

## Press information from Sensor Instruments

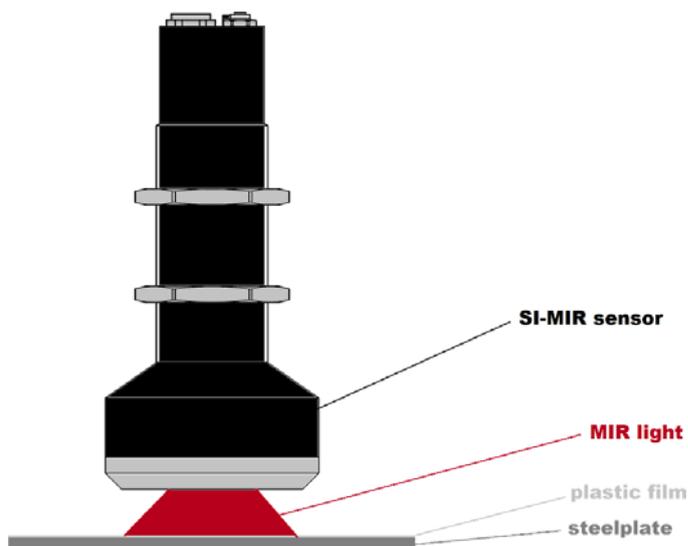
July 2020

### No stress with stretch! Measuring the thickness of thin and transparent plastic films

**31/07/2020. Sensor Instruments GmbH:** It is important to be able to measure the thickness of stretch films after production, including after the stretching procedure. The **SPECTRO-MIR-10** measurement system enables fast and precise inline and offline measurement and is not affected by extraneous light.

The measurement principle is easy: mid-wavelength infrared light (MIR) is aimed at a reference metal plate, the majority of which is reflected in a diffuse manner. In addition to the broadband MIR light sources, which provide a homogeneous illumination of the measurement object at the respective measuring point, the front end of the sensor contains two detectors, each fitted with a narrow band wavelength window in the MIR range. The centre wavelengths of the two filters are offset; one of the two optical windows serves as a reference, i.e. the MIR radiation is not influenced by the presence of stretch films yet a significant reduction of the received signal can be observed in the actual measurement window. Placing the two signals in relation to each other produces an intensity-independent signal which alters with the thickness of the film in a reproducible fashion.

The **Windows®-Software SPECTRO MIR Scope V1.0** can be used to calibrate the measurement system to the respective film type. In addition to the parametrization software, the **monitoring software SPECTRO MIR Monitoring V1.0** is available, which is used to save measurement data and display it graphically and numerically, including trends.

