Model Number
3741F1250G

DC RESPONSE ACCELEROMETER

Revision: B ECN #: 53791

Performance ENGLISH SI Sensitivity(± 3 %) 54 mV/g 5.5 mV/(m/s²) [1] Measurement Range ± 50 g pk ± 490.3 m/s² pk [1] Frequency Range(± 5 %) 0 to 1,500 Hz 0 to 1,500 Hz 10 to 2,000 Hz Frequency Range(± 10 %) 0 to 2,000 Hz 0 to 2,000 Hz 2 Resonant Frequency 6.5 kHz 6.5 kHz [2] Phase Response(100 Hz) 0.3 % 0.3 % [3] Non-Linearity(Typical) 0.3 % 0.3 % [3] Non-Linearity(Max) 1 % 1 % [3] Broadband Resolution(0.5 to 100 Hz) 1.5 mg ms 0.015 m/s² ms [2] Transverse Sensitivity(Typical) 1 % 1 % 1 % Transverse Sensitivity(Max) 3 % 3 % E2] Transverse Sensitivity(Max) 3 % 4 49,050 m/s² pk Exercity pk Environ mental 5 to 250 °F -54.0 to 121 °C Exercity pk
Sensitivity(± 3 %)
Measurement Range ± 50 g pk ± 490.3 m/s² pk Frequency Range(± 5 %) 0 to 1,500 Hz 0 to 1,500 Hz Frequency Range(± 10 %) 0 to 2,000 Hz 0 to 2,000 Hz Resonant Frequency 6.5 kHz 6.5 kHz [2] Phase Response(100 Hz) < 10°
Frequency Range(± 5 %) 0 to 1,500 Hz 0 to 1,500 Hz 0 to 2,000 Hz Frequency Range(± 10 %) 0 to 2,000 Hz 0 to 2,000 Hz 1 to 2,000 Hz Resonant Frequency 6.5 kHz 6.5 kHz [2] Phase Response(100 Hz) < 10°
Frequency Range(± 10 %)
Resonant Frequency 6.5 kHz 6.5 kHz [2] Phase Response(100 Hz) < 10°
Phase Response(100 Hz) < 10 °
Non-Linearity(Typical)
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Broadband Resolution(0.5 to 100 Hz)
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Transverse Sensitivity (Max) 3 % 3 % Environ mental Overload Limit(Shock) ± 5,000 g pk ± 49,050 m/s² pk Temperature Range(Operating) -65 to 250 °F -54.0 to 121 °C Temperature Range(Storage) -65 to 250 °F -54.0 to 121 °C Temperature Coefficient of Sensitivity ± 1 % FSO ± 1 % FSO [2][4] Zero g Offset Temperature Coefficient ± 1 % FSO ± 1 % FSO [5][4][2] Base Strain Sensitivity 40 μg/gauss 3.9 (m/s²)/με [2] Magnetic Sensitivity 40 μg/gauss 3.9 (m/s²)/Tesla [2] Electrical Excitation Voltage 5 to 32 VDC 5 to 32 VDC Current Consumption ≤ 5 mA ≤ 5 mA ≤ 5 mA Output Impedance ≤ 120 Ohm ≤ 120 Ohm ≤ 120 Ohm Offset Voltage(0 g) ± 20 mVDC ± 20 mVDC 6] Common Mode Voltage(± 0.1 VDC) + 1.65 VDC + 1.65 VDC Spectral Noise(1 Hz) 150 μg/√Hz 1,472 (μm/s²)/√Hz [2]
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Temperature Range(Operating) -65 to 250 °F -54.0 to 121 °C Temperature Range(Storage) -65 to 250 °F -54.0 to 121 °C Temperature Coefficient of Sensitivity ± 1 % ± 1 % [2][4] Zero g Offset Temperature Coefficient ± 1 % FSO ± 1 % FSO [5][4][2] Base Strain Sensitivity .001 g/με .01 (m/s²)/με [2] Magnetic Sensitivity 40 μg/gauss 3.9 (m/s²)/Tesla [2] Electrical Excitation Voltage 5 to 32 VDC 5 to 32 VDC Current Consumption ≤ 5 mA ≤ 5 mA ≤ 5 mA Output Impedance ≤ 120 Ohm ≤ 120 Ohm ≤ 120 Ohm Offset Voltage(0 g) ± 20 mVDC ± 20 mVDC [6] Common Mode Voltage(± 0.1 VDC) + 1.65 VDC + 1.65 VDC Spectral Noise(1 Hz) 1,472 (μm/s²)/Hz [2]
