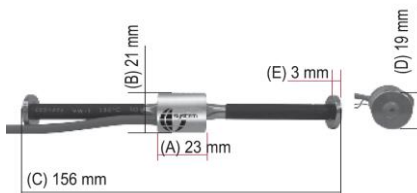


TECHNICAL FEATURES

- ✓ Type of sensor: vibrating wire;
- ✓ Nominal measuring range: $\pm 1500 \mu\epsilon$;
- ✓ Sensitivity: $1 \mu\epsilon$;
- ✓ Accuracy: $<0.5\%$ F.S.;
- ✓ Operating temperature: from -20°C to $+80^{\circ}\text{C}$;
- ✓ Integrated temperature sensor: NTC $3 \text{ K}\Omega$;
- ✓ Spool resistance: 150Ω ;
- ✓ Typical frequency: 800 Hz ;
- ✓ Thermal dilation coefficient: $12.2 \mu\epsilon/^{\circ}\text{C}$;
- ✓ Output signal: Hz .



strain gauge dimension



Position of the strain gauge in 3D

The vibrating wire strain gauge is widely used to measure the deformation in concrete.

The instrument is essentially made up of a steel wire tensioned between two ends, completely immersed into the surface to be monitored. The deformation of the structure under load changes the distance between the two ends with consequent change in the wire tension. When that is energized with electrical input, it generates resonance frequency. Measured by an electromagnetic coil, the frequency is proportional to the length of the wire, thus to the tension applied, and this is gauges the deformation of the material. These kind of instruments offer the advantage of excellent stability of measurement over time and output

signal in Hz suitable for transmission through very long cables. The sensor includes a thermistor for temperature change readings. This instrument ensures long term precision and stability. Thanks to the frequency signal, it is not affected by the length of the cable. The thermistor for temperature measures is part of the instrument. This instrument is used to measure strain in definitive tunnel linings, inverted tunnel arch, building foundations, foundations piles, overpasses and all other structures in concrete where it is necessary to detect strain over time.

DIMENSIONS

body length (A)	23 mm
body length (B)	21 mm
total length of the sensor (C)	156 mm
diameter of the anchoring blocks (D)	19 mm
Thickness of the anchoring blocks (D)	3 mm

product compliant with European directives