

AUTOMATED DIAMETER & WIDTH MEASUREMENT

Industry : Paper
Application type : Dimension measurement / Monitoring

Brief description



Pic 1: Paperrolls

Dimetix laser distance sensors are the ideal proven choice for roll diameter and width monitoring applications in paper and textile mills. The sensors have the range and accuracy to measure a variety of roll sizes as production moves through the mill without adjustment and without contact. The lasers are maintenance free and provide a reliable, repeatable, and cost effective alternative to string potentiometers, transducers, ultrasonic sensors, and manual tape measure readings.

In the application shown here, a pair of Dimetix laser distance sensors are mounted opposing each other to measure width. This measurement is referred to as "differential" because both distance measurements are added together to determine the roll width based on a known separation distance. The Dimetix laser

sensors mounted overhead measure diameter based on a known position and calibration offset. In this case, the rolls rest in a shallow V roller assembly to maintain position.

Customers advantages

- Non-contact visible eye-safe laser measurement
- Laser sensors can be placed far apart to permit space for material transport and foot traffic
- Plenty of measurement range means that lasers do not have to be adjusted for various roll sizes
- Measurements can be acquired by a PLC or PC
- Maintenance free application– no moving parts to wear or string cables to break



Pic 2: Laser spot on paper roll



DLS-C series

The DLS-C distance measuring device measures absolute distances up to 500 meters on reflective foil without contact. Due to most innovative laser technology the DLS-C has a unique accuracy of ± 1.5 mm. A further advantage of the DLS-C is the quick determination of the positions of moving objects.

The DLS-C is an optical distance measuring device. It measures, maintenance-free, distances up to 65m on natural surfaces. It determines positions of objects that are difficult to access or may have very high surface temperatures. Just as easily, it accurately measures distances in hazardous environments.

The DLS-C is designed to be suitable for both, heavy industrial and outdoor applications. It is constructed of a solid metal case and provides class IP65 environmental protection. **It represents a cost efficient solution even at extreme environment temperatures as high as $+50^{\circ}$ C.** Furthermore, various features make it flexible for multiple applications in numerous industries such as automotive, paper, metal and textile.

Specification

- Measuring range 0.05 up to 500m
- Accuracy ± 1.5 mm
- Repeatability $\pm 0.4 - \pm 1.5$ mm
- Extended operating temperature
- Solid metal case IP65
- Supply voltage



For new projects we recommend our **D-Series**. Further information can be found [here](#).

For more information please contact us on application@dimetix.com

