Nordson
MEASUREMENT & CONTROL

SR710S SENSOR

NIR Measurement Technology for the Coating and Converting Industries

The SR710S non-contact precision infrared gauges provides high-resolution measurements of coatings, laminates. It represent a non-nuclear solution and does not require special licensing or protection guards. This gauge combines high-speed measurement performance with accuracy to achieve robust, reliable measurements on a fast-moving web. Its selective infrared technologies enables scanning coat weight measurement without the need for the extra hardware required by subtractive methods.

With ultra-fast measurement speeds (up to 10 times faster than other IR gauges), their patented design achieves improved resolution, speed and accuracy. When incorporated into a TDi web gauging system, it provides the industry's best cross-web and machine direction profiling performance, for superior quality and productivity.

The SR710S gauge is engineered to be unaffected by changes in process and ambient conditions, such as:

- Lighting fluctuations
- Temperature
- Relative humidity
- Air quality: dust, evaporates content etc.
- Web flutter

This also includes subtle changes that can occur within the substrates from batch to batch.

Specifically engineered for measuring thin coatings on metal foils, steel coils, metallized paper or plastics using a unique patented design

Applications:

- Coated film
- Laminates
- Thermal lamination films
- Laquer on aluminum foil
- Flexible packaging
- Industrial packaging
- Steel and aluminum coating

TDi Systems: Delivering the process visibility and control required to provide greater production, quality and process efficiency.

Nordson's "Total Distributed Intelligence" Systems use a robust, easy-to-install architecture with minimal hardware that is reliable and easy to maintain.

As part of the TDi System, the SR710S functions as an "i-Sensor". It is a "smart" device with the signal processing carried out in the high-speed embedded processor prior to the operator consoles and control devices on the network.

The same is true for the scanning frames, such that when position data from a scanning frame is combined with measurement data from a sensor, the resulting profile accurately represents the position of streaks and cross-machine control zones.

This provides reliable data for effective process control for a fast return on investment from the system.

Incorporates a unique patented design

Specifically engineered for measuring thin coatings on metals and metalized substrates

High-Precision Performance

The SR710S delivers exceptional measurement precision of thin organic coatings on metals and metalized substrates. These coatings may be just a few microns thick, but the combination of more intense mid-IR wavelengths plus the high-sensitivity detector used in the SR710S, means the gauge can accurately measure down to 0.1 microns, while remaining unaffected by changing ambient and process conditions.

Cost-Effective Measurement

The SR710S is able to accurately measure very thin, high value-added coatings that have been difficult to gauge with alternative technologies. The combination of its performance and ability to measure coatings directly, make it significantly more cost effective than alternative measurement technologies; for example multi-scanner X-ray or beta gauge configurations that employ subtractive techniques to calculate the coat weight.

SR710S Advantages

The SR710S can be installed on the NDC MiniTrak-S scanner and integrated into an TDi System. These platforms include operator display and control options that provide tangible financial cost, quality and productivity benefits. These systems are configured specifically for each application and are able to deliver a range of benefits including:

- Reduced product change and start-up times
- Tight machine-direction and cross-direction coating thickness control
- Reduced raw material consumption
- Reduced drying costs
- Enhanced product quality and consistency

Parameter	SR710S
Measurement Capabilities	- Thin organic coatings on foils - Wax or lubricant on steel - Adhesives on aluminum foil or metallized papers - Lacquers on metals/metallized substrates - Extruded polymers on metals - Organic based coating on steel
Calibration	SpeedCal™ pre-calibrated. No routine re-calibration required
Network Connectivity	Industrial Ethernet
Environmental	Ambient temperature: Up to 50°C (Cooling optional). Cast alloy sensor housing.

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