

CSG-3000

Dynamic Concrete Strain Gauge

Dynamic concrete strain gauges measure axial strain in flexible pavement under high frequency (dynamic) conditions. Utilizing four active elements of a Wheatstone bridge circuit, this gauge compensates for temperature, and rejects bending strain, providing a sensor that is easily adaptable to most data acquisition systems without requiring additional signal conditioning.

Because of their low-profile design, these sensors can be used in concrete pavements, columns, walls, bridge elements or wherever dynamic strains need to be measured.

Each sensor is provided with end washers, nuts and are individually calibrated and supplied with fabrication Quality-Control documentation.

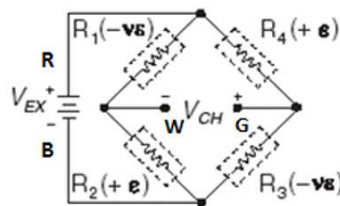


5/16" Diameter by 8" Long Sensor



Features

- RoHS Compliant
- Uses a combination of M-Coat A, M-Coat C, wax and electrical tape as coating
- Jewell can accommodate up to 250ft max of cable
- #22 or #30 AWG, 4-Conductor, Shielded, Teflon-Jacketed Cable available



PIN OUT:

RED	P+
BLACK	P-
GREEN	S+
WHITE	S-
2.0 to 5.0	Vdc



PERFORMANCE SPECIFICATIONS

PERFORMANCE

BRIDGE COMPLETION	Full bridge, no completion required
RANGE	±2000 microstrain
GAUGE RESISTANCE	350 Ohm
EXCITATION	up to 10 Volts
OUTPUT	~ 1.3 mV/V Nominal (at 1000 µε)
CALIBRATION	Individually provided. We will ship a copy of the calibration report with each unit at no additional cost
FACTOR GRID AREA	0.099cm ²
GAGE AREA	1.030cm ²
FATIGUE LIFE	<10 ⁷ repetitions @ +/- 1500 µstrain
CELL	5/16-in - 18 Threaded Stud
MATERIAL	Black Oxide Steel
COATING	Clear RTV, Acrylic, Polyurethane, Wax, Silicone Tape
OPERATING TEMPERATURE RANGE	-34 °C to 100 °C
LEAD WIRE	22AWG Truck weight cable, braided shield, twisted pair four wire; or 30AWG Teflon cable
WEIGHT	Sensor (0.7 lbs.); #22AWG cable is 0.03 lbs. per ft

Specifications are subject to change without notice due to continued product development

ORDERING INFORMATION

HOW TO ORDER

PART #	DESCRIPTION
815-00003-ROHS	CSG-3000 with 15 ft. cable (22AWG Truck weight cable)
815-00004-ROHS	CSG-3000 with 50 ft. cable (22AWG Truck weight cable)
815-00005-ROHS	CSG-3000 with 15 ft. cable (30AWG Teflon cable)
Purchase of Jewell Strain Gauge Includes:	
Installation of customer specified length of lead wire based on above options	
Gauge factor correction for lead wire desensitization	
Tension load application and data collection in µ-strain/mV	
Calibration and data collection. A copy of the calibration & test report will be provided with each unit	

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