

Low cost tri-axial accelerometer

Description

Model 860 is a low cost triaxial accelerometer which simultaneously measures acceleration and low-frequency vibration in three mutually perpendicular axial. 860 is triaxial capacitive accelerometer family utilizes a silicon Micro-Electro-Mechanical System (MEMS) variable capacitance sensing element. The output signal is scaled as a voltage which is proportional to the applied acceleration, signal format is single-ended $2.5 \pm 2V$. The accelerometer is powered by a single regulated supply between 5.5 to 30 Vdc. Thermal drift has been compensated by internal circuit for the best environment stability. The sensing element and electronics are contained in a water proof housing with an integral cable terminated by pigtails or specified connector. Signal ground is isolated from the test object that benefit from the anodized aluminum housing. The accelerometer can be mounted by M6 metric screw or adhesive. 860 is well-suited for a wide variety of R&D or OEM applications requiring low frequency measurements and compact size.

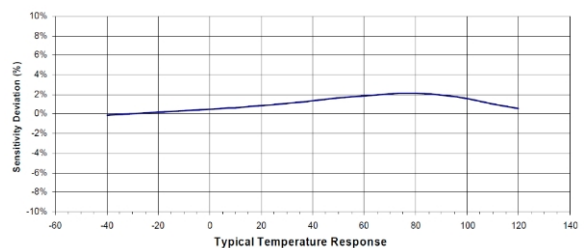
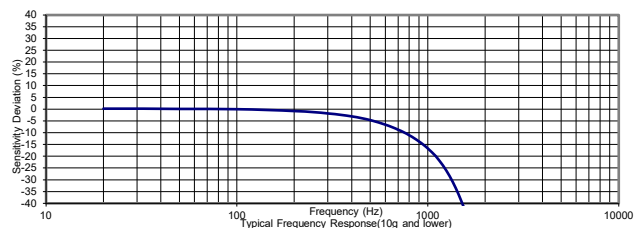
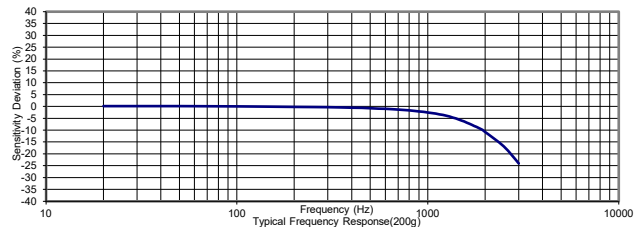
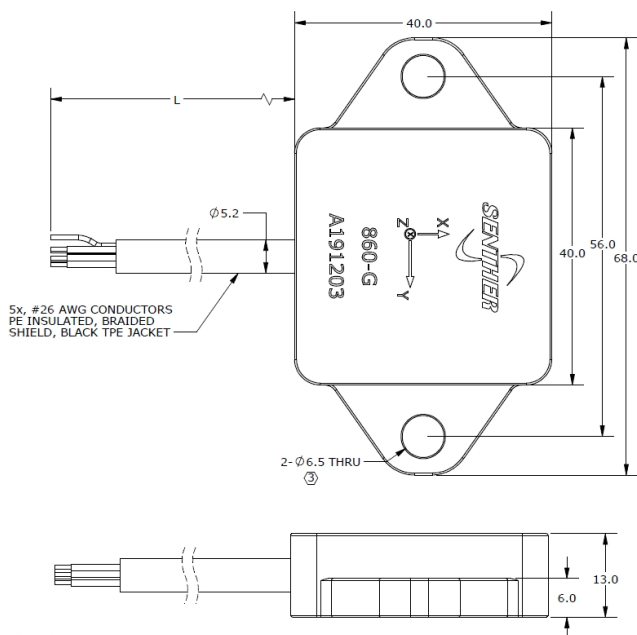


Features

- DC response
- 2 to 200g full scale
- Motion, low frequency, tilt
- Low cost
- Amplified voltage output

Application

- Automotive road testing
- Civil engineering structures
- Railway comfort



Specification

All values are typical at +24°C (+75°F), 12Vdc excitation and apply to each axis unless otherwise stated.

DYNAMIC RANGE	2	5	10	200	g
SENSITIVITY ±10%	1000	400	200	10	mV/g
FREQUENCY RESPONSE ±3db	0-200	0-300	0-400	0-1000	Hz
RESIDUAL NOISE (PASSBAND)	1000	600	500	1300	µV RMS
SHOCK LIMIT	5000	5000	5000	5000	g

PARAMETERS	VALUE	UNITS
ZERO ACCELERATION OUTPUT	2.5±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 (@500Vdc)	>100	MΩ
TURN ON TIME	<100	mSEC
OPERATING AND STORAGE TEMPERATURE	-40 to +85	°C
HUMIDITY	Epoxy potted	
WEIGHT (CABLE NOT INCLUDED)	50	Grams
MOUNTING TORQUE	18 (2.0)	lb-in (Nm)

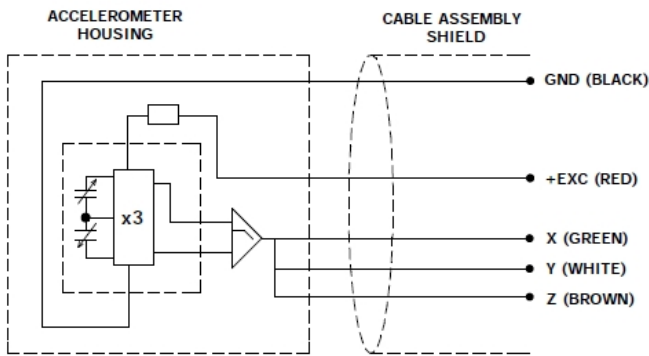
Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0124	M6x16 socket head cap screws	2pcs included
PJ0048	LEMO FGG-1B-307 connector	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration

Sensor	Connector	Data acquisition	Computer
			



Ordering information

860	M1	-	5	-	3
Model	M1	-	Range	-	Cable length
860	M1=5-pin M8 connector output	-	2=2g 5=5g 10=10g 200=200g	-	1=1 meter 3=3 meters

860M1 Configuration:

