

Tri-axial digital output accelerometer



Features

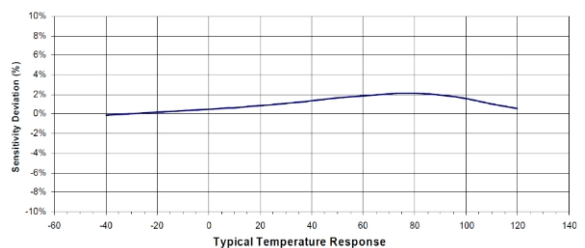
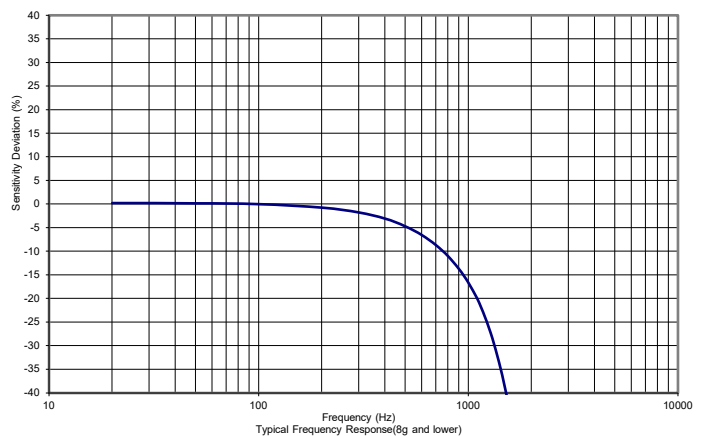
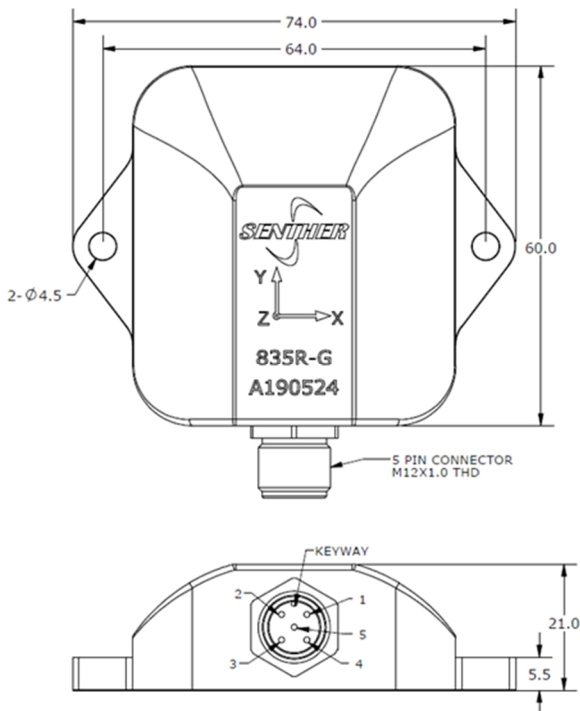
- 485-ASCII interface
- High Resolution
- Rugged design
- Case isolated
- ESD protection
- Stable output
- EMI / RFI shielded

Application

- Automotive road testing
- Civil engineering structures
- Railway comfort
- Aviation and aerospace

Description

Model 835R is a digital output triaxial accelerometer which simultaneously measures acceleration and low-frequency vibration in three mutually perpendicular axial. 835R is triaxial capacitive accelerometer family utilizes a silicon Micro-Electro-Mechanical System (MEMS) variable capacitance sensing element. The output signal is scaled proportionally to the applied acceleration, signal format can be 485-ASCII or 485-ASCII with address. The accelerometer is powered by a single regulated supply between 9 to 36 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 a M12 5-pins connector. Signal ground is isolated from the test object that benefit from the anodized aluminum housing. The accelerometer can be mounted by M4 metric screw or adhesive. 835R is well-suited for a wide variety of OEM applications requiring low frequency measurements and reliability package. Model 18T-L is the mating cable for the sensor, refer below measurement configuration for wiring.



Specification

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

Model	835R-2	835R1-2	835R-4	835R1-4	835R-8	835R1-8	
Acceleration range	±2	±2	±4	±4	±8	±8	g
Frequency response ±5%	0-50	0-50	0-50	0-50	0-50	0-50	Hz
Residual noise	0.2	0.2	0.2	0.2	0.2	0.2	mg
Resolution	0.2	0.2	0.2	0.2	0.2	0.2	mg
Repeatability	0.5	0.5	0.5	0.5	0.5	0.5	mg
Shock limit	1000	1000	1000	1000	1000	1000	g
Transverse sensitivity	<1	<1	<1	<1	<1	<1	%
Amplitude nonlinearity (BFSL)	±1	±1	±1	±1	±1	±1	%FSO
Thermal bias shift	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	mg/°C
Thermal sensitivity shift, -40 to +85°C, REF. 24°C	±1.25	±1.25	±1.25	±1.25	±1.25	±1.25	%
Protocol	485-ASCII	485-ASCII (with address)	485-ASCII	485-ASCII (with address)	485-ASCII	485-ASCII (with address)	

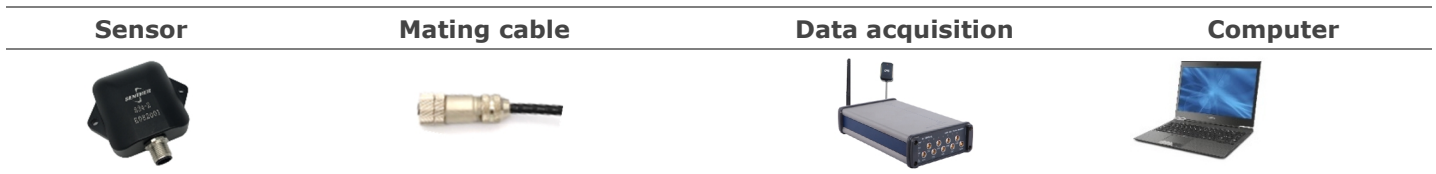
Items	Spec.	Unit
Power requirement	9 to 36	Vdc
Insulation (@100Vdc)	>100	MΩ
Startup time	<100	mSEC
Operation temperature range	-40 to +85	°C
Protection	IP67	
Case material	Anodized aluminum	
Weight (W/O cable)	130	Gram

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0113	M4x12 socket head cap screws	2pcs included
18T-10	10 meter mating cable(PVC) with M12 connector	Optional
19A-10-B1	10 meter mating cable(TPU) with M12 to BNCx2 connector	Optional
19A-10-B3	10 meter mating cable(TPU) with M12 to BNCx3 connector	Optional
PJ0048	LEMO FGG-1B-307 connector	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration



Model 18T mating cable:

Connector/Pin

- 1 = Power +
- 2 = Power Ground
- 3 = RS485-A
- 4 = RS484-B
- 5 = NA

Wire definition	
1	Brown
2	White
3	Blue
4	Black
5	Gray

Ordering information

835	R	-	2	-	LC
Model	Output format	-	Range	-	Economical option
835	R=485-ASCII R1=485-ASCII with address	-	2=2g 4=4g 8=8g	-	LC=Low cost version(Optional spec.) Blank=Standard version

