

# TECNO TIN - UVC 2

## Tin side detection system

- Measuring range typ. 10 mm ... 40 mm
- Reflection-based measurement method
- UVC LED and UV filter (AC-/DC-operation or OFF for luminous objects can be switched)
- High scan frequency
- Gray scale detection (12-bit resolution)
- Insensitive to outside light (in AC-operation)
- Brightness correction can be activated (STAT/DYN)
- Averaging can be activated (from 1 up to over 32000 values)
- TEACH via PC or PLC
- Switching state indication by means of 2 yellow LEDs
- RS232 interface (USB or ETHERNET converter available)
- Parameterizable via Windows® software, scope function
- Temperature compensated (from 0°C to 60°C)
- Automatic threshold correction can be activated
- Switching threshold can be parameterized relative or absolute
- 2 digital inputs (0V/+Ub)
- 2 digital outputs (max. 60 kHz switching frequency)
- 1 analog output (0V...+10V or 4...20mA), selectable via software
- Various switching threshold functions (window, upper/lower threshold)
- Integrated cooling device for protection against overheating of the sensor

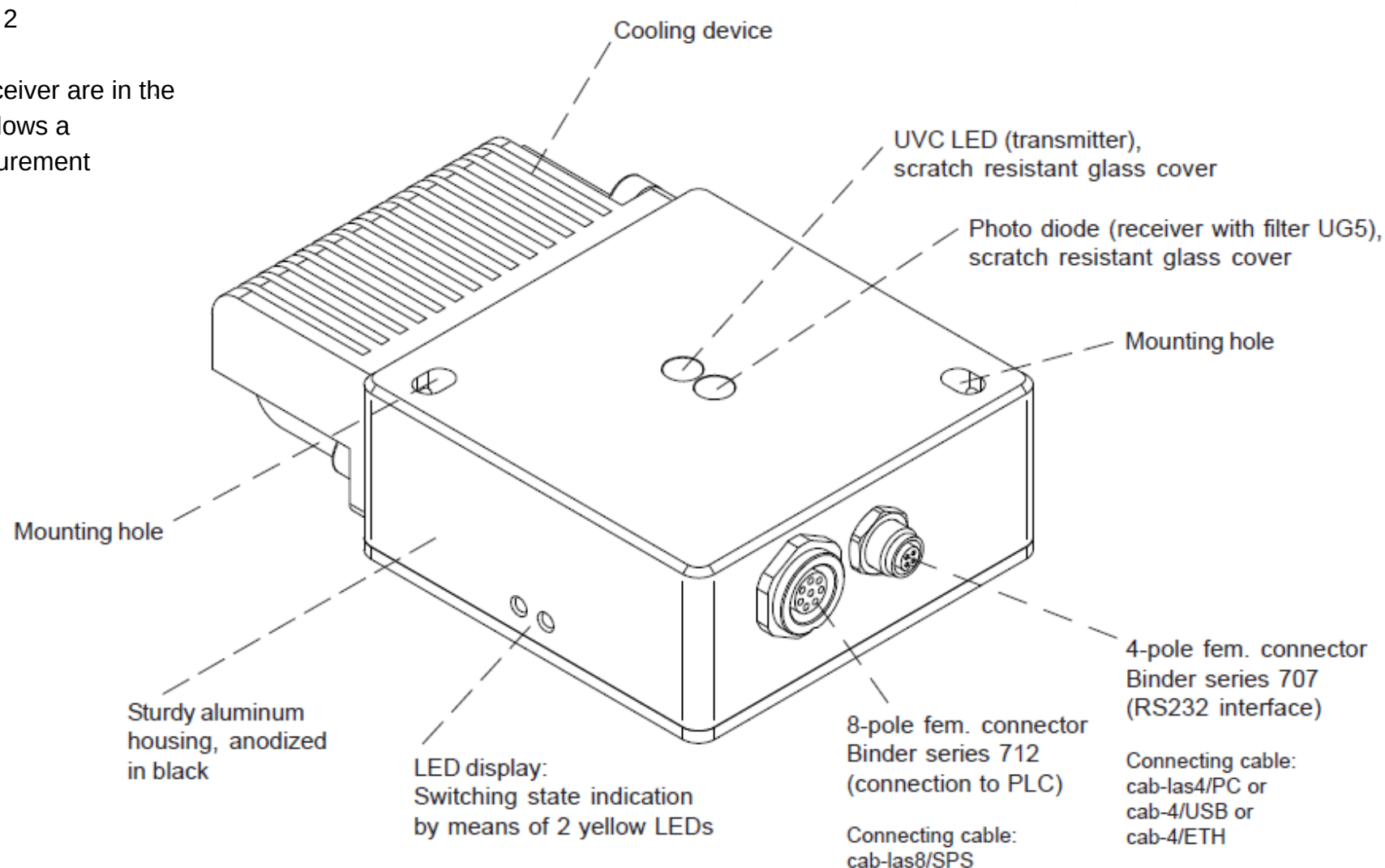


## Design

### Product name

TECNO TIN - UVC 2

Transmitter and receiver are in the UV range, which allows a transmission measurement in the UV range



