

# Linear Accelerometer

## SA-132RHT

Columbia Model SA-132RHT Force Balance Accelerometer has been designed for extreme high temperature environments including aircraft engines. The Model SA-132RHT is capable of operating at temperatures of up to 185 degrees Celsius. This sensor is completely self-contained and provides a high level, low impedance output eliminating the need for high temperature signal conditioning.

This sensor is also available with optional pre-wired 5-conductor #22AWG high temperature cable installed for additional convenience. User-specified load resistor will be installed with cable by special request. *Consult the factory for customized versions of this sensor.*

- \* Miniature / High Temp.
- \* Operational to 185°C
- \* Extreme Shock and Vibration Survival

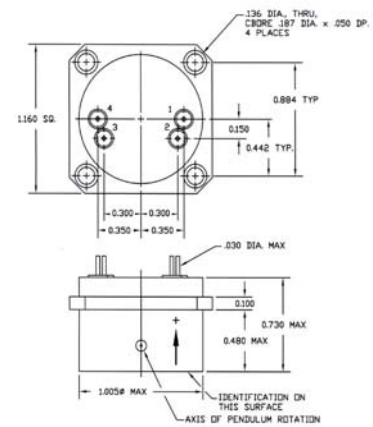
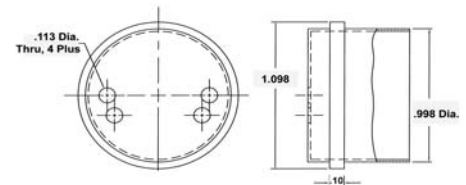


Figure 1 – Optional Round Flange



### Output Terminal Pin / Cable Lead Functions:

Pin	Function	Optional Cable Lead Color
A	+15 VDC	Red
B	Power Ground	Black
	Signal Ground	White
C	-15 VDC	Yellow
D	Output	Green

### Ordering Information:

**SA-132RHT(+/- X G ) F Cxx**

Standard Accelerometer  
Range +/- X G (Required)

Optional Round Flange (See Fig. 1 Above)

Optional High Temp Cable Installed

**xx** = Cable Length (Feet)

**xxM** = Cable Length (Meters)

### Specifications

	SA-132RHT
<b>Operational</b>	
Ranges Available	±5 G To ±15 G
Output Voltage	±5 Volts ±2% into 100K Load
Excitation	±15 VDC <20 mA
Output Impedance	<5000 Ohms
Sensitive Axis Alignment	Better Than 0.5 Deg
Scale Factor Tolerance	±1.5%
Scale Factor Temp Coefficient	0.025% / Deg C Max.
Zero Bias	±0.15% F.R.
Null Temp Sensitivity	0.002% F.R./ Deg C
Natural Frequency	75 Hz To 200 Hz
Damping Ratio	0.6 To 1
Cross Axis Sensitivity	0.01 G/G
Output Noise	<3 mV RMS (0 To 10 KHz)
Non-Linearity	±0.15% F.R.
Hysteresis & Non-Repeatability	±0.15% F.R.
Threshold & Resolution	0.001% F.R.

### Environmental

Temperature, Operating	-40 To +185 Deg C
Temperature, Storage	-50 To +200 Deg C
Vibration Survival (2 To 2,000 Hz)	25 G RMS, 0.5" Disp D.A.
Shock Survival	500 G, 0.5 mSec
Ambient Pressure	0 To 5 Atmospheres
Humidity	95% R.H.

### Physical

Weight (Excluding Cable)	1.5 Oz (42.5 Gm)
Size	
Standard Square Flange	1.16 In Sq x 0.73 In H (2.95 cm Sq x 1.86 cm H)
Optional Round Flange	1.10 In Dia. x 0.73 In H (2.79 cm Dia. x 1.86 cm H)
Case Material	Nickel-Plated Aluminum
Sealing	Environmental
Electrical Interface (Standard)	4 Terminal Pins
Optional High Temp Cable	5 Leads



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