MCT NIR

MCT NIR On-line moisture and coating measurement

Near Infrared (NIR) Technology:

All molecular bonds absorb specific wavelengths of light. Hydrogen bonds including O-H (water); C-H (hydrocarbon) and N-H (ammonia) all absorb strongly in the NIR spectral region. The amount of NIR energy reflected at a given wavelength is inversely proportional to the quantity of absorbing molecules in a product. The NIR technique is a non-destructive, non-contacting measurement. Mesys's sensor utilizes multiple wavelengths of NIR light, projected onto the product at a very high repetition rate. The reflected light is then measured using a digitally enhanced detection system and thousands of data points are sampled every second.

Ideal applications:

Moisture on paper, film, non woven and textile

On-line coating weight measurement (solvent or water based) on paper and aluminum

Lamination line coating weight measurement directly on coating roller

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MCT NIR Sensor specifications

Measured NIR Constituents: Moisture, oil, coating, etc.
Resolution: 0.1% to 0.05% (depends on material)
Accuracy: +/- 0.1%
Moisture Ranges: 0–90%
Optical Measurement Distance: 4–16 in (10–40 cm)
Sampling Size: Approximately 1.5-in (3.7 cm) diameter on sample
Calibration Codes: 50 Standard
Enclosure: Cast Aluminum, IP65 (NEMA 4),Stainless
Power: 80–260 VAC (50/60 HZ), 24 VDC
Operating Temperature: 0–130°F (0–55°C)
Vortec Cooling (High Temp): Max 170°F (85°C)
Stainless Steel IP67: Max 200°F (93°C)
Calibration: Factory Pre-Calibrated
Routine re-calibration is not required
Ambient Light Sensitivity: None
IP, RS-422/485 (factory confi gured), Digital I/O (factory confi gured)
Optional interfaces: Profi bus, Profi net, DeviceNet, Ethernet IP
Lamp and Motor (MTBF 20 years)

Thin coating measurement
on coating roller (lamination line)

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