

Tri-axial DC response seat pad accelerometer

Description

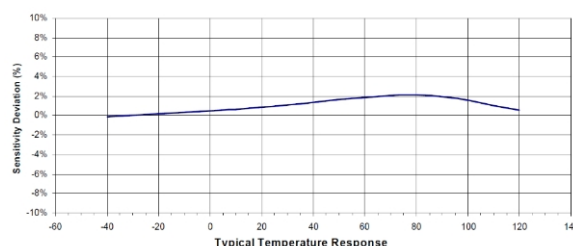
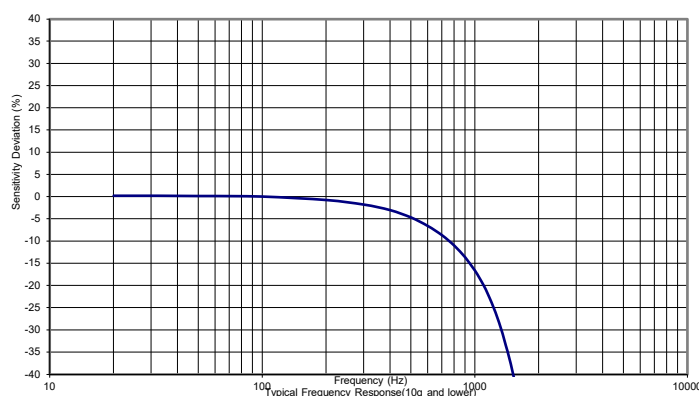
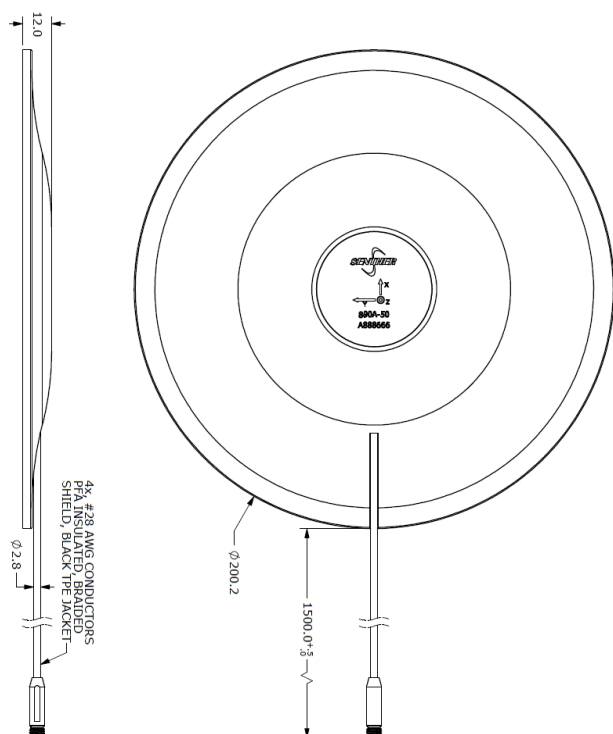
Model 890 is a static response triaxial seat pad accelerometer designed especially for characterizing whole body vibration in accordance with ISO 2631-1 and ISO 8041. The seat pad incorporates a removable triaxial accelerometer with $\pm 2000\text{mV}$ full scale output. The model 890 is designed for static or low frequency measurements with a measurement resolution of $<1.5\text{mg}$. A flexible cable is included for simple interface. The accelerometer uses silicon Micro-Electro-Mechanical System (MEMS) sensing element which provides a better operating in low frequency range. The MEMS sensor combines outstanding variable capacitance technology achieve very low sensitivity variation over the operating temperature range, compared to other sensing element designs. The accelerometer enables the test engineer or technician to measure the accelerations of three orthogonal axes of vibration simultaneously on vehicle or platform. All variations provide reliable measurements and long-term stability.

Features

- Static response
- 2 to 200g full scale
- Motion, low frequency
- Vehicle drive testing
- 5K g shock survivability
- Temperature compensation

Application

- Vehicle drive testing
- Aerospace grounding
- Human motion
- Automotive platform motion test



Specification

All values are typical at +24°C, and 12Vdc excitation unless otherwise stated.

PARAMETERS	VALUE				UNITS
DYNAMIC RANGE	2	5	10	200	g
SENSITIVITY $\pm 10\%$	1000	400	200	10	mV/g
FREQUENCY RESPONSE $\pm 5\%$	0-200	0-300	0-400	0-1000	Hz
RESIDUAL NOISE (PASSBAND)	1000	600	500	1300	μ V RMS
SHOCK LIMIT	5000	5000	5000	5000	g





PARAMETERS	VALUE	UNITS
ZERO ACCELERATION OUTPUT	2.5 \pm 0.1	V
TRANSVERSE SENSITIVITY	<3	%
NON-LINEARITY (BFSL)	± 1	%FSO
THERMAL ZERO SHIFT, -40 to +85°C, REF. 24°C	± 2	%FSO
THERMAL SENSITIVITY SHIFT, -40 to +85°C, REF. 24°C	± 2	%
EXCITATION VOLTAGE	5.5 to 30	Vdc
EXCITATION CURRENT	<10	mA
FULL SCALE OUTPUT VOLTAGE	± 2	Vpk (FSO=2V)
OUTPUT IMPEDANCE	<100	Ω
INSULATION RESISTANCE (@100Vdc)	>100	M Ω
TURN ON TIME	<100	mSEC
OPERATING AND STORAGE TEMPERATURE	-40 to +85	°C
HUMIDITY (SENSOR ELEMENT)	Epoxy potted	
MATERIAL (SEAT PAD)	Nitrile Rubber	
WEIGHT (CABLE NOT INCLUDED)	380	Grams

Accessories

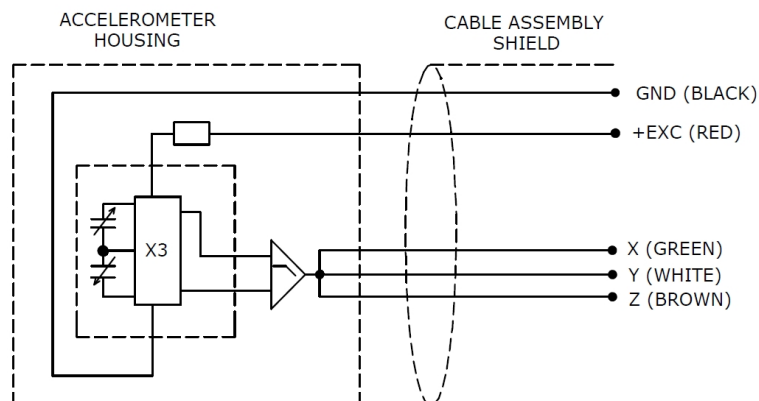
Calibration certificate included.

Part Number	Description	Availability
PJ0048	LEMO FGG-1B-307 connector	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration

Sensor	Connector	Data acquisition	Computer
			

Wiring configuration



Ordering information

890	-	50	3
Model	-	Range	Cable length
890	-	2=2g 5=5g 10=10g 200=200g	3=3 meters 6=6 meters



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