

Linear Accelerometer

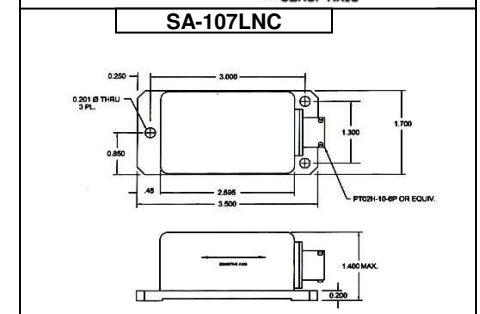
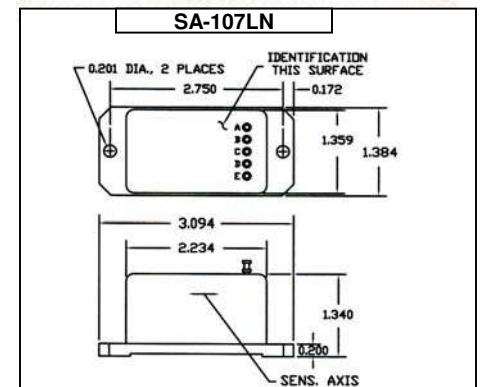
SA-107LN, SA-107LNC

Columbia Models SA-107LN and SA-107LNC Servo Accelerometers are high-sensitivity, low noise sensors designed for use in seismic and low level, low frequency motion studies. The accelerometers are self-contained and provide a high level, low impedance output. No signal conditioning is required in most applications.

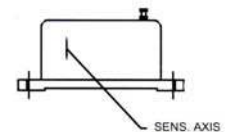
These sensors utilize low noise electronics in conjunction with the force balance principle to make possible measurements in the low frequency micro-G range. Aside from the traditional DC-coupled zero output, the SA-107LN(C) also provides AC-coupled zero output which eliminates tilt-induced or offset errors facilitating high amplification of the basic output. *Consult the factory for customized versions of this sensor.*

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).

- * Seismic Event Sensor
- * Ultra Low Noise
- * High Level Output



Z Option:
Alternate Sensitive Axis



Specifications

Operational

	SA-107LN	SA-107LNC
Ranges Available	±0.1 G To ±2 G	
Output Voltage	±7.5 Volts into 100K Load	
Excitation	±12 To ±15 VDC <10 mA	
Output Impedance	<1000 Ohms	
Sensitive Axis Alignment	Better Than 0.25 Deg	
Scale Factor Tolerance	±1%	
Scale Factor Temp Coefficient	0.01% / Deg C Max.	
Zero Output		
A.C. Coupled	<5 mV	
D.C. Coupled	<1 mG	
Null Temp Sensitivity	75 µV./ Deg C	
Natural Frequency	100 To 200 Hz Dependent Upon Range	
Damping	0.7 ±0.1	
Cross Axis Sensitivity	0.002 G/G Exclusive of Sensitive Axis Alignment	
Output Noise	<2.5 µV RMS From 0 To 50 Hz	
Non-Linearity	<±0.1% F.R.	
Hysteresis & Non-Repeatability	<0.5 mG	
Threshold & Resolution	Better Than 1 µG	

Environmental

Temperature, Operating	-40 To +80 Deg C	
Temperature, Storage	-50 To +90 Deg C	
Vibration Survival (2 To 2,000 Hz)	5 G RMS, 0.5" Disp D.A.	
Shock Survival	200 G, 5 mSec (1/2 Sine)	
Ambient Pressure	0 To 5 Atmospheres	
Humidity	95% R.H.	

Physical

	SA-107LN	SA-107LNC
Weight	4 Oz (113.4 Gm)	5 Oz (141.8 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)	3.50 In L x 1.70 In W x 1.40 In H (8.89 cm L x 4.32 cm W x 3.56 cm H)
Case Material	Anodized Aluminum	
Sealing	Environmental	
Electrical Interface	5 Terminal Pins	6-Pin Connector
Optional Mating Connector	N/A	PT06A-10-6S(SR)

Cable Options for Model SA-107LN P/N AID04348; Model SA-107LNC P/N AFB04322

I/O Pin Functions:

SA-107LN		SA-107LNC	
Pin	Function	Pin	Function
A	+15 VDC	A	+15 VDC
B	Ground	B	Power Ground
C	-15 VDC	C	-15 VDC
D	DC Output	D	DC Output
E	AC Output	E	AC Output
		F	Signal Ground

Ordering Information:

SA-107LN(+/- X G)

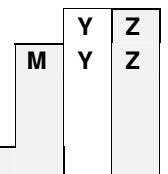
SA-107LNC(+/- X G)

Standard Accelerometer
Range +/- X G (Required)

Optional Mating Connector Supplied

1G Counterbias Option

Z Option (See Above)



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