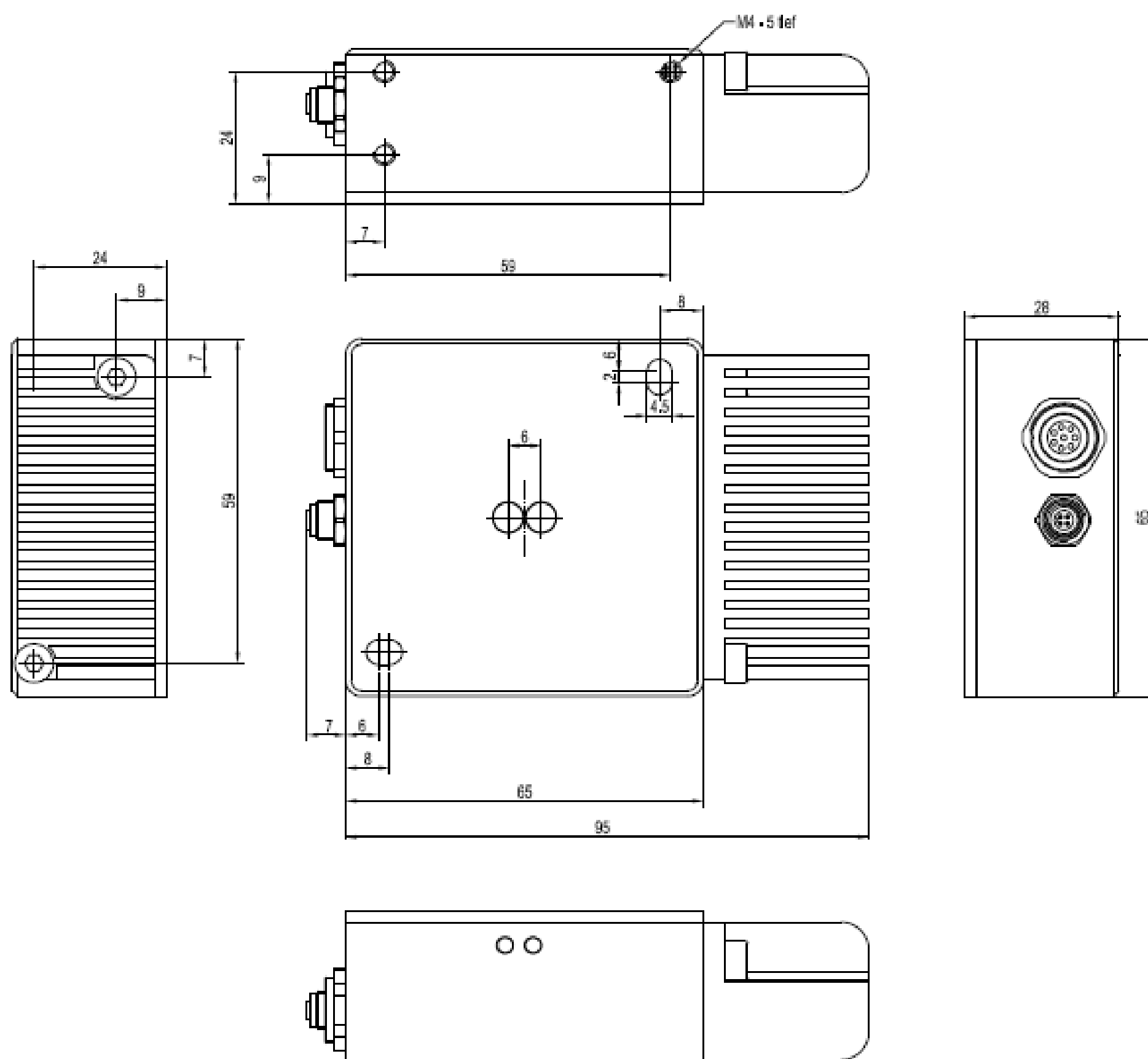
# Tin side detection system

## Technical data

|                                          |                                                                                                                                |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Voltage supply</b>                    | +24VDC (± 10%), reverse polarity protected, overcurrent protected                                                              |
| <b>Current consumption</b>               | < 220 mA                                                                                                                       |
| <b>Max. switching current</b>            | 100 mA, short circuit proof                                                                                                    |
| <b>Switching state indication</b>        | 2 yellow LED visualize the physical state of the outputs OUT0 and OUT1                                                         |
| <b>Digital inputs (2x)</b>               | IN0 and IN1 (Pin 3 and 4): digital (0V/+24V)                                                                                   |
| <b>Digital outputs (2x)</b>              | OUT0 and OUT1 (Pin 5 and 6): digital (0V/+24V), npn-/pnp-able (bright-/dark-switching, can be switched)                        |
| <b>Analog output (1x)</b>                | ANALOG (Pin 8): voltage 0 ... +10V or current 4 ... 20mA, adjustable via PC software                                           |
| <b>Interface</b>                         | RS232                                                                                                                          |
| <b>Averaging</b>                         | max. 32768 values, adjustable via PC software                                                                                  |
| <b>Analog band width</b>                 | max. 90 kHz (-3 dB)                                                                                                            |
| <b>Transmitter (light source)</b>        | UV LED, 265 nm                                                                                                                 |
| <b>Object distance (measuring range)</b> | with reflected light fiber optics: typ. 10 mm ... 40 mm                                                                        |
| <b>Detection range</b>                   | typ. 10 mm at a distance of 15 mm<br>typ. 20 mm at a distance of 40 mm                                                         |
| <b>Ambient light</b>                     | max. 5000 Lux                                                                                                                  |
| <b>Size of light spot</b>                | typ. Ø 15 mm depending on object distance                                                                                      |
| <b>Housing dimensions</b>                | LXWxH approx. 95 mm x 65 mm x 38 mm<br>(incl. fiber optics adaptor M18x1, without connectors)                                  |
| <b>Housing material</b>                  | Aluminum, anodized in black                                                                                                    |
| <b>Enclosure rating</b>                  | IP64                                                                                                                           |
| <b>Connecting cables</b>                 | to PLC: cab-las8/SPS or cab-las8/SPS-w<br>to PC/Ethernet interface: cab-4/ETH<br>to PC/USB interface: cab-4/USB or cab-4/USB-w |
| <b>Type of connector</b>                 | connection to PLC: 8-pole fem. connector (Binder series 712)<br>connection to PC: 4-pole fem. connector (Binder series 707)    |
| <b>Operating temp. range</b>             | -20°C ... +55°C                                                                                                                |
| <b>Storage temp. range</b>               | -20°C ... +85°C                                                                                                                |
| <b>EMC test acc. to</b>                  | DIN EN 60947-5-2                          |

