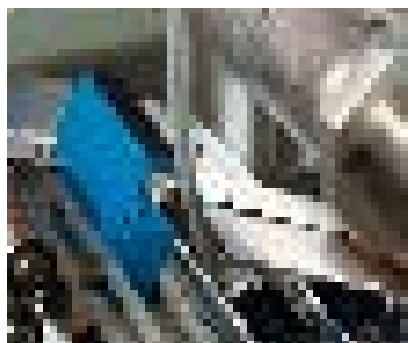
- transparent labels
- unprinted labels
- coloured labels
- metallic labels
- RFID labels

### Substrate:

- transparent substrate
- opaque substrate
- printed (and non-transparent) substrate

### TRANSPARENT LABELS

Transparent labels on transparent substrates – most opto-electronic sensors cannot cope with this. SICK UF ultrasonic fork sensors provide a reliable solution, even at very fast transport speeds.



**METALLISED LABELS**

SICK's new UF ultrasonic fork sensors cannot be dazzled. They continue to operate reliably regardless of reflective material surfaces. Even original-product labels and product decoration with high-quality metal surfaces are reliably detected and processed.



**COLOURED LABELS**

Detect labels on monochrome, non-transparent substrates – no problem for SICK's UF ultrasonic fork sensors. Material thickness is measured ultrasonically and the label identified in milliseconds during "running operation".



**RFID LABELS**

The future belongs to RFID technology. Radio Frequency Identification labels enable "transparent" goods traffic. Ultrasonic sensors from SICK reliably detect the radio chips, e.g. during application to the product.





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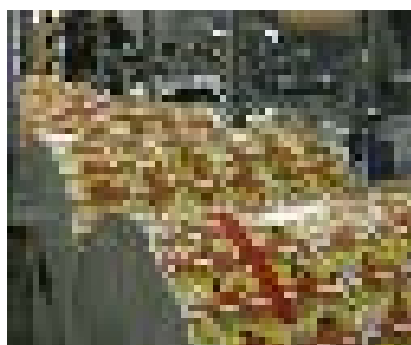
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## Sticky tape detection: no disruption to production.

Tape on packaging can destroy the good impression products make on the consumer. Therefore tape must be reliably detected and removed during the labelling process. SICK's UF ultrasonic fork sensors prove to be up to the task here too. They detect sticky tape regardless of material, printing, colour or reflective surfaces. The fast and stable response times also ensure that performance is maintained at high transport speeds and machine cycle times.

### TAPE DETECTION

- Detection of sticky tape regardless of the colour
- Detection regardless of printing on the substrate



## Checking for double sheets: Dynamic detection whilst production is maintained.

The detection of sheets, cards, foils or label substrates lying upon one another is a key task in many industrial production processes. Sensors need to detect the simultaneous in-feed of two sheets. Ideal solution: SICK's new UF ultrasonic fork sensors. They function regardless of material and colours, are suitable for all weights of paper and detect transparent foils.

Another advantage over optical systems: UF ultrasonic fork sensors are easy to install.

### CHECKING FOR DOUBLE SHEETS

- Detection of 1 or 2 sheets
- Detection of thin cardboard
- Detection of paper on paper
- Detection of foil on foil (transparent on transparent)
- Detection of perforations in transparent material



Test them yourself!



### Sector knowledge decisive

SICK convinces producers of labelling machines, as well as pharmaceutical and consumer goods producers, or packaging and logistics service providers who invest in their own machines and plant. Both OEMs and end-users profit from our decades of experience – across all sectors.

Ask our application specialists – they already know the solution!

- Labelling technology
- Consumer goods production
- Packaging industry
- Pharmaceutical industry
- Logistics
- Print and paper

### UF ULTRASONIC FORK SENSORS

- Small, robust metal housings
- Waste reduction through minimum label separation distance
- High positional accuracy

Further information at  
[www.sick.com](http://www.sick.com)





### FACTORY AUTOMATION

With its intelligent sensors, safety systems, and auto idet applications, SICK realises comprehensive solutions for factory automation.

- Non-contact detecting, counting, classifying, and positioning of any types of object
- Accident protection and personal safety using sensors, as well as safety software and services



### LOGISTICS AUTOMATION

Sensors made by SICK form the basis for automating material flows and the optimisation of sorting and warehousing processes.

- Automated identification with bar code and RFID reading devices for the purpose of sorting and target control in industrial material flow
- Detecting volume, position, and contours of objects and surroundings with laser measurement systems



### PROCESS AUTOMATION

Analyzers and Process Instrumentation by SICK MAIHAK provides for the best possible acquisition of environmental and process data.

- Complete systems solutions for gas analysis, dust measurement, flow rate measurement, water analysis or, respectively, liquid analysis, and level measurement as well as other tasks



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