

High temperature PE accelerometer



Features

- High sensitivity
- Top connectors/cables
- Hermetic seal
- Case isolated
- •Wide frequency response

Application

•Engine condition monitoring

- •High temperature pipeline
- Aircraft research
- •Exhaust system monitoring

Description

Model 310P is a piezo-electrical accelerometer permitting high temperature vibration measurements. 310P features a shear mode ceramic crystal which exhibits excellent output stability over time. With the benefit of special piezo crystal, The accelerometer transmit the acceleration signal by charge output through the low noise cable. Signal ground isolated from the outer case of the unit. The welded stainless steel construction provides a hermetic housing for high temperature application. The 5/8-24 glass insulated connector provides long-term stability over the operating temperature range. The 310P has 1/4-28 thread hold for stud mounting on the test object. The 310P provides wide frequency response, which is ideal for dynamic vibration and shock measurement. Senther's model 16A5-L is a 1/4-28 mating Teflon jacket cable for the sensor. IN-07 charge amplifier is recommended when 310P work under high temperature environment.





Specification

All values are typical at +24°C (+75°F) and 100Hz unless otherwise stated.

Dash NO.	-40	
SENSITIVITY, TYPICAL	40	pC/g
SENSITIVITY, MINIMUM	36	pC/g
FREQUENCY RESPONSE ±5%	3-5000	Hz
FREQUENCY RESPONSE ±10%	1-10000	Hz
FREQUENCY RESPONSE ±3dB	0.4-14000	Hz
RESONANT FREQUENCY	32	kHz
TRANSVERSE SENSITIVITY	<5	%
TEMPERATURE RESPONSE, -50 to +200°C	±15	%
LINEARITY	±1	%
DYNAMIC RANGE	±1000	g
SHOCK LIMIT	±5000	g

Parameters	Value	Units
INTERNAL RESISTANCE (@100Vdc)	>10	GΩ
INTERNAL RESISTANCE @ +200°C (+392°F)	>10	MΩ
CAPACITANCE (NOMINAL)	1400	pF
GROUNDING	OUNDING Case isolated	
INSULATION RESISTANCE (@100Vdc)	>100	MΩ
OPERATING TEMPERATURE	RATING TEMPERATURE -50 to +200 °C	
HUMIDITY	IDITY Hermetically Sealed	
MATERIAL (Casing)	RIAL (Casing) Stainless steel	
SENSING ELEMENT	Piezo Ceramic	
WEIGHT	121 Grams	
MOUNTING TORGUE	OUNTING TORGUE 6 (0.7) Ib-i	

Accessories

Calibration certificate included.

Part Number	Description	Availability	
PM0011	Mounting stud 1/4-28 to 1/4-28 thread	One stud Included	
PM0008	Mounting stud 1/4-28 to M6 thread		
PM0007	Mounting stud 1/4-28 to M10 thread	Optional	
PM0445	Adhesive mounting adapter	Optional	
MB0001	Flat magnet mounting adapter	Optional	
MB0011	Saddle magnet mounting adapter	Optional	
16A5-10	10 meter mating cable with MIL-C-5015 connector Optional		
16A5-10-B	10 meter mating cable with MIL-C-5015 to BNC connector	Optional	
IN-06	3 channel charge amplifier	Optional	
IN-07	1 channel charge amplifier	Optional	
IN-SDG	8 channels data acquisition system	Optional	

SENTHER TECHNOLOGY Co., Ltd. • Skyworth innovation valley 5B-8F, Baoan, Shenzhen, 518108, China • Tel: 0755-85273639 • http://www.senther.com



Measurement configuration



Ordering information

310	Р	-	А
Model	Output signal	-	Mounting stud
310	P=Charge output	-	A= ¼-28 to ¼-28 stud
			B= ¼-28 to M6 stud
			C*=Special



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