## Tin side detection system

### Dimensions



All dimensions are in mm

## Tin side detection system

### ➤ Connector assignment

#### Connection to PLC:

##### 8-pole fem. connector Binder series 712

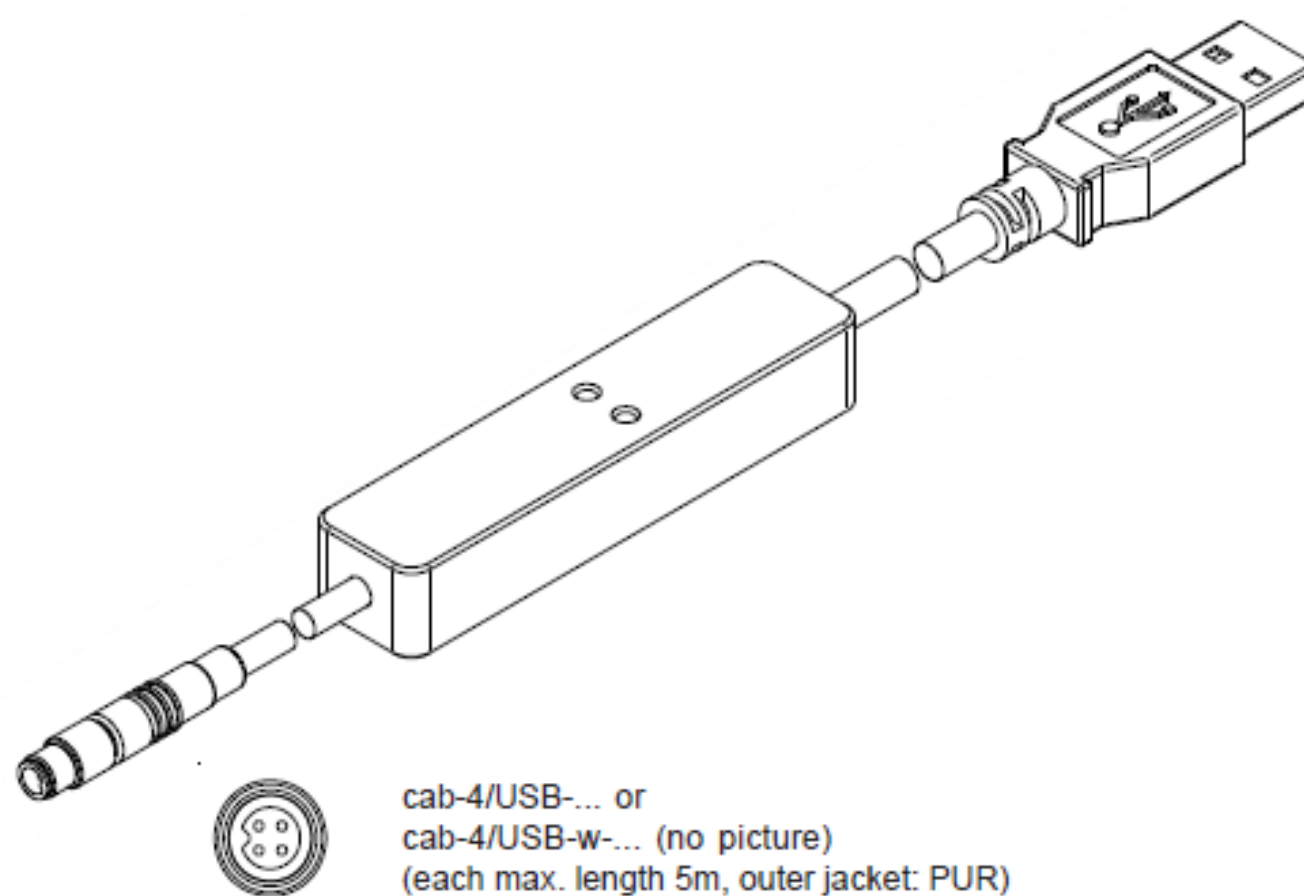
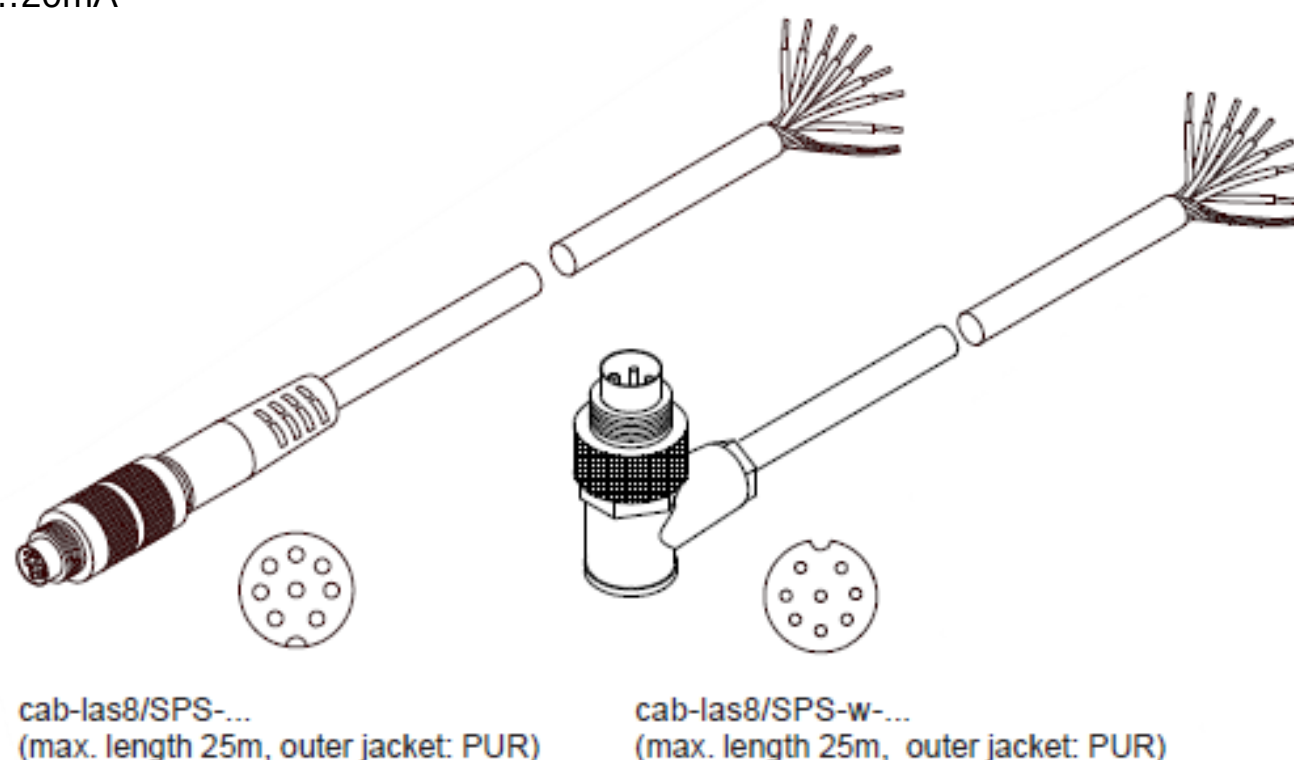
| Pin: | Color: | Assignment:                                                |
|------|--------|------------------------------------------------------------|
| 1    | white  | GND (0V)                                                   |
| 2    | brown  | +24VDC ( $\pm 10\%$ )                                      |
| 3    | green  | IN0 (Digital 0: 0 ... 1V, Digital 1: +Ub - 10%)            |
| 4    | yellow | IN1 (Digital 0: 0 ... 1V, Digital 1: +Ub - 10%)            |
| 5    | grey   | OUT0 (Digital 0: Type 0 ... 1V, Digital 1: Type +Ub - 10%) |
| 6    | pink   | OUT1 (Digital 0: Type 0 ... 1V, Digital 1: Type +Ub - 10%) |
| 7    | blue   | 0...+10V                                                   |
| 8    | red    | ANALOG current 4...20mA                                    |

