NOVA SERIES

GUARDIAN

CROSS DIRECTION WEB PROFILE

Scanning Frame System

MOISTURE • COAT WEIGHT • THICKNESS • WEB TEMPERATURE

PROCESS SENSORS
CORPORATION

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Cross Direction Web Profile

Scanning Frame System

Leading Applications:

- Hot Melt & Film Thickness
- Wet End Water Based Coat Weight
- Dry End Organic Coat Weight
- Exit and Inlet Dryer Moisture
- Re-Moisturizers (LAS, Steam Curtains and Water Decks)

Measure Coatings and Moisture on:

- Paper
- Film
- Foil
- Metal
- Textiles
- Non-Woven
- Extrusions
- Foam
- Tags
- Tapes
- Labels
- Release Liners
- Packaging Materials
- Narrow Webs
- Coatings
- Laminations
- Other Substrates

- **Maintain Uniform Web Profile**
- **Reduce Edge Curl and Lay Flat Issues**
- **Improve Quality Assurance and Control**

Edge curl and lay flat issues are a problem in the label and converting industry. Uneven moisture stratification can cause shrinkage or expansion of cellulose fibers. Curled stock is a problem for printing and packaging. Coatings can also get thinner or thicker at the edges. A NIR transmitter cross directional web profile greatly helps to reduce curl or coating issues and improve process control operation.

Benefits of Near Infrared Technology

- Accurate, Fast, Reliable & Low Maintenance
- No Government Regulations
- Easy Calibration, Operation & Standardization
- Best Return On Investment

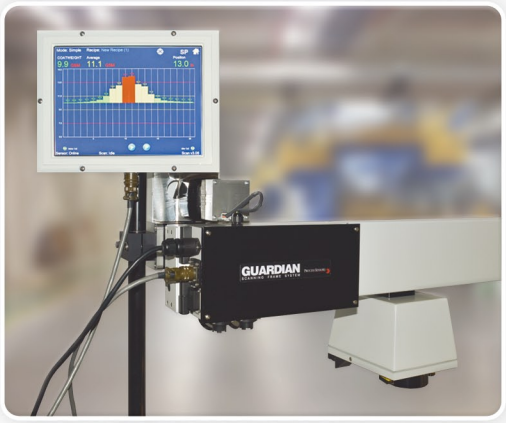
The Near Infrared (NIR) Operating Principle

The MCT transmitter shines NIR light wavelengths, selected specifically by PSC, for the measurement and application being performed, typically 1.94μ for moisture or water based coatings and 2.34μ for hydrocarbon depositions or film thickness. The NIR light is then directed onto the product being measured, normally a moving web and measures the returned energy to provide a calibrated display of percent moisture, GSM, #/ream or other engineering units. Additionally, IR web temperature can also be built into the MCT Nova Series Transmitter.

Choose Your
Nova Series Guardian

Guardian CD Web Profile System Industry Standard

The **Guardian Profile System** connects to a PC with a 19" Display at a Central Console. Larger displays, up to 65", for multiple scanners and measurements, can be integrated into a single distributed system. The Guardian System can also be operated manually or via a Human Machine Interface (HMI).



Entry Level Profile System

Process Sensors Guardian Cross Direction Web Profile System can be as simple and inexpensive as an automatic scanning frame with 12" Operator Interface (OI) for profile display and controls mounted on frame end.

Simple Cross Direction Scanning System with Digital Display

This system allows for automatic scanning across web or jogging to fixed position for machine direction measurement and display on a 5.7" touch screen with alarms, alerts and analog and digital outputs.

