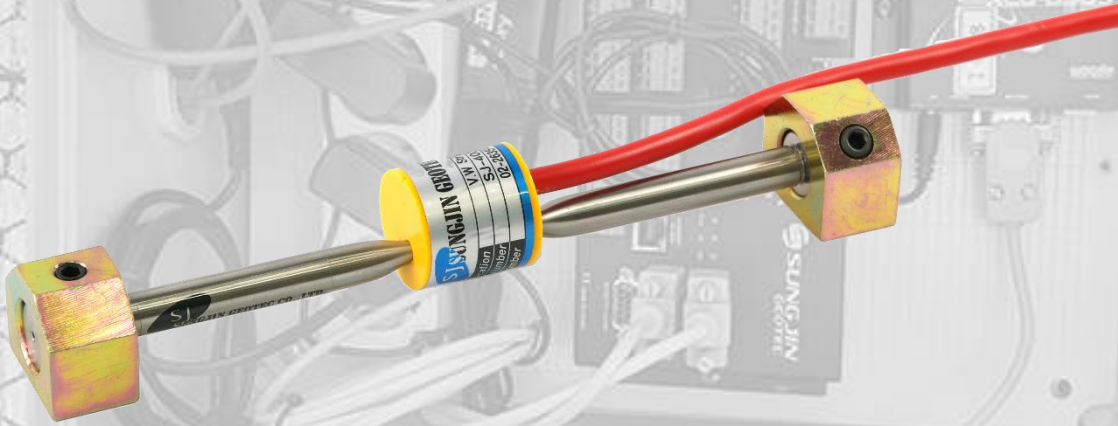


Description

VW Arc-Weldable Strain Gauge is mounted on the steel or steel structure to measure the stress changing condition of structure the caused by the excavation or surrounding work to jüge the stability of retaining wall and temporary facilities. VW type sensor can be measured for long time by excellent reproducibility and responsiveness and less effect by temperature change



Feature

- * Excellent reproducibility and responsiveness which is free from cable length or resistance change
- * Perfect waterproof structure
- * High stability and high sensibility
- * High accurate NTC Thermistor mounted.

Component

- * VW strain gauge main body
- * Mounting block
- * Cable

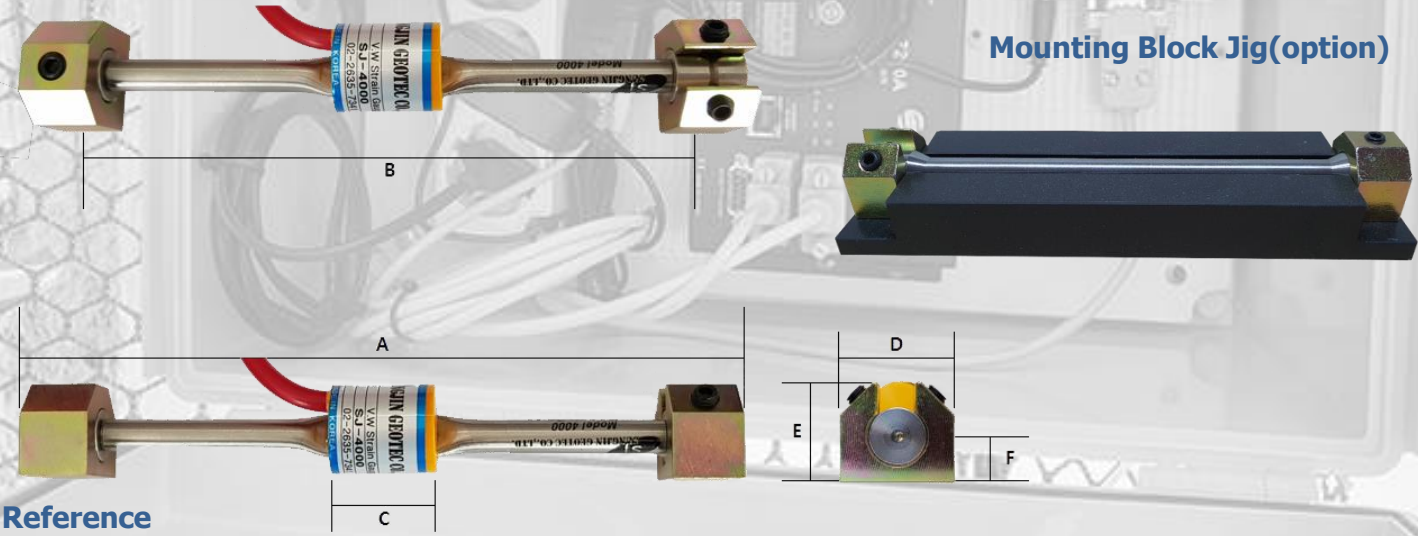
Specification

| Model | SJ-2000 |
|-------------------------------|----------------------------------------------------------------|
| Type | Vibration wire type |
| Measurement Frequency | 400 ~ 1,250Hz |
| Measurement strain range | Min 1,000 ~ Max 4,000 $\mu\epsilon$ |
| Resolution | 1.0 $\mu\epsilon$ |
| Accuracy | $\pm 0.1\%$ FSR |
| Non-linearity | $\pm 0.5\%$ FSR |
| Thermal expansion coefficient | 10.8ppm/ ° C |
| Operation Temp. | -20° C ~ 105° C |
| Temp sensor | NTC Thermistor (3KD-ATF) |
| Temp sensor operation range | Thermistor: -40° C ~ 80° C |
| Temp. sensor accuracy | Thermistor: $\pm 1^\circ$ C |
| Main material | Stainless steel 300, Fluoro O-ring, High density epoxy potting |
| Waterproof capacity | 100m H ₂ O |
| cable | $\phi 6.4$ mm, 0.235mm ² x 4C Shield PVC SYS cable |

* The product spec is subject to change without prior notice in order to enhance the product's quality.

Dimension

| Item | SJ-2000 | |
|-----------|---------|---------------------------------------|
| Dimension | A (mm) | 165 |
| | B (mm) | 150 |
| | C (mm) | 24 |
| | D (mm) | 24 |
| | E (mm) | 21 |
| | F (mm) | 9 |
| | Weight | Sensor : 0.08 / Mounting block : 0.16 |



Reference

* Strain ($\mu\epsilon$) calculation:

$$\text{- Microstrain } (\mu\epsilon) = \text{Gage Factor} \times 10^{-3} \times F^2 = \text{Gage Factor} \times 10^9 / N^2$$

Whereas, F=Hz measurement value, N=microsecond measurement value, Gage Factor=4.062

* Stress (σ) calculation:

$$\text{- stress } (\sigma : \text{kg.}\text{cm}^2) = -1.0 \times \text{Strain } (\epsilon) \times \text{Material elastic modulus } \epsilon$$

* Axial force (P) calculation:

$$\text{- Axial Force } (P : \text{ton}) = \text{Stress } (\sigma) \times \text{Material cross section } (A) \div 1000$$

Anchor type Mounting Block(option)



Standard installation : Steel pipe and Strut