#### Connecting cable:

cab-las8/SPS-(length)

cab-las8/SPS-w-(length)

(standard length 2m)

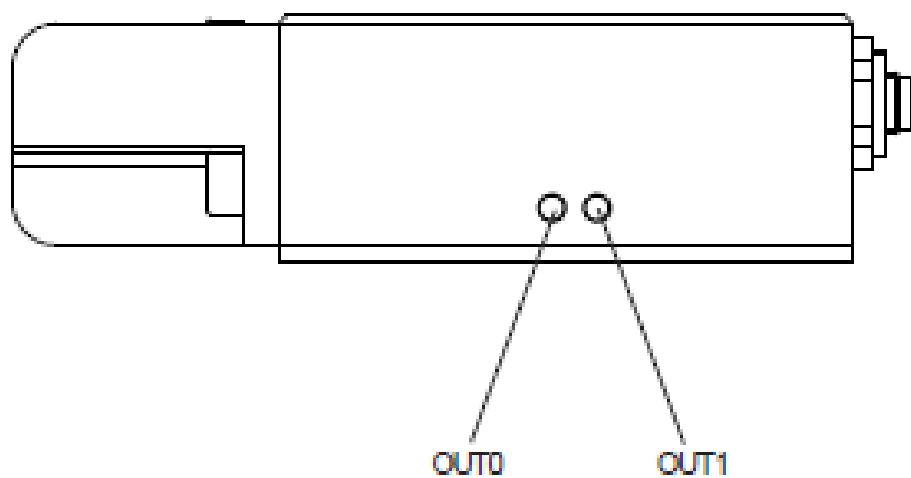


## Tin side detection system

### LED Display

#### LED display:

By means of the two LEDs  
the physical state of the two outputs  
OUT0 and OUT1 is visualized:



