

POSITION MEASUREMENT OF FLOODGATES

Industry: Geodesy and Construction, Hydro tech
Application type: Position measurement, Monitoring

Brief description



Pic 1: Floodgates under construction

In times of floodwater, floodgates guarantee the controlled efflux of the enormous house of water. It is necessary to know the exact position of the floodgates, in order to determine the amount of overflow. For this purpose, at the locks of the Yeongsan River in South Korea ([position of the barrage](#)) Dimetix laser distance sensors are in use.

Dimetix laser distance sensors measure the position of the floodgates milli-meter precise and absolutely contactless. Since the sensors do not consist of any movable parts, they are maintenance free. The floodgates at the Yeongsan River are lifted up to 15m. Neither this measuring distance, nor the environmental temperature of up to -20°C cause a problem to

the laser sensors. This is thanks to an integrated heating which enables the use of the sensors even at temperatures of -40°C.

The Dimetix laser distance sensors meet the requirements of the customer in an optimal way. Their installation was very fast and extremely easy. The sensors are fixed in the upper service area and the laser beam points to the top of the gates. Dimetix laser distance sensors measure on natural targets, there is no need for target plates. The sensors are connected to a control via RS-422. A great advantage of the Dimetix laser distance sensors is their astonishing temperature range of 90°C – from -40°C to +50°C. Thanks to this, they are an excellent choice for outdoor applications in most parts of the globe.



Pic 2: Sensor for position measuring

The solution with the Dimetix laser distance sensors enables the customer to permanently monitor the position of all floodgates and thus to know the flow rate at any time.

Customers advantages

- Easy installation due to visible laser beam
- Operates in a vast temperature range
- Maintenance free



Used Products

DLS-C Series

The DLS-C distance measuring device measures absolute distances up to 500 meters without contact. Due to most innovative laser technology the DLS-C has an accuracy of ± 1 mm.

The DLS-C is an optical distance measuring device. It measures, maintenance-free, distances on natural surfaces and reflective foil. 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 low as -40° 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 500 m
- Accuracy ± 1 mm
- Repeatability 0.4 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

