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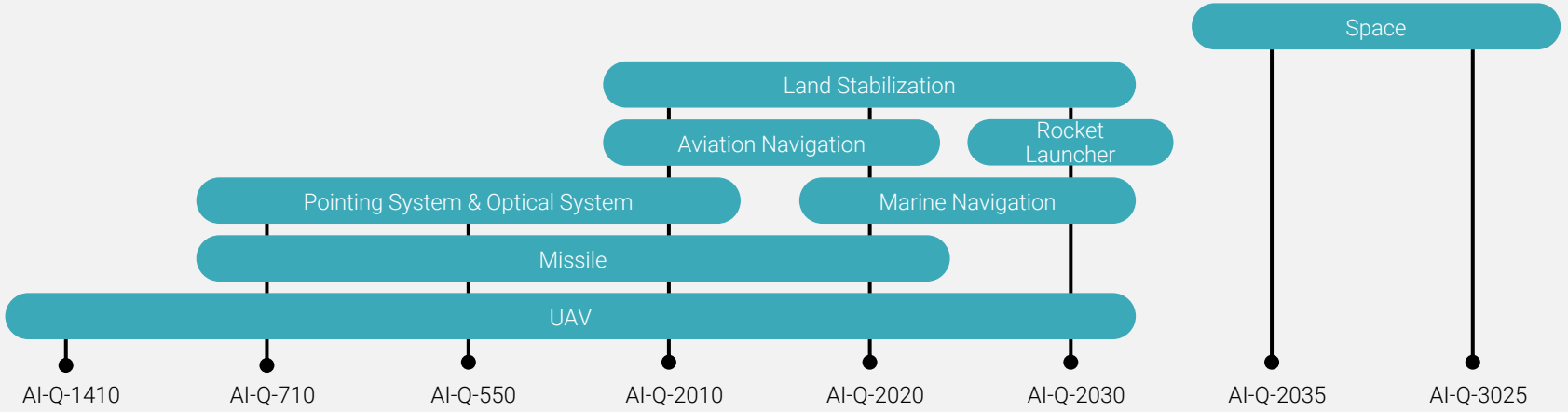
ITAR-Free Tactical & Navigation Grade Quartz Servo Accelerometers

LAND, AIR, SPACE AND MARINE

ITAR-Free Tactical & Navigation Grade Quartz Servo Accelerometers

WIDE RANGE OF ACCELEROMETERS



Parameter	AI-Q-1410	AI-Q-710	AI-Q-550	AI-Q-2010	AI-Q-2020	AI-Q-2030	AI-Q-2035	AI-Q-3025
Input Range, g	±60	±30	±80	±60	±60	±60	±60	±60
Bias, mg	<5	<8	<4	<4	<4	<4	<4	<3
Bias One Year Repeatability, µg	<1000	<1200	<1000	<550	<220	<160	<160	<80
Bias Temperature Sensitivity, µg/°C	<90	<70	<50	<30	<30	<30	<30	<20
Scale Factor, mA/g	1.20 - 1.46	1.23 - 1.43	0.65 - 0.85	1.20 - 1.46	1.20 - 1.46	1.20 - 1.46	1.20 - 1.46	1.20 - 1.46
One Year Repeatability, ppm	<1000	<1200	<600	<600	<500	<310	<310	<100
Temperature Sensitivity, ppm/°C	<180	<200	<100	<180	<180	<180	<180	<120
Axis Misalignment µrad	<7000	<2000	<1500	<2000	<2000	<2000	<2000	TBD
Operating Temperature, °C	-55 to +95	-55 to +96	-55 to +105	-55 to +95	-55 to +95	-55 to +95	-55 to +95	TBD
Bandwidth, Hz	>300	>300	>300	>300	>300	>300	>300	>800
Input Voltage, VDC	±13 to ±28	±13 to ±28	±13 to ±18	±13 to ±28	±13 to ±28	±13 to ±28	±13 to ±28	TBD
Radiation				N/A				30krad

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AI-Q-1410

The AI-Q-1410 is a tactical grade accelerometer, built with Quartz Flexure technology. Due to its analogue output and excellent long-term repeatability, the AI-Q-1410 is an optimal solution for demanding Rail Measurement Systems and other challenging Tactical Measurement Systems.