Temperature Range(Storage) -65 to 250 °F -54.0 to 121 °C Temperature Coefficient of Sensitivity ± 1 % ± 1 % FSO 1 % FSO [5][4][2] Zero g Offset Temperature Coefficient ± 1 % FSO ± 1 % FSO [5][4][2] Base Strain Sensitivity .001 g/με .01 (m/s²)/με [2] Magnetic Sensitivity 40 μg/gauss 3.9 (m/s²)/Tesla [2] Electrical Excitation Voltage 5 to 32 VDC 5 to 32 VDC Current Consumption ≤ 5 mA ≤ 5 mA ≤ 5 mA Output Impedance ≤ 120 Ohm ≤ 120 Ohm ≤ 120 Ohm GenwbDC ± 20 mVDC [6] Common Mode Voltage(± 0.1 VDC) ± 150 μg/√Hz 1,472 (μm/s²)/√Hz [2]
Temperature Coefficient of Sensitivity $±1\%$ $±1\%$ [2][4] Zero g Offset Temperature Coefficient $±1\%$ FSO $±1\%$ FSO [5][4][2] Base Strain Sensitivity $.001 \text{ g/μe}$ $.01 \text{ (m/s}^2)/\mu\text{e}$ [2] Magnetic Sensitivity 40 μg/gauss $3.9 \text{ (m/s}^2)/\text{Tesla}$ [2] Electrical Excitation Voltage $.5 \text{ to } 32 \text{ VDC}$ $.5 \text{ to } 32 \text{ VDC}$ Current Consumption $.5 \text{ fmA}$ $.5 \text{ fmA}$ Output Impedance $.5 \text{ fmA}$ $.5 \text{ fmA}$ Output Impedance $.5 \text{ fmA}$ $.5 \text{ fmA}$ Output Offset Voltage(0 g) $.5 \text{ to } 32 \text{ VDC}$ $.5 $
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Base Strain Sensitivity .001 g/με .01 (m/s²)/με [2] Magnetic Sensitivity 40 μg/gauss 3.9 (m/s²)/Tesla [2] Electrical Excitation Voltage 5 to 32 VDC 5 to 32 VDC Current Consumption ≤ 5 mA ≤ 5 mA 0 to 32 VDC Output Impedance ≤ 120 Ohm ≤ 120 Ohm 0 to 32 VDC 0 to 32 VDC 0 to 32 VDC 1 to 32 VDC 1 to 32 VDC 1 to 32 VDC 0 to 32 VDC 0 to 32 VDC 1 to 32 VDC 1 to 32 VDC 0 to
Magnetic Sensitivity 40 μg/gauss $3.9 (m/s^2)/Tesla$ [2] Electrical Electrical [2] Excitation Voltage $5 \text{ to } 32 \text{VDC}$ $5 \text{ to } 32 \text{VDC}$ Current Consumption ≤ 5 mA ≤ 5 mA Output Impedance ≤ 120 Ohm ≤ 120 Ohm Offset Voltage(0 g) ± 20 mVDC ± 20 mVDC [6] Common Mode Voltage(± 0.1 VDC) + 1.65 VDC + 1.65 VDC Spectral Noise(1 Hz) 1,472 (μm/s²)/∀Hz [2]
Electrical Excitation Voltage 5 to 32 VDC 5 to 32 VDC Current Consumption ≤ 5 mA ≤ 5 mA Output Impedance ≤ 120 Ohm ≤ 120 Ohm Offset Voltage(0 g) ± 20 mVDC ± 20 mVDC Common Mode Voltage(± 0.1 VDC) + 1.65 VDC + 1.65 VDC Spectral Noise(1 Hz) 150 µg//Hz 1,472 (µm/s²)//Hz [2]