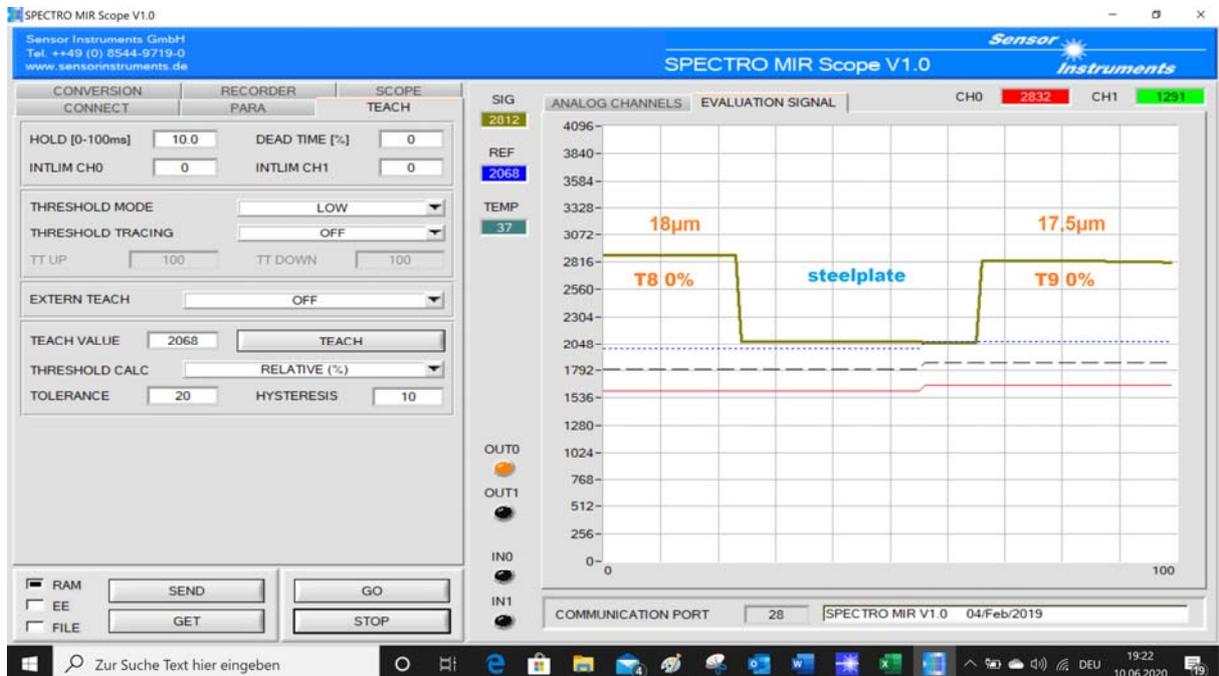


Sketch: SI-MIR sensor, MIR light, plastic film, steel plate

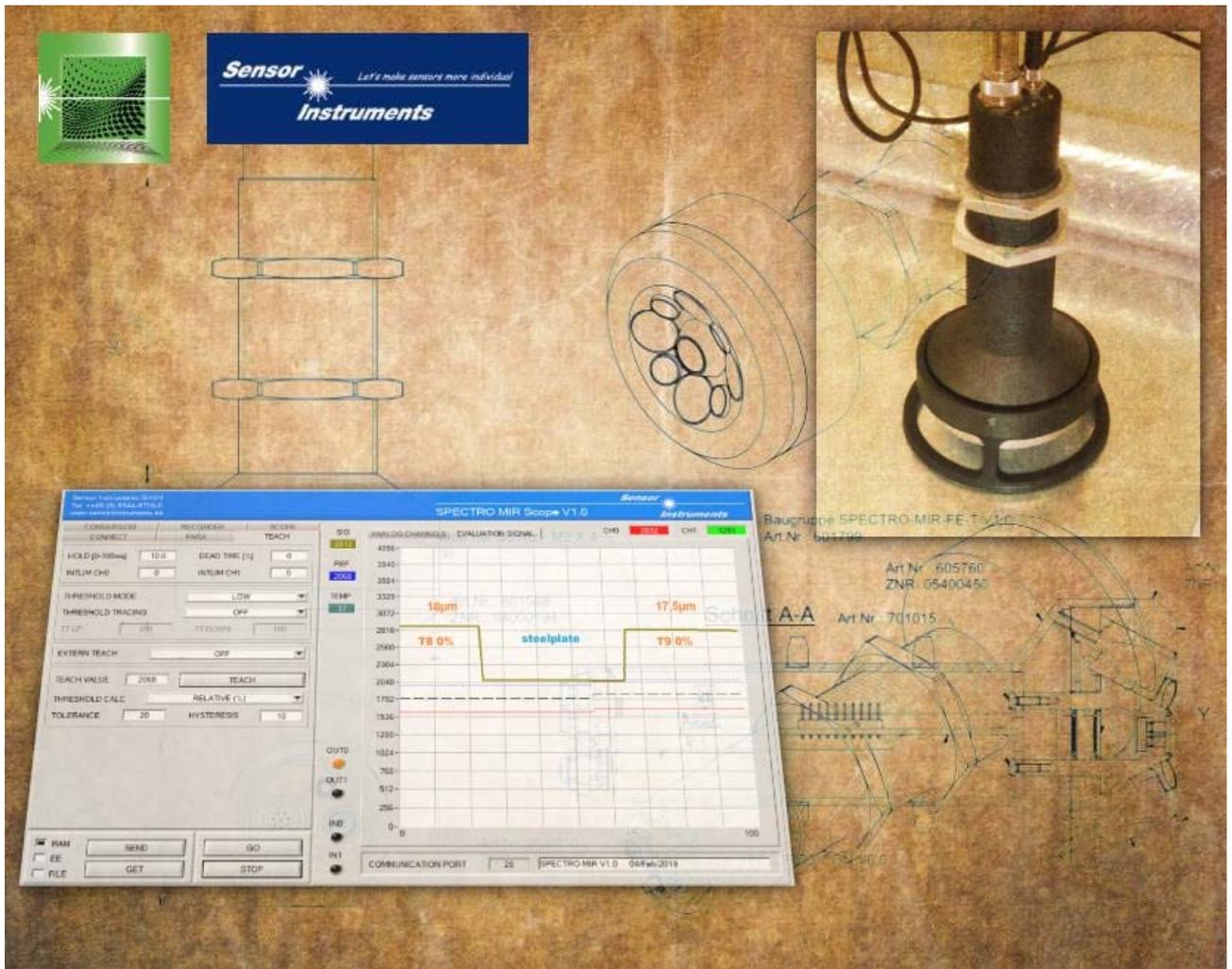




The **SPECTRO-MIR-10** measurement system permits quick, precise inline and offline measurements and is not affected by extraneous light.



The **SPECTRO MIR Scope Windows®** software for parametrizing the measurement system



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