

Lightning protection bi-axial accelerometer



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Features

- Low frequency response
- · Bi-axial output
- High sensitivity
- Hermetic seal
- Lightning protection
- EMI / RFI shielded
- Temperature signal available

Application

- Wind blade monitoring
- Tower testing
- High structure monitoring

Description

Model 322A is a bi-axial lighting protection IEPE accelerometer permitting low frequency vibration measurements. 322A features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with in a two-wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is internal shielded and isolated from the outer case of the unit. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded stainless-steel construction provides a hermetic housing. The standard M12 glass insulated connector provides long-term stability over the operating temperature range. In addition to adhesive mounting, 322A has Ø5.2 through holes for M5 screws mounting on the test object. The 322A provides low frequency response and shock resistance, which is ideal for high structure vibration monitoring under incidental shock environment. Model 322T is available for temperature measurement. Senther's model 18T-L is a M12 connector mating cable for the sensor.









Specification

Typical at +24°C (+75°F), 24Vdc, 4 mA and 100Hz, unless otherwise stated.

Part Number	±5-LF	±10-LF	g
Sensitivity ±10%	1000	500	mV/g
Freq. Resp. ±5%	0.3-4000	0.3-4000	Hz
Freq. Resp. ±3dB	0.1-6000	0.1-6000	Hz
Bias Voltage	10 to14	10 to14	Vdc
Supply Voltage	18 to 30	18 to 30	Vdc
Supply Current	2 to 10	2 to 10	mA
Residual Noise	0.00015	0.0002	g RMS
Shock Limit	2000	2000	g
Transverse Sensitivity	<5	<5	%
Non-Linearity (BFSL)	±1	±1	%FSO
Temp. Resp., -55 to +125°C	±10	±10	%
Output Impedance	<100	<100	Ω
Warm-up Time	<5	<5	Second
Operating Temperature	-55 to +125	-55 to +125	°C
High Voltage Insulation (Pins to Case).	4000	4000	VAC

Temperature Sensor:

Items	Spec	Units
Output Sensitivity	10	mV/°C
Output Voltage at 0°C	500	mV
Accuracy	±1	°C
Range	-40 to +125	°C

Overall configuration	Standard	Units
Case Material	316L Stainless Steel	
Protection	IP68	
Insulation Impedance (@500Vdc)	>200	ΜΩ
Lighting Insulation (@AC 4000V)	>60	Second
Operating Temperature	-55 to +125	°C
Weight	<250	gram

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0095	M5x12 socket head cap screws	2pcs Included
PF0095	Adhesive epoxy-Loctite® #401	Optional
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
IN-03	3 channels IEPE signal conditioner	Optional
IN-3062	8 channels data acquisition system	Optional

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Measurement configuration

• Z Out+(4)

• TEMP Out+(2)



White

Blue

Black

Gray

2

3

4

5



Ζ

TEM

322	Α	-	5	-	LF	-	M1
Model	Output signal	-	Range	-	Low frequency option	-	Special housing
322	A=IEPE output	-	5=5g	-	LF=Low frequency	-	Groove for adhesive
	T= IEPE and temperature signal output		10=10g				GROOVE





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