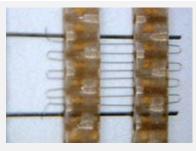
# **Product Data Sheet**



HFN-12-125-SCW

## **HFN Series > High Temperature Bondable Strain Gages**

Maximum operating temperature: 1600°F (871°C)

**Description:** Wire resistance strain gages constructed of Nichrome V alloy wire.

Features: High fatigue strength and excellent oxidation resistance.

Uses: Recommended for dynamic stress measurements on turbine blades and

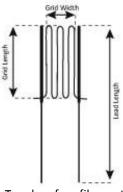
engines, exhaust systems, and power plant applications.

## AVAILABLE IN THE FOLLOWING CONFIGURATIONS

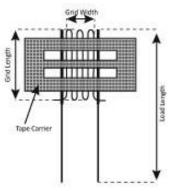
# **Application Methods**

Free filament gages are bonded to components using flame sprayed rod or powder, or with a ceramic cement application.

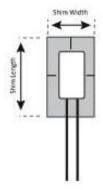
Weldable gages are attached to the component using a capacitive fine-spot welder.



Tapeless free filament gage with lead wires



Free filament gage with temporary tape carrier



Pre-installed weldable strain gage

For more info about weldable strain gages, please see our High Temperature Weldable data sheets.

## STANDARD PART NUMBERS

Standard Part Numbers	Strain Type	Gage Resistance (nominal)	Gage Factor (nominal)	Grid Length	Grid Width	Lead Wire	Lead Length	Lead Type	Specification Drawing
HFN-12-063-SCW	Dynamic	120 Ohms	2.0	.063"	.080"	.003" Chromel A <sup>2</sup>	2.75"	Straight	50-501
HFN-12-125-SCW	Dynamic	120 Ohms	2.0	.130"	.055"	.003" Chromel A <sup>2</sup>	2.75"	Straight	50-502
HFN-12-250-SCW	Dynamic	120 Ohms	2.0	.250"	.030"	.003" Chromel A <sup>2</sup>	2.75"	Straight	50-503
HFN-35-250-SCW	Dynamic	350 Ohms	2.0	.250"	.110"	.003" Chromel A <sup>2</sup>	2.75"	Straight	50-504

Standard gage configurations can be customized for individual application needs. Please see the following options table for custom orders; then consult our sales and/or engineering department to confirm availability and compatibility with your application.



## **CUSTOM OPTIONS TABLE**

Gage Resistance	Grid Length	Lead Length				
12 – 120 Ohms	063 – 1/16"	Standard – 2.75"				
35 – 350 Ohms	125 – 1/8"	Custom – 2.75" – 12"				
	250 – 1/4"					
Lead Wire Configurations						
SPW 0.003" Plati	0.003" Platinum-Nickel					
LPW 0.005" PT 10						
SCW 0.003" Chro	0.003" Chromel A <sup>2</sup>					
LCW 0.005" Chro	0.005" Chromel A					
SNR 0.003" x 0.0	0.003" x 0.015" NiChrome Ribbon					
SMW 0.003" Mole	0.003" Moleculoy Wire					
SHW 0.003" Hosk	0.003" Hoskins 875					
LHW 0.005" Hosk	0.005" Hoskins 875					
ISMW 0.003" Mole	0.003" Moleculoy wire – inboard configuration with straight lead wire					
ICMW 0.003" Mole	0.003" Moleculoy wire – inboard configuration with convoluted lead wire					

**Packaging:** Strain gages are supplied on glass slides, and sold in packages of 5.

Lead Wires: Standard design is a straight, 2.75" length lead. For custom lead lengths and configurations, please consult the Custom Options Table.

**Lead Configurations**: High fatigue Z-type leads can be custom ordered for most gages. Consult our sales department for more information.

**Tape Carrier:** Fiberglass reinforced Teflon with silicone

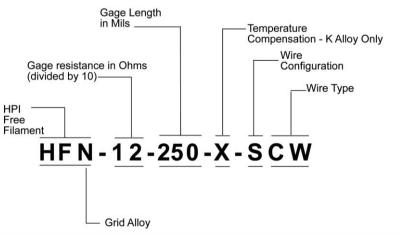
adhesive. Shelf life: 9 months (adhesive)

**Fatigue Life** (nominal):  $1 \times 10^6$  cycles at  $\pm 750 \mu$ "/" at

room temperature.

#### **Z-LEAD CONFIGURATION** Wire in this area is flattened to .0015" and angled for better stability for long leads (to prevent twisting and rolling) Grid wire 30° angle at weld

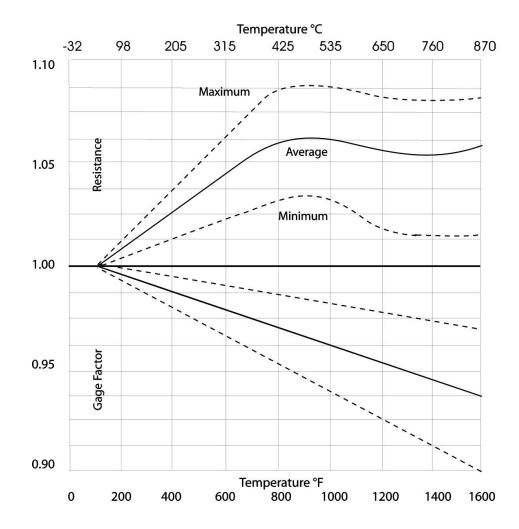
# **Part Number Designation Code:**





## **ENGINEERING DATA:**

# Resistance and Gage Factor Change vs. Temperature HFN and HBWANV Series Gages



For current pricing on strain gages and installation products, please contact our Sales Dept. or 978-772-6963