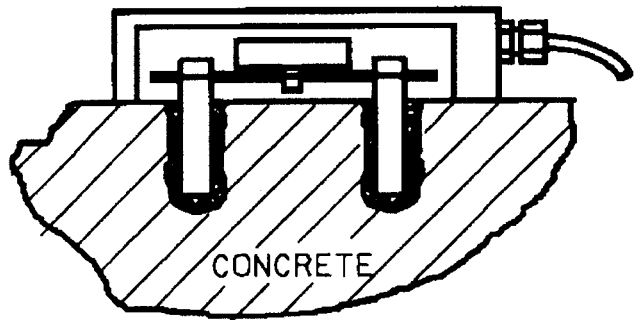
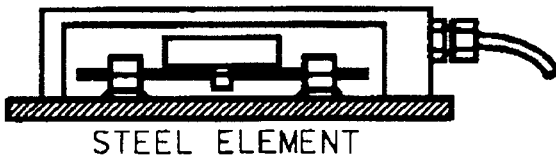


Geonor P-280W

Weldable Vibrating Wire Strain Gauge

for reliable monitoring of strain in steel and concrete



Welded to steel surface

Cast in concrete

FEATURES:

- Accurate monitoring of strain in steel and concrete
- Wide span of strain
- Easy installation
- Stainless steel sensor element
- Waterproof to 20 bar of pressure
- Possibility to make static and dynamic measurements
- Long term stability
- No signal loss in long cables

Field Monitoring

GEONOR P-280W WELDABLE VIBRATING WIRE STRAIN GAUGE

APPLICATIONS

The gauge measures strain or stress on steel and concrete surfaces. Applications include:

- Steel legs and braces on offshore structures
- Steel reinforcing
- Pile load tests
- Surfaces of concrete structures
- Bridges and buildings
- Struted and braced excavations
- Steel beams, columns and tubular elements

The P-280W can be used both for static and dynamic monitoring with appropriate readout equipment. The measuring range can easily be determined during installation to permit the monitoring of ranges between small and very large scale strains.

DESIGN

The gauge consists of 3 main parts; strain gauge sensor, posts and cover.

The sensor element is a stainless steel tube with a central steel wire clamped to the tube at each end. Strain in steel or concrete structures is picked up from the posts by the wire in the steel tube. The exciter and pickup element keep the wire oscillating and record the frequency. The strain is a function of the resonant frequency measured in the wire. The gauge is a joint design of Geonor and the Norwegian Geotechnical Institute.

INSTALLATION

The posts are installed using a positioning adaptor. For steel surfaces, the posts are welded to the surface using TIG or standard arc welding equipment. For concrete surfaces, the posts are epoxied in drilled holes in the concrete surface.

The sensor element attaches to the posts through insert holes. The signal exciter and pickup element are connected to the sensor steel tube and cover. The signal cable is installed and secured.

TECHNICAL SPECIFICATIONS

	Standard version	Options
Measuring range:	+/-1000 microstrain	+/-2500 microstrain
Linearity and hysteresis:	< 1.0 % FS	< 1.0 % FS (calibrated)
Frequency range:	800 - 1800 Hz	
Calibration:	Sensors are individually calibrated	
Temperature sensitivity:	3.5 microstrain/°C	
Temperature operating range:	-25 to +80°	
Materials:	Stainless steel, other materials on request	
Dimensions:	80 x 20 x 30 mm	
Accessories:	Positioning adaptor, epoxy for concrete, posts for concrete	

ORDER REFERENCE

Part No.	Equipment
280-WS	Weldable strain gauge for steel surfaces
280-WC	Strain gauge for concrete surfaces
280-W-PS	Posts for welding to steel
280-W-PC	Posts for concrete
280-W-H	Protection housing
P-520F	Read out frequency indicator