

New Product Release

Dual Channel Control Unit

T-Ray® 5000 TCU54nm



TeraMetrix is pleased to announce the release of the T-Ray® 5000 Dual Channel Control Unit. With the same footprint as the widely adopted single channel TCU52nm, the TCU54nm can control two terahertz sensors enabling a wide variety of multi-sensor applications.

The T-Ray® 5000 is characterized by high precision, short measurement time, and a robust construction. The processed waveforms enable multiple measurements to be made simultaneously with a single sensor head. The release of a two channel system opens new measurement opportunities.

The T-Ray® 5000 Dual Channel Control Unit (TCU54nm) is the same size, shape and weight as our successful single channel unit, and is based on the same proven technology.

APPLICATIONS

With the ability to make simultaneous measurements at two locations, some of the potential applications are:

- Differential measurement as coatings or layers are applied
- OD and ID of large diameter pipe
- Four point measurement of small diameter tubing
- Top and bottom balance of steel cord tire ply
- Two point calender control

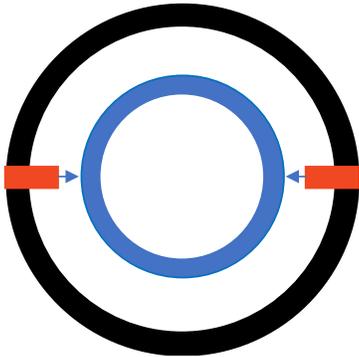
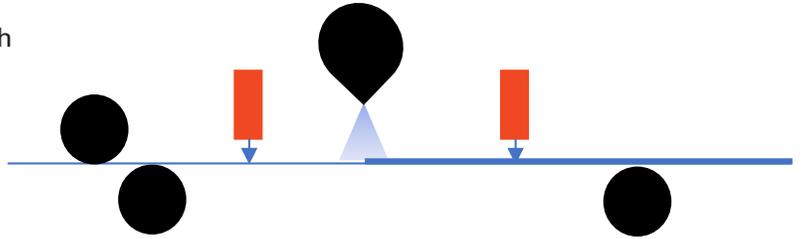
KEY FEATURES

- Two reflection sensors
- New lightweight umbilical
- High speed measurement
- Independent measurement recipes
- Simple user interface
- Single fiber to each head

BENEFITS

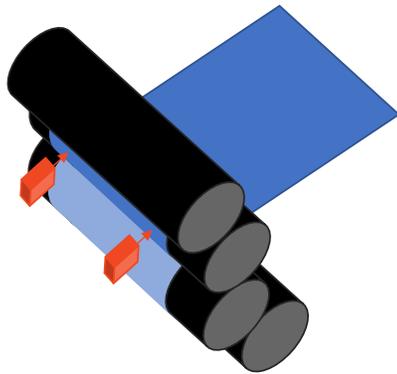
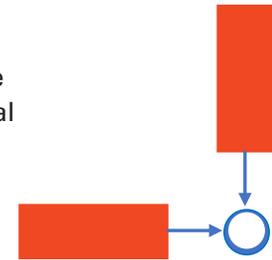
- Low cost per sensor
- High quality production
- Efficient line startup

The two sensors can be positioned before and after a coater to measure the basis weight of each layer. The precise correlation between position and measurement allows accurate same spot measurements to be made.



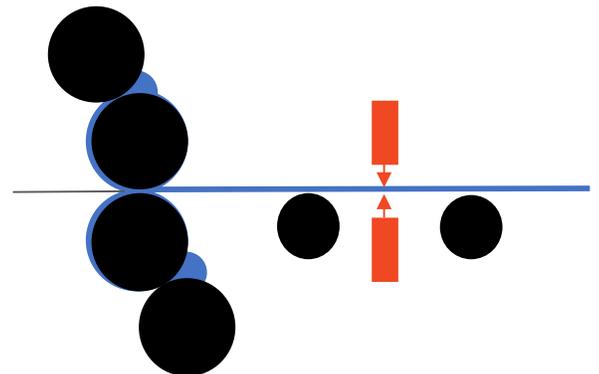
For large diameter pipes, measurement on opposite sides of the product allow real time measurement of the OD, ID, pipe wall thickness and concentricity. If the sensors are placed on a rotating translation stage, all angles of the pipe can be measured.

The terahertz beam is small enough that it can measure both sides of a small tube at the same time with a single sensor. With a dual channel system, two orthogonal sensors can measure the four cardinal points on the tube to allow dimensional control of production.



A calender stack can be controlled with a two-point control for roll runout and the center control can be provided by a cascade loop from the scanning sensor shown below. The high precision of the T-Ray® 5000 provides excellent non-contact control of the stack.

On steel cord tire ply calenders, balance above and below the cords is critical to performance. Dual sensors can be deployed on both sides of the ply to provide a measurement of balance and total thickness, while avoiding nuclear and ionizing radiation.



Industry Leading Regulatory Compliance

The T-Ray® 5000 intelligent TCU has been certified by Underwriters Laboratories has received the CE mark, is fully compliant with FDA CDRH laser safety regulations, and has been tested to meet FCC part 18 regulations.



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