Applications include: Tactical and industrial grade applications and IMU as well as structural monitoring of bridges, dams, skyscrapers, and wind turbine blades.

AI-Q-710

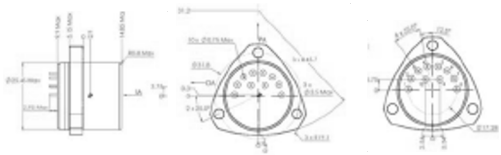
The AI-Q-710 is a tactical grade accelerometer, built with Quartz Flexure technology. Due to its analogue current output and excellent long-term repeatability, the AI-Q-710 is an optimal solution for demanding navigation and flight control systems.

Applications include: Tactical and industrial grade applications and IMU, optical system as well as structural monitoring of bridges, dams, skyscrapers, and wind turbine blades.

AI-Q-550

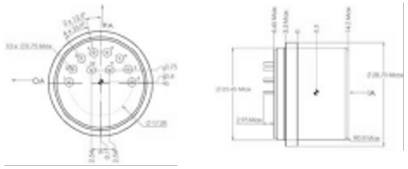
Offering input range of ±80 g with one-year bias composite repeatability better than 1mg in a compact and ruggedized casing that provides a high shock and vibration resistance matching the highest industry standards. Ideal when tactical grade performance, small dimensions, robustness and reliability are required.

Applications include: IMU for short to medium term flight applications such as missiles due to its higher input range of 80g, as well as downhole drilling.



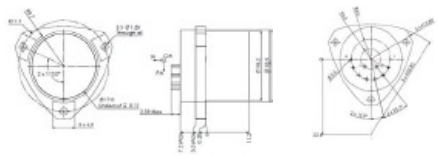
Dimensions (mm)

Note: centre of mass deviation +/- 2.5 mm along each axis



Dimensions (mm)

Note: centre of mass deviation +/- 2.5 mm along each axis



Dimensions (mm)

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AI-Q-2010

Built with state of the art Quartz Flexure technology suitable for delivering data monitoring capabilities and inputs into vehicle control systems. With its high input range and excellent long-term repeatability, the AI-Q-2010 is an optimal solution for Automated Vehicles and other demanding land applications.

Applications include: IMU that require low accuracy for shorter flight applications, flight control systems both commercial and military, and high accuracy optical stabilisation for cameras and periscopes.

AI-Q-2020

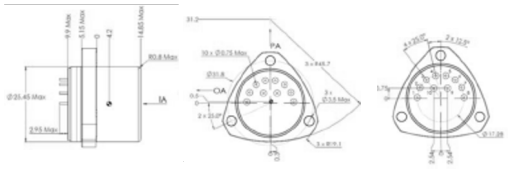
The AI-Q-2020 is built with state of the art Quartz Flexure technology to deliver true navigational grade performance. With a very high input range and excellent long-term repeatability, the AI-Q-2020 is an optimal solution for demanding applications.

Applications include: IMU and INS systems, and high-end navigation grade systems.

AI-Q-2030

The AI-Q-2030 is built with state of the art Quartz Flexure technology suitable for monitoring the health of infrastructures. The AI-Q-2030 provides a very high input range and excellent long-term repeatability, which makes it an optimal solution for demanding applications.

Applications include: IMU and INS systems, and high-end navigation grade systems.



Dimensions (mm)

Product Range Features:

- Navigation and tactical grade performance.
- High input range (up to ±80g measurement range).
- Analogue current output.
- Compact, rugged design.
- High stability under temperature changes.
- High reliability.
- Internal temperature sensor for thermal compensation.
- Dual built-in self-test.
- ITAR-Free.

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Rad-Hard Space Accelerometer

AI-Q-3025

The AI-Q-3025 is a rad-hard accelerometer based on successful quartz pendulum accelerometer products and heritage. The primary application is Navigation and Fault Detection Isolation and Recovery (FDIR) onboard satellites as well as for land, marine, and aerospace applications.

The AI-Q-3025 will be the first European designed and manufactured space-grade accelerometer that will withstand 30krad and will be available in 2021.

If you would like more information, please contact our Sales Team through info@penlink.se.