capaNCDT CS sensor series

The capacitive sensors in the "CS" series are cylindrical sensors with measuring ranges from 50 µm to 10 mm. The sensors are pluggable and can be operated with all cables and standard controllers from the Micro-Epsilon sensor portfolio. Depending on the sensor, a type C or type B plug is required on the sensor cable. The series is extremely versatile and consists of two different series, the older CSx models and the new CS-x models.

The CS005, CS02, CS08 and the CS1HP are from the older CSx series. The remaining models have been replaced by the newer CS-x sensors, which are significantly more temperature-stable and enable even more precise measurements. This is mainly because different potting has been used and the mechanical design of the sensor has been optimized.

In addition, the housing diameter of the CS-x sensors has been minimally reduced - except for a small, defined area. The unreduced part of the housing now serves as the optimum clamping area and also represents the installation situation for the adjustment. This reproducibly compensates for mechanical temperature expansions in the field which therefore hardly affect the measurement signal. Due to the identical sensor diameter, the sensors can be interchanged as usual.

Characteristics

	CSx / CS-x
Measuring ranges	0.05 … 10 mm
Temperature range	-50 … 200 °C
Resolutions	0.04 … 7.5 nm
Linearity (sensor only)	±0.15 … ±15 µm
Temperature stability	0.01 … 0.5 µm / K

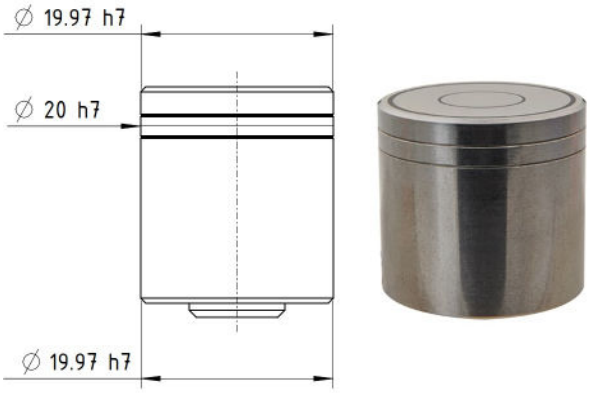
Product features

1. Robust sensors made of stainless steel
2. Highest resolution and precision
3. Extremely high temperature stability
4. Universal use in industry & cleanrooms

Higher temperature stability CS-x

The previous specifications of the CSx sensors are based on calculated "theoretical values" at 70 °C. In comparison, the temperature stability values of the CS-x sensors are now also qualified for up to 150 °C. A function test is performed up to 200 °C (temperature range).

CSx sensor design (example CS2)



CS-x sensor design (example CS-2)

CS005 to CS1HP

CS-025 to CS-10