

VIBRATING WIRE STRAIN GAUGES

Description

The vibrating wire strain gauges are used to measure the stress in load-bearing structures or to monitor the tensions in tunnel linings, during tunnel excavation phases. Such control is necessary for the verification of the tensions and deformations of both temporary and permanent retaining structures.

The vibrating wire strain gauges consist of a stainless steel tube inside which a thin rope, secured at the two ends, is made to vibrate by an excitation coil. An internal thermistor detects the temperature. The gauge can work both in tension and compression, and is also watertight and can be installed externally in stressed structures or embedded in concrete castings for stress measurements.

Data can be read through the portable control unit or by using an automatic data acquisition system, designed to provide continuous monitoring.

Applications

- Posts and tests on posts
- Concrete structures, beams and columns
- Foundations, slurry walls
- Tunnels
- Steel structures, pipes and centrings
- Dams (gravity dams, arch dam, RCC)
- Bridges and viaducts
- Ports



Features

- Reliability on long time monitoring
- High resolution and accuracy
- Degree of protection IP68
- Sturdy construction, also suitable for harsh environments
- Internal temperature sensor
- Overvoltage resistant
- Possibility of transmitting the signal over long distances

Technical Specifications

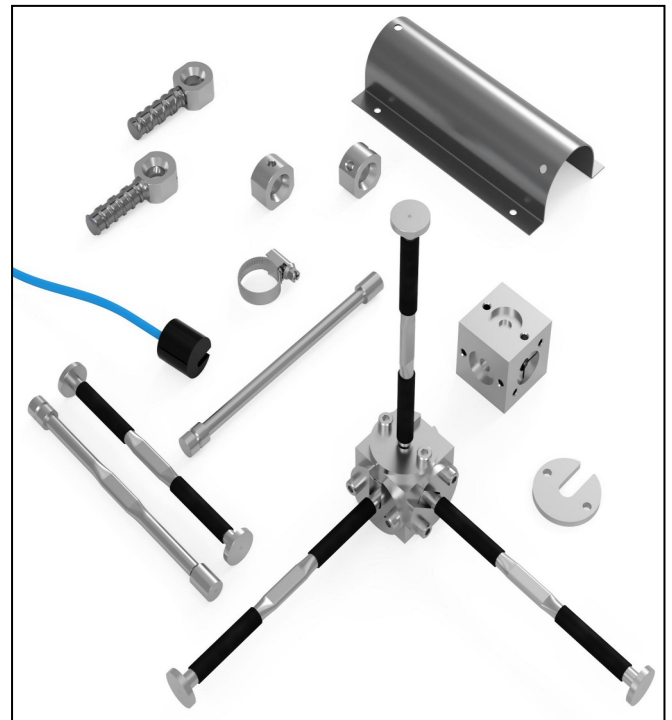
	Weldable strain gauge	Embedded strain gauge
Type	welding to metal	embedded in concrete
Rope length	153 mm	145 mm
Range	3000 $\mu\epsilon$	3000 $\mu\epsilon$
Sensitivity	1 $\mu\epsilon$	1 $\mu\epsilon$
Total accuracy	< 0,5% F.S.	< 0,5% F.S.
Standard frequency	800 Hz	900 Hz
Termistor	NTC 3 K Ω	NTC 3 K Ω
Coil resistance	150 Ω	150 Ω
Operating temperature	-20.....+80 °C	-20.....+80 °C
Dimensions	165X25X25 mm	157X25X25 mm
Material	Stainless steel	Stainless steel

Accessories and spare parts

- Pair of blocks for weldable strain gouge
- Jig for the blocks
- Cut to size signal cable

Please specify

CODE	PRODUCT DESCRIPTION
BCV-100	Arc-weldable VW strain-gauge
BCV-200	Embedment VW strain-gauge
BCV-600	Arc-weldable VW strain-gauge, only vibrating wire
BCV-620	Embedment VW strain-gauge, only vibrating wire
BCV-700	Spare weldable blocks
BCV-800	Spacing jig
BCV-900	Signal cable 4x0.22 (specify lenght)



For further information:

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