Guardian System Features:

- Cross Direction Zoned Web Profile
- Zone, Profile and Roll Averages
- Roll Reports and Data Archiving
- Designated Lane and Machine Direction Measurements

Guardian System Components

- MCT Nova Series Near Infrared Transmitter
- Automatic Industrial Scanning Frame
- Automatic Web Edge Detection Option
- Operator Interface and PC Based Software Systems
- Alarms, Alerts, Scan Speed, Product Recipes, Diagnostics
- Wall, Console, Arm Bracket and Pedestal Housing Options
- Ethernet Communication and Analog Outputs
- Central and Local Display Options

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For more information on Process Sensors instruments and accessories, visit our website at: **www.processsensors.com**

NOVA SERIES

GUARDIAN Cross Direction Web Profile Scanning Frame System

Specifications: Scanning Frame

Power: 90-260VAC 15A
Outputs: • 3x 4-20mA Selectable sources
• Live NIR Value • Scan NIR Average Values
• Live Temperature & Scan Temperature Average Value
Inputs • Web Break • Web Length • Cooling Air
• Sensor Window Purge
Ambient Temperature: 0-50°C (32-120°F) with air cooling up to 80°C (160°F)

Specifications: Operator Interfaces

Touch Screen PC – Windows based
Cross Web Profile Displays, Machine Direction Trends, Scan Average Trends
NIR Constituents: 1 or 2
Product Temperature: 80°C (160°F)
Recipe Codes: Unlimited
Communication to Frame: Ethernet
Power: 90-260VA
Multi Frame Operation: 19" Screen – Larger Optional

12" Touch Screen
Non-PC based, Cross Web Profile, Single Frame Operation, Machine Direction Trend
NIR Constituent: 1
Product Temperature: 80°C (160°F)
Recipe Codes: 100
Communication to Frame: RS485
Power: 24VDC from Frame

5.7" Touch Screen
Non PC based, Single Frame Operation, Digital Displays Only
NIR Constituents: 1, 2 or 3
Product Temperature: 80°C (160°F)
Recipe Codes: 100
Communication to Frame: RS485
Power: 24VDC from Frame

NIR Measurements:

Moisture Range: Min 0.1%, Max 95%
Coatings Range: Min 0.1 GSM, Max 250 GSM
Moisture Accuracy: ±0.1%
Coatings Accuracy: ±0.1 gr/m
Repeatability: ±0.2%

Maintenance:

Warranty: 24 months Parts/Labor
Routine Cleaning: None Required
Calibration Verification: Calibration Check Standard
Cooling: Vortex Air Cooler (optional)

CE Compliance

EMC Directives
EN50081-1 & EN50081-2, EN61010-1
Low Voltage Directive

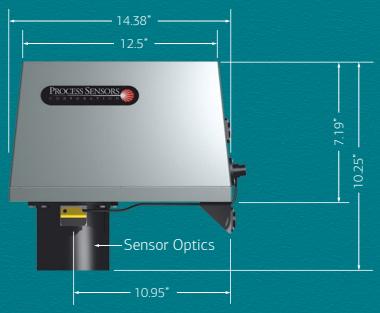
Fieldbus Interfaces

(for non-profile data)

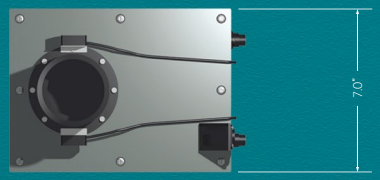
Ethernet IP, Devicenet, Profibus, Profinet, OPC-DDE Server

Dimensions: MCTTransmitter

Front View



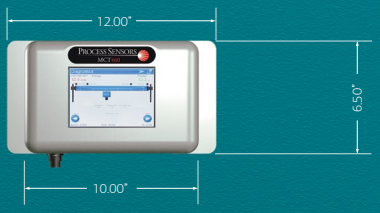
Bottom View



All Power and Interface Connections on Rear Panel

Dimensions: Operator Interface

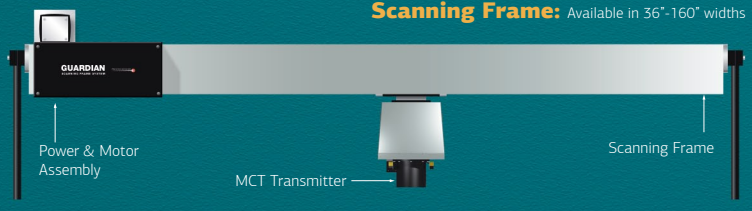
Front View



Bottom View

Single Cable to Scan Controller

Scanning Frame: Available in 36"-160" widths



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