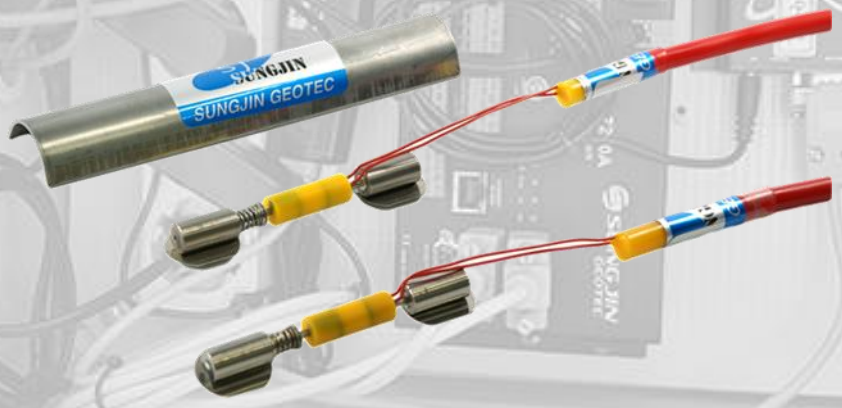
VW & Spot-Weldable Type Strain Gauge

Description

SJ-2150/2100 is equipped with coil housing with gauge and magnetic coil connected with stainless steel tube and flange in waterproof and anti-corrosion. SJ-2150/2100 contains stainless steel tube and gauge and magnetic coil in waterproof and anti-corrosion. The vibration sensor has the excellent responsiveness and reproducibility and it is almost not affected by the secular change, so it is most suitable for long time measurement.



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

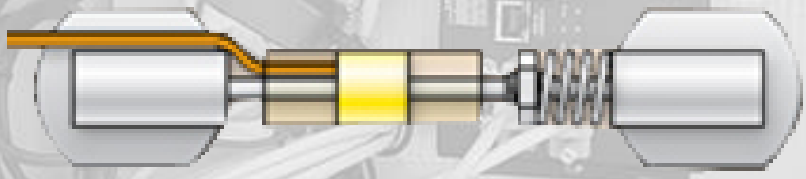
Specification

Model	SJ-2150
Type	Vibration wire type
Measurement Frequency	1,400 ~ 3,500Hz
Measurement strain range	Min 1,000 ~ Max 4,000με
Resolution	0.5με
Accuracy	±0.1% FSR
Non-linearity	±0.5% FSR
Thermal expansion coefficient	$11X10^{-6}$ / °C
Operation Temp.	-20°C ~ 50°C
Temp sensor	NTC Thermistor (3KD-ATF)
Temp sensoro peration range	Thermistor : -20 ~ 50°C
Temp. sensor accuracy	Thermistor: +/-1° C
Main material	Stainless steel 300, Fluoro O-ring, High density epoxy potting
Waterproof capacity	100m H_2O
cable	ø6.4 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-2150
Dimension	L (mm)	60
	L(Gauge) (mm)	55
	L(Sensor) (mm)	51
	D (Ø)	6.5
	Weight	Main body 0.01
	Tie bolt jig (Ø)	50



Reference

* Strain (με) calculation:

- Microstrain (με) = Gage Factor × 10^{-3} × F^2 = Gage Factor × 10^9 / N^2

Whereas, F=Hz measurement value, N=microsecond measurement value, Gage Factor=0.391

* Stress (σ) calculation:

- stress (σ : kg.㎠) = -1.0 × Strain (ε) × Material elastic modulus €

* Axial force (P) calculation:

- Axial Force (P : ton) = Stress (σ) × Material cross section (A) ÷ 1000

Standard installation : Steel pipe and Strut and Tie bolt Strand