Honeywell

Q-Flex[®] QA-750 Accelerometer

Cost-effective inertial-grade sensor

For Q-Flex technology in an economical package, Honeywell produces the QA750 for a broad array of moderate performance applications.

As with the entire Q-Flex family of accelerometers, the QA750 features patented Q-Flex® etched-quartz-flexure seismic system. An amorphous quartz proof-mass structure provides excellent bias, scale factor, and axis alignment stability.

The integral electronics develops an acceleration proportional output current providing both static and dynamic acceleration measurements. By use of a customer supplied output load resistor, appropriately scaled for the acceleration range of the application, the output current can be converted into a voltage.

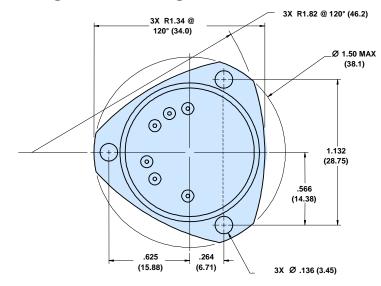


As an option, the QA750 can be provided with the temperature-compensating algorithm where bias, scale factor, and axis misalignment performance are dramatically improved.

Robust design and quality assurance provides superior reliability.

Features

- High value
- Environmentally rugged
- Analog output
- Compact design
- Field-adjustable range
- Built-in test
- Optional thermal compensation



3X .130 (3.30) MAX (19.81) MAX (100 (25.65) MAX (100 (25.65) MAX)

Configuration Drawings

Performance Characteristics

Additional product specifications, outline drawings and block diagrams, and test data are available on request.

Input Range [g] ±30 Bias [mg] <8 One-year Composite Repeatability [µg] <1000 (w/o model data) Temperature Sensitivity [µg/°C] <60 Scale Factor [mA/g] 1.20 to 1.46 One-year Composite Repeatability [ppm] <1000 (w/o model data) Temperature Sensitivity [ppm/°C] <190 Axis Misalignment [µrad] <7000 One-year Composite Repeatability [µrad] <300 Vibration Rectification [µg/g ² rms] <60 (50-500 Hz) <200 (500-2000 Hz) Intrinsic Noise [µg-rms] <7 (0-10 Hz) <70 (10-500 Hz) <1500 (500-000 Hz) Intrinsic Noise [µg-rms] <7 (0-10 Hz) <70 (10-500 Hz) <1500 (500-000 Hz) Environment Operating Temperature Range [°C] -55 to +95 Shock [g] 200 Vibration Peak Sine [g] 20 @ 30-500 Hz Resolution/Threshold [µg] <1 Bandwidth [Hz] >300 Thermal Modeling <16 Quiescent	Performance	
One-year Composite Repeatability [µg] <1000 (w/o model data)	Input Range [g]	±30
Temperature Sensitivity [µg/°C] <60	Bias [mg]	<8
Scale Factor [mA/g] 1.20 to 1.46 One-year Colmposite Repeatability [ppm] <1000 (w/o model data)	One-year Composite Repeatability [µg]	<1000 (w/o model data)
One-year Colmposite Repeatability [ppm] <1000 (w/o model data)	Temperature Sensitivity [µg/ºC]	<60
Temperature Sensitivity [ppm/°C] <190	Scale Factor [mA/g]	1.20 to 1.46
Axis Misalignment [µrad]<7000One-year Composite Repeatability [µrad]<300	One-year Colmposite Repeatability [ppm]	<1000 (w/o model data)
One-year Composite Repeatability [µrad] <300	Temperature Sensitivity [ppm/ºC]	<190
Vibration Rectification [µg/g²rms] <60 (50-500 Hz) <200 (500-2000 Hz)	Axis Misalignment [µrad]	<7000
<200 (500-2000 Hz)Intrinsic Noise [µg-rms]<7 (0-10 Hz) <70 (10-500 Hz) <1500 (500-10,000 Hz)	One-year Composite Repeatability [µrad]	<300
	Vibration Rectification [µg/g ² rms]	
Operating Temperature Range [°C] -55 to +95 Shock [g] 200 Vibration Peak Sine [g] 20 @ 30-500 Hz Resolution/Threshold [µg] <1	Intrinsic Noise [µg-rms]	<70 (10-500 Hz)
Shock [g] 200 Vibration Peak Sine [g] 20 @ 30-500 Hz Resolution/Threshold [µg] <1	Environment	
Vibration Peak Sine [g] 20 @ 30-500 Hz Resolution/Threshold [µg] <1	Operating Temperature Range [°C]	-55 to +95
Resolution/Threshold [µg] <1	Shock [g]	200
Bandwidth [Hz] >300 Thermal Modeling -010 NO -020 YES Electrical Quiescent Current per Supply [mA] <16	Vibration Peak Sine [g]	20 @ 30-500 Hz
Thermal Modeling -010 NO -020 YES -020 YES Electrical Quiescent Current per Supply [mA] Quiescent Power [mW] @ ±15 VDC <480	Resolution/Threshold [µg]	<1
-010 NO -020 YES Electrical Quiescent Current per Supply [mA] <16	Bandwidth [Hz]	>300
-020 YES Electrical Quiescent Current per Supply [mA] <16	Thermal Modeling	
Quiescent Current per Supply [mA] <16		
Quiescent Power [mW] @ ±15 VDC <480	Electrical	
Electrical Interface Temp Sensor Voltage Self Test Power / Signal Ground Input Voltage ±13 to ±18 Physical Weight [grams] 52.5 ±4 Diameter below mounting surface [inches] Ø1.07 ±0.01 Height - bottom to mounting surface [inches] .600 Max	Quiescent Current per Supply [mA]	<16
Voltage Self Test Power / Signal Ground Input Voltage ±13 to ±18 Physical Weight [grams] 52.5 ±4 Diameter below mounting surface [inches] Ø1.07 ±0.01 Height - bottom to mounting surface [inches] .600 Max	Quiescent Power [mW] @ ±15 VDC	<480
Power / Signal Ground Input Voltage ±13 to ±18 Physical	Electrical Interface	Temp Sensor
Input Voltage ±13 to ±18 Physical		Voltage Self Test
Physical Weight [grams] 52.5 ±4 Diameter below mounting surface [inches] Ø1.07 ±0.01 Height - bottom to mounting surface [inches] .600 Max		Power / Signal Ground
Weight [grams]52.5 ±4Diameter below mounting surface [inches]Ø1.07 ±0.01Height - bottom to mounting surface [inches].600 Max	Input Voltage	±13 to ±18
Diameter below mounting surface [inches] Ø1.07 ±0.01 Height - bottom to mounting surface [inches] .600 Max	Physical	
Height - bottom to mounting surface [inches] .600 Max	Weight [grams]	52.5 ±4
	Diameter below mounting surface [inches]	Ø1.07 ±0.01
Case Material 300 Series Stainless Steel	Height - bottom to mounting surface [inches]	.600 Max
	Case Material	300 Series Stainless Steel

ISO-9001 Certification Since 1995

DISCLAIMER: Specifications are subject to change without notice. Honeywell reserves the right to make changes to any product or technology herein to improve reliability, function, or design. Honeywell does not assume any liability arising out of the application or use of the product.

Accelerometers exported from the United States must be done in accordance with the Export Administration Regulations (EAR) and/or the International Traffic in Arms Regulations (ITAR) as applicable.

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