Linear Accelerometers

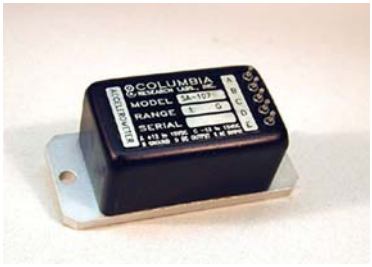
SA-107B(C), SA-107BHP(C)

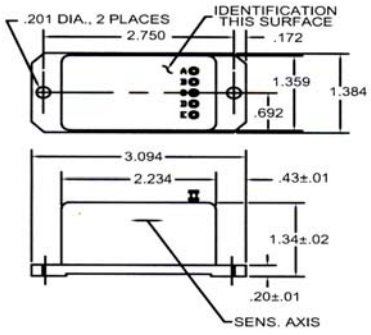
* **Single Axis**
* **+/-15 VDC Operation**
* **Low Cost and High Performance**

The Columbia Models SA-107B and SA-107BHP Servo Accelerometers offer the superior performance of force balance technology and are configured for general purpose and high performance applications respectively. These sensors are ideal for DC and low frequency measurements. The accelerometers are self-contained and provide high level, low impedance output. No signal conditioning is required in most applications.

The SA-107B Series is well suited for many OEM and industrial applications. These devices are available with either terminal pins or a 4-pin connector for convenient installation. ***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).





Specifications

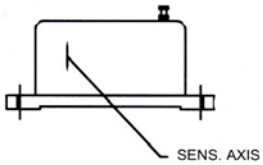
Operational	SA-107B SA-107BC	SA-107BHP SA-107BHPC
Ranges Available	±0.25 G To ±100 G	±0.1 G To ±100 G
Output Voltage	±7.5 Volts Into 10K Load	
Excitation	±15 ±1 VDC 10 mA Max.	
Output Impedance	<100 Ohms	
Sensitive Axis Alignment	±0.5° Max.	±0.25° Max.
Scale Factor Tolerance	±1% of Nominal	
Scale Factor Temp Coefficient	±0.02% / Deg C	
Zero Bias	±0.05% F.R. or 3 x 10^{-4} (Larger Value Applies)	
Null Temp Sensitivity	0.0005% / Deg C	
Natural Frequency	30 To 250 Hz, Dependent Upon Range	
Damping	0.7 ±0.2	
Output Noise	<2 mV RMS (2 To 10K Hz)	
Cross Axis Sensitivity	0.002 G/G Exclusive of Case Alignment	
Non-Linearity	±0.1% F.R.	±0.05% F.R.
Hysteresis & Non-Repeatability	±0.05% F.R. or 3 x 10^{-4} G	±0.03% F.R. or 1.5 x 10^{-4} G
Threshold & Resolution	±0.001% F.R.	

Environmental		
Temperature, Operating	-50 To +85 Deg C	
Temperature, Storage	-60 To +100 Deg C	
Vibration Survival (2 To 2,000 Hz)	5 G RMS, 0.5" Disp D.A.	15 G RMS, 0.5" Disp D.A
Shock Survival	125 G, 5 mSec	1500 G, 1 mSec
Ambient Pressure	0 To 5 Atmospheres	
Humidity	95% R.H.	

Physical		
Weight	4 Oz (113.4 Gm)	
Size	3.09 In L x 1.38 In W x 1.34 In H (7.85 cm L x 3.51 cm W x 3.41 cm H)	
Case Material	Anodized Aluminum	
Sealing	Environmental	
Electrical Interface: SA107B & SA-107BHP SA-107BC & SA-107BHPC	5 Terminal Pins Connector #PT02A-8-4P or Equiv.	
Optional Mating Connector for SA-107BC & SA-107BHPC	PT06A-8-4S(SR)	

Cable Options for Models SA-107BC & SA-107BHPC: P/N AFB04379

Z Option – Alternate Sensitive Axis



I/O Pin Functions:

SA-107B & SA-107BHP	
Pin	*Function*
A	+15 VDC
B	Ground
C	-15 VDC
D	Output
E	Test

SA-107BC & SA-107BHPC	
Pin	*Function*
A	+15 VDC
B	Ground
C	-15 VDC
D	Output

Ordering Information:

SA-107B(+/- X G)		Y	Z
SA-107BHP(+/- X G)		Y	Z
Accelerometer w/Terminal Pins Range +/- X G (Required)			
SA-107BC(+/- X G)	M	Y	Z
SA-107BHPC(+/- X G)	M	Y	Z
Accelerometer w/Connector Range +/- X G (Required)			
Optional Mating Connector Supplied			
1G Counterbias Option (Ranges ±0.5G &higher)			
Z Option (See Above)			

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