### Measuring principle

#### Measuring principle of the sensors of TECNO TIN - UVC:

The sensors inside the TECNO TIN-UVC is of single-channel design, i.e. they acquire the analog signal that comes from a receiver and evaluate this signal. UV light source is used as a transmitter. The receiver is correspondingly matched to the transmitter. The acquired analog signal is provided through a voltage output and a current output.

The software can be used to select various evaluation modes for the analog signal. The status of the analog signal is provided through 2 digital outputs in accordance with the selected evaluation mode. A digital input allows external "teaching" of the sensor. An additional input allows the "freezing" of the analog output signal upon a positive input edge.

Parameters and measurement values can be exchanged between PC and sensor either through RS232 or Ethernet. Through the interface all the parameters can be stored in the non-volatile EEPROM.

Possible firmware updates can be easily performed through the RS232 interface, even with the sensor system in installed condition.

## Our solution for Automation

Tecnosens' Automation Division deals with the distribution of sensors for measurement in industrial automation and the realization and development of integrated systems for customized applications.

Thanks to the know-how acquired in more than 25 years we can participate in the design and engineering, following and supporting the customer step by step.

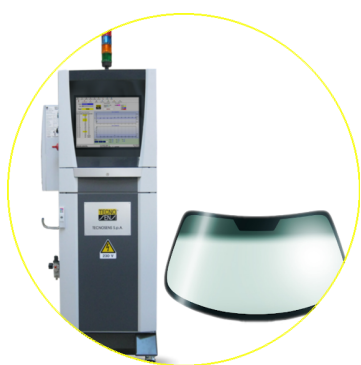
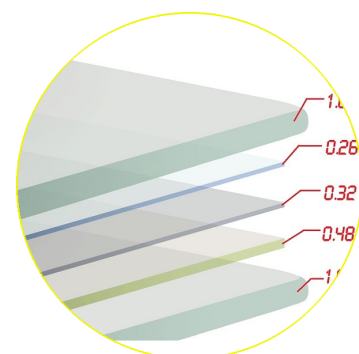
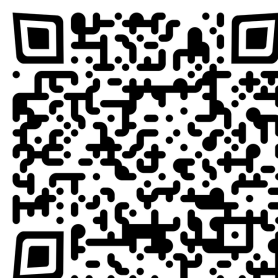
### Find out our solutions:



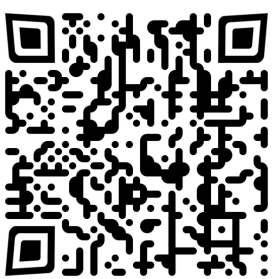
**Air Gap**



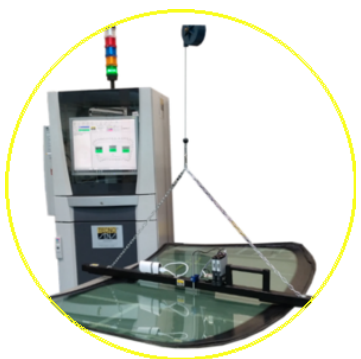
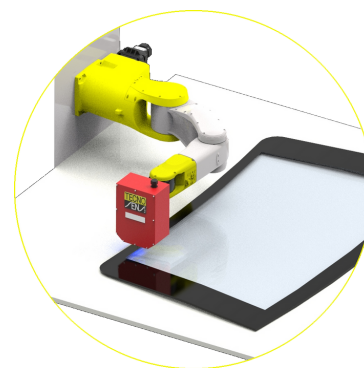
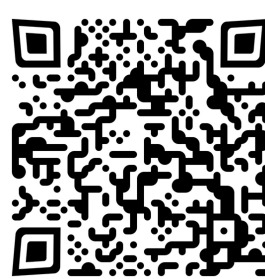
**Multilayer**



**Glass Gauging**



**Black band**



**Caliber WI**



**Tecnosens**

