

# Linear Accelerometers

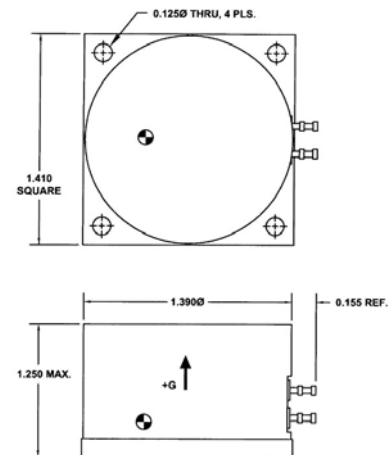
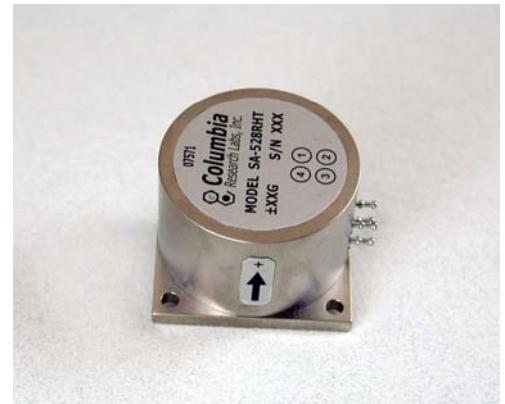
## SA-528RHT

The Columbia Model SA-528RHT Force Balance Accelerometer is designed for extreme high temperature environments including aircraft engines. The Model SA-528RHT is capable of operating at temperatures of up to 175 degrees Celsius. This sensor is completely self-contained and provides a high level, low impedance output eliminating the need for high temperature signal conditioning.

In addition to small size and exceptional high temperature performance, Model SA-528RHT incorporates our patented high performance torquer system, which provides exceptional performance and reliability in severe vibration and shock environments. An optional integrated high temperature cable is also available. *Consult the factory for customized versions of these sensors.*

Note: Exports of accelerometers from the United States are subject to the licensing requirements of the Export Administration Regulations (EAR) and/or the International Traffic in Arms Regulations (ITAR).

- \* Miniature Aircraft Sensors
- \* High Temperature To 175 C
- \* Extreme Shock and Vibration Survival



### Specifications

	SA-528RHT
<b>Operational</b>	
Ranges Available	$\pm 1$ G To $\pm 50$ G
Output Voltage	0.2 To 4.8 $\pm 2\%$ VDC into 100K Load
Excitation	+28 $\pm 4$ VDC, +30mA Max.
Output Impedance	Less Than 1000 Ohms
Sensitive Axis Alignment	<1 Degree
Scale Factor Tolerance	$\pm 1.5\%$
Scale Factor Temp Coefficient	Less Than 0.03% / Deg C Max.
Zero Bias	2.500 $\pm 0.030$ VDC
Null Temp Sensitivity	Less Than 0.005% F.R. / Deg C
Natural Frequency	75 Hz To 250 Hz (Function of G Range)
Damping Ratio	0.7 $\pm 0.2$
Cross Axis Sensitivity	0.01 G/G
Output Noise	3 mV RMS Max.
Non-Linearity	$\pm 0.15\%$ F.R.
Hysteresis & Non-Repeatability	$\pm 0.1\%$ F.R.
Threshold & Resolution	<0.001% F.R.

### Environmental

Temperature, Operating	-50 To +175 Deg C
Temperature, Storage	-60 To +200 Deg C
Vibration Survival (2 To 2,000 Hz)	18 G RMS, 0.5" Disp D.A.
Shock Survival	1500 G, 0.5 mSec
Ambient Pressure	0 To 5 Atmospheres
Humidity	95% R.H.

### Physical

Weight	3 Oz (85 Gm)
Size	1.41 In Sq x 1.25 In H (3.58 cm Sq x 3.18 cm H)
Case Material	Nickel-Plated Aluminum
Sealing	Environmental
Electrical Interface Standard	4 Terminal Pins
Optional High Temp Cable	4 Cable Leads

### Output Terminal Pin / Cable Lead Functions:

Pin	Function	Optional Cable Lead Color
1	Signal Output	Green
2	+28 VDC	Red
3	Power Ground	Black
4	Signal Ground	White

### Ordering Information:

SA-528RHT (+/- X G) Cxx

Standard Accelerometer w/Pins  
Range +/- X G (Required)

Integrated High Temp Cable Option  
xx = Cable Length (Feet)  
xxM = Cable Length (Meters)



Columbia Research Laboratories, Inc. 1925 Mac Dade Blvd. Woodlyn, PA 19094

Phone: 1.800.813.8471 / Fax: 610.872.3882 / email: sales@columbiaresearchlab.com