Excitation Voltage 5 to 32 VDC 5 to 32 VDC Current Consumption ≤ 5 mA ≤ 5 mA Output Impedance ≤ 120 Ohm ≤ 120 Ohm Offset Voltage(0 g) ± 20 mVDC ± 20 mVDC [6] Common Mode Voltage(± 0.1 VDC) + 1.65 VDC + 1.65 VDC Spectral Noise(1 Hz) 150 μg/√Hz 1,472 (μm/s²)/√Hz [2]
Current Consumption ≤ 5 mA ≤ 5 mA Output Impedance ≤ 120 0hm ≤ 120 0hm Offset Voltage(0 g) ± 20 mVDC ± 20 mVDC [6] Common Mode Voltage(± 0.1 VDC) + 1.65 VDC + 1.65 VDC Spectral Noise(1 Hz) 1,472 (µm/s²)/ \forall Hz [2]
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Offset Voitage(0 g) \pm 20 mVDC \pm 20 mVDC [6] Common Mode Voltage(\pm 0.1 VDC) $+$ 1.65 VDC $+$ 1.65 VDC Spectral Noise(1 Hz) 150 μ g/√Hz 1,472 (μ m/s²/√Hz [2]
Common Mode Voltage(± 0.1 VDC) + 1.65 VDC + 1.65 VDC Spectral Noise(1 Hz) + 1.65 VDC 150 μ g/√Hz 1,472 (μ m/s²)/√Hz [2]
Spectral Noise(1 Hz) 150 μ g/ \sqrt{Hz} 1,472 (μ m/s ²)/ \sqrt{Hz} [2]
Spectral Noise(10 Hz) 150 μg/√Hz 1,472 (μm/s²)/√Hz [2]
Spectral Noise(100 Hz) 150 µg/√Hz 1,472 (µm/s²)/√Hz [2]
Electrical Isolation(Case) $> 10^8 \text{ Ohm}$ $> 10^8 \text{ Ohm}$ [7]
7 10 011111
Physical Housing Material Anodized Aluminum Anodized Aluminum
Housing Material Anodized Aluminum Anodized Aluminum Sealing Epoxy Epoxy
Size (Height x Length x Width) 0.30 in x 1.00 in x .85 in 7.62 mm x 25.4 mm x 21.6
Size (Height x Length x Width) 0.50 in x 1.00 in x .65 in 7.62 min x 25.4 min x 21.6 mm
Weight(without cable) 0.35 oz 9.92 gm [2]
Electrical Connector Integral Cable Integral Cable
Electrical Connection Position Side Side
Cable Termination Pigtail Ends Pigtail Ends
Cable Type 010 4-cond Shielded 010 4-cond Shielded
Cable Length 10 ft 3 m
Mounting Through Holes (2) Through Holes (2)

UK

CA[8]

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.

OPTIONAL VERSIONS

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

NOTES:

[1] Measured at 100 Hz, 10 grms.

[2]Typical.

[3]Zero-based, least-squares, straight line method. [4]-65 to +250 °F, ref. 75 °F (-54 to +121 °C, ref. 24 °C)

[5]FSO = Full Scale Output over the Measurement Range (4VDC).

[6]Offset tolerance is based on manufacturers supplied cable length.

[7]Case and shield to mounting surface or cable leads.

[8] See PCB Declaration of Conformance PS027 for details.

SUPPLIED ACCESSORIES:

Model 081A103 Mounting screw (2)

Model ACS-103 Phase and Amplitude Calibration from 2 Hz to +5% of frequency range (1)

Model M081A103 Mounting screw and washer, M3 x 0.5 thread (2)

OPTIONAL ACCESSORIES:

Model 080A208 Triaxial mounting block

Entered: ND	Engineer: NJF	Sales: JM	Approved: BAM	Spec Number:
Date: 05/08/2023	Date: 05/08/2023	Date: 05/08/2023	Date: 05/08/2023	69813



AN AMPHENOL COMPANY

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