

Stressometer® Systems

Digital Transmission Unit PFSA107



ABB's Digital Transmission Unit provides non-contact, maintenance-free sensor excitation and signal transmission from the Stressometer® flatness measurement roll.

Measurement made easy

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01 Digital Transmission Unit (DTU)

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02 Four measurements per roll revolution. To get the shortest possible system response time, while maintaining accuracy, it is vital to maximize the measurement density. For a roll of 313 mm diameter, the Stressometer can measure up to 256 measurement points per meter of strip.

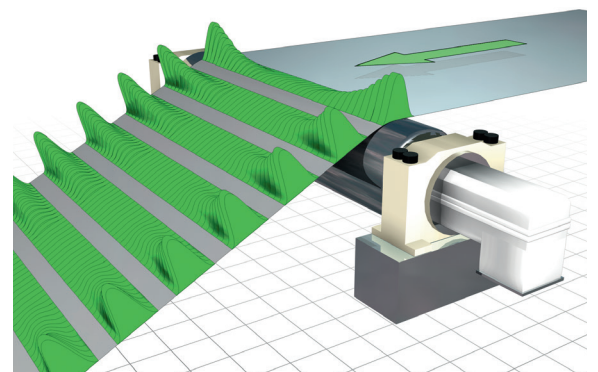
Digital Transmission Unit

The DTU is built to be completely insensitive to tough mill environments. The main features are:

- Signal transmission over a non-contact capacitive link. The link is not affected by the surrounding air quality which could be the case with optical links.
- Sensor excitation using a non-contact rotating transformer.
- Maintenance-free hybrid bearings are used to ensure a long lifetime.
- All measurement signals are transmitted through a fiber optic cable to the control cabinet.

Direct and parallel measurement

It is important that all measurement points are processed in parallel, i.e. at the same time. This means that strip tension variations will influence all measurement points in the same way and thus will not influence the actual flatness measurement.



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The DTU is based on a non-contact rotating transformer and a capacitive link for the sensor signals. The unit is protected by a rugged housing.



Properties	PFSA 107
Number of measurement signals transmitted in parallel	up to 80
Speed	up to 4,000 rpm
Degree of protection	IP 65
Type of bearing	Hybrid deep groove ball bearing
SKF Lnmh	>4.5 million hours
External signal connections	Power supply Control signal cable Optical fiber cable
Vibration tolerance	< 4.5 mm/s*

* According to ISO 10816-3

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