

Model Number
300A12

SHEAR ICP® ACCELEROMETER SYSTEM

Revision: A
ECN #: 21675

DYNAMIC PERFORMANCE (357M50 with 422M136)

Voltage Sensitivity	mV/g [mV/(ms ⁻²)]	10 [1,02]	(±20%)
Measurement Range (for ±2.5V output)	±g pk [±ms ⁻² pk]	250 [2 450]	
Frequency Range (±5%)	Hz	10 to 10,000	
Mounted Resonant Frequency	kHz	≥60	
Broadband Resolution (1 Hz to 10 kHz)	g rms [ms ⁻² rms]	0.002 [0,02]	[1]
Amplitude Linearity	%	≤±1	[2]
Transverse Sensitivity	%	≤5	[3]

ENVIRONMENTAL

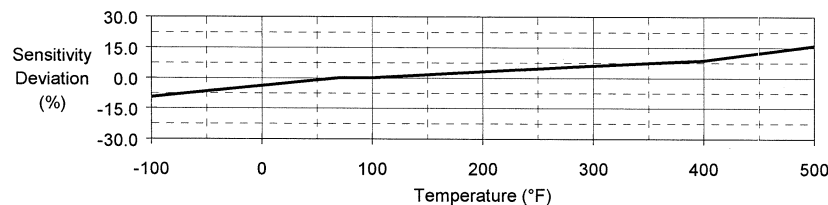
Shock Limit – (357M50)	±g pk [±ms ⁻² pk]	3,000 [29 430]	
Shock Limit – (422M136)	±g pk [±ms ⁻² pk]	1,000 [9 810]	
Operating Temperature Range - (357M50)	°F [°C]	-100 to +500 [-73 to +260]	
Operating Temperature Range – (422M136)	°F [°C]	-65 to +250 [-54 to +121]	
Temperature Response – System	%/°F [%/°C]	See Graph	[1]

ELECTRICAL

Excitation Voltage/Constant Current - (422M136)	VDC/mA	18-28/2.2-20	
Output Impedance	ohms	<10.0	
Output Bias - (422M136)	VDC	8.0 to 12.0	
Discharge Time Constant	sec	0.05	
Spectral Noise: (1 Hz)	μg/√Hz [(μms ⁻²)/√Hz]	1,000 [9 810]	[1]
(10 Hz)	μg/√Hz [(μms ⁻²)/√Hz]	300 [2 940]	[1]
(100 Hz)	μg/√Hz [(μms ⁻²)/√Hz]	40 [390]	[1]
(1 kHz)	μg/√Hz [(μms ⁻²)/√Hz]	10 [98]	[1]

MECHANICAL – FOR 357M50

Sensing Element	material/geometry	Ceramic/Shear	
Housing	material/sealing	Stainless Steel/Hermetic	
Size (hex x height)	in [mm]	0.38 x 0.87 [9,5 x 22]	
Weight	oz [gm]	0.192 [5,4]	[1]
Electrical Connector	type/location	10-32 Coaxial/Top	
Mounting Thread	size	10-32 Male	
Mounting Torque	in-lb [N-cm]	10-20 [113-225]	



All specifications are at room temperature unless otherwise specified.

In the interest of constant product improvement, we reserve the right to change specifications without notice.

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DD032 Rev.G 2/16/99

OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted by the letter prefixes below. More than one option may be used.

-None-

NOTES:

- [1] Typical.
- [2] Zero-based, least-squares, straight line method.
- [3] Transverse sensitivity is typically ≤3%.

SUPPLIED ACCESSORIES:

Model 422M136 Charge Amplifier
Model 357M50 Charge Sensor
Cable: Part Number 16950-01
Model ACS-45 Calibration of 300A12 system. (1)

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Drawn: BLS	Eng: DMO	Sales: WAC	Appd: MB	Spec Number:
Date: 3-1-05	Date: 3-1-05	Date: 3/1/05	Date: 3/1/05	18539