A260 Series

Gravity Referenced
Linear Servo Accelerometer

Sherborne Sensors
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Introduction

Using the same torquer mechanism and servo electronics as the A220 series, the A260 features a switching regulator to enable direct operation from a single ended dc power supply. Galvanic isolation between primary and secondary circuits provides total electrical isolation between the input supply and signal output. To meet certain measuring requirements, especially in certain aerospace applications, this series has provision for an optional active filter with low output impedance and 1g bias circuitry for vertical mounting.

The A260 series inclinometers have a long and successful market history under the Schaevitz® brand. Acquisition of this technology by Sherborne Sensors has allowed customers to benefit from the same exceptional product qualities as its predecessors, with the added benefits of extensive applications engineering support, global technical sales presence, repair, refurbishment and calibration services, stocking programs, and continuous product improvements.

Applications

- Flight test monitoring
- Accident data collection
- Structural health monitoring
- Flight simulators
- Braking control on mass transit systems
- Road bed analysis
- Data acquisition systems
- Low frequency analysis

Features

- Available in ranges from ±1g to ± 20g
- High resolution down to 0.05 mg
- Closed loop force balance system
- Flight qualified versions available
- Self-Test facility
- DC Input – DC Output
- Manufactured to ISO 9001:2000 standards
- Connector and solder pin options
- Wide operational temperature range –55° to + 95°C
- 1g bias option to compensate for earth's gravity
- Low pass electronic filter options

MECO MEASUREMENTS & CONTROLS
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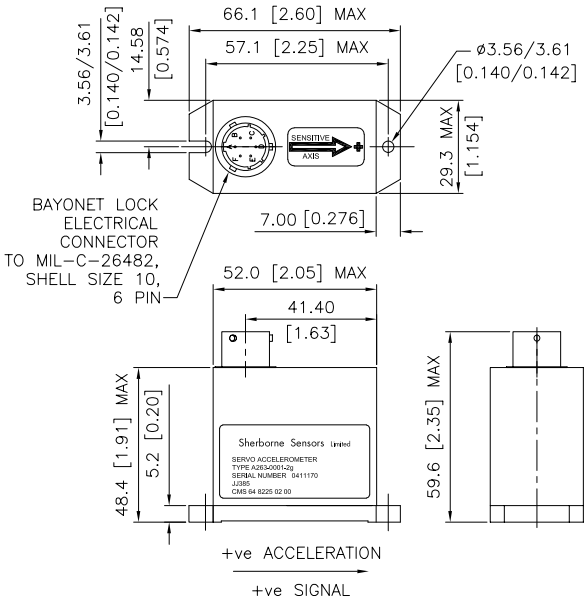
Specifications

Environmental Characteristics		
Operating Temperature Range	°C (°F)	-55°C to +95 (-67 to 203)
Survival Temperature Range	°C (°F)	- 65 to 105 (-85 to 221)
Constant Acceleration	g	100g in all 3 axes without damage
Shock		100g, 11ms ½ sine
Altitude	m (ft)	30,000 (98,400)
Environmental Sealing		IP65
EMC Directive		EN 61326:1998
EMC Emissions		EN 55022:1998
EMC Immunity		EN 61000-4-2 incorporating A1: 1998 & A2: 2001 EN 61000-4-3: 2002 EN 61000-4-4: 2004 EN 61000-4-6: 1996 incorporating A1: 2001 EN 61000-4-8: 1994 incorporating A1: 2001

Specifications by Range @ +25°C (+77°F)		± 1g	± 2g	± 5g	± 10g	± 20g
Excitation Voltage	Volts dc			16 to 32		
Power Consumption	W (max)			1		
Full Range Output (FRO) (see note 1)	Volts dc			± 5		
Output Standardisation	% FRO			± 1		
Output Impedance	Ω (nom)	5000	2500	5000	2500	5000
Output Noise	V rms			< 0.005		
Non-linearity (see note 2)	% FRO (max)	± 0.05	± 0.05	± 0.05	± 0.05	± 0.10
Hysteresis	% FRO (max)			0.02		
Resolution	% FRO (max)			0.0005		
Natural Frequency	Hz (nom)	90	100	115	130	150
Sensitive Axis-to-Case Misalignment	deg			< ± 0.2		
Cross-axis Sensitivity (see note 3)	% FRO (max)	± 0.2	± 0.2	± 0.2	± 0.2	± 0.5
Zero Offset (see note 4)	% FRO			< ± 0.1		
Damping Ratio				0.6 ± 0.1		
Insulation Resistance	MΩ			≥ 20		
Thermal Zero Shift	%FRO/°C (%FRO/°F) (max)			≤ ± 0.002 (0.004)		
Thermal Sensitivity Shift	%Reading/°C (%Reading/°F)(max)			≤ ± 0.02 (0.04)		
Weight	Grams (ozs)	180 (6.3) Connector Version, 155 (5.5) Solder Pin Version				

Notes
1. Full Range Output (FRO) is defined as the full acceleration excursion from positive to negative, i.e. ± 2g = 4g
2. Non-linearity is determined by the method of least squares
3. Cross-axis sensitivity is the output of unit when subjected to full range acceleration in cross-axis
4. Zero offset is specified under static conditions with no vibration inputs



MODEL DESIGNATION & ORDERING CODE

A263 - □□01 □g

- g Range
- 0 Standard 3 1g Bias
- 0 Standard Unit 1 Special

Specify Optional Mating Connector 3CON-0009 if required

Electrical Connections

Pin A	16 to 32Vdc
Pin B	Power Supply Ground
Pin C	Signal Ground
Pin D	Output
Pin E	Not Connected
Pin F	Self Test

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