

# FS710e FORWARD SCATTER SENSOR

For moisture measurement in paper and board

## Features:

- ▶ Excellent signal to noise ratio
- ▶ Unaffected by changes in lighting, humidity and temperature
- ▶ Measures total moisture independent of basis weight and moisture stratification



The **FS710e** continues the pedigree that has been established by previous generations of infrared gauges from NDC Technologies. The FS710e measurement accuracy is improved with its independence to ambient conditions, while also delivering high reliability and a lower cost of ownership than its contemporaries.

Used primarily in the paper and board industries, the FS710e is designed to measure the moisture content of heavier weight products or products where the moisture content may be stratified.

The FS710e utilizes application-matched measurement optics for the particular product. Each configuration includes carefully specified filters to ensure optimum sensitivity and measurement accuracy. Through the use of “forward-scatter” transmission technology, the FS710e penetrates the full thickness of the paper or board, providing a true measure of total moisture, regardless of its degree of stratification.

## Benefits

- ▶ Improve product quality
- ▶ Reduce raw material consumption and moisture-related scrap
- ▶ Speed up start up and grade change times
- ▶ Reduce moisture profile streaks and machine direction variability
- ▶ Reduce moisture-related defects:
  - Calender blackening
  - Smoothness
  - Curl
  - Mottle
  - Coating bond
- ▶ Improve drying strategies:
  - Reduce drying energy
  - Operate to maximum process drying rate

# Specifications

NDC Technologies systems are integrated with customer process lines and control systems to form complete measurement and control solutions.

The FS710e is designed to connect with other NDC products, such as scanning frames and web profile display and control systems. As part of the Series 710 range, the FS710e seamlessly integrates with peripheral devices such as the Human Machine Interface (HMI), Operator Workstation, and other NDC Infrared sensors. The FS710e and peripheral devices respond to the broadest needs of the industry, ranging from the sophisticated 'lights-out' fully networked factory, to the smaller installations of a few stand-alone gauges.

Ultra high speed data collection means that the noise is substantially reduced, which in turn means that the user can get more information about the real variation in the process rather than variation contributed to by conventional gauges.

Property	FS710e Specifications
Range:	1% to 15% Moisture content in 100 - 400 GSM Paper or Board
Accuracy	0.15%
Beam Patch:	10mm (25mm optional) circular
Air Gap:	47mm (52mm for large patch)
Passline:	±5mm
Rel. Head Movement:	±3mm
Response Time:	User selectable (0.03 – 1000 sec linear and exponential)
Streak Detection:	1.0mm
Connectivity:	Ethernet TCP/IP, multi-databus RS232, 4-20mA
Reliability:	Lamp/motor warranty for five years
CE Compliance:	Low Voltage directive EN61010-1
EMC directives	EN50081-1 & EN50082-2
Power:	42W consumption
Environmental:	IP65 (NEMA4); 0-50°C

NDC Technologies is represented in over 60 countries worldwide. [www.ndc.com](http://www.ndc.com)

**spectris**

**NDC Americas**  
Tel: +1 626 960 3300  
Email: [info@ndc.com](mailto:info@ndc.com)

**NDC Belgium**  
Tel: +32 4 239 90 10  
Email: [sales@ndcinfra.be](mailto:sales@ndcinfra.be)

**NDC Japan**  
Tel: +81 3 3255 8157  
Email: [ndcjapan@ndc.com](mailto:ndcjapan@ndc.com)

**NDC Italy**  
Tel: +39 0331 454 207  
Email: [ndcitaly@ndc.com](mailto:ndcitaly@ndc.com)

**NDC India**  
Tel: +91 9890800697  
Email: [ndcindia@ndc.com](mailto:ndcindia@ndc.com)

**NDC United Kingdom**  
Tel: +44 1621 852244  
Email: [enquiries@ndc.com](mailto:enquiries@ndc.com)

**NDC China**  
Tel: +86 21 6113 3609  
Email: [info@ndcinfra.com.cn](mailto:info@ndcinfra.com.cn)

**NDC Germany**  
Tel: +49 1801 977112  
Email: [ndcgermany@ndc.com](mailto:ndcgermany@ndc.com)

**NDC Singapore**  
Tel: +65 91994120  
Email: [apacsales@ndc.com](mailto:apacsales@ndc.com)



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