



FAA700 series DC-Operated Single and Dual Axis Accelerometer

WIRE COLOUR	FUNCTION
RED	6.5–18V Supply ¹
BLACK	Ground ²
YELLOW	X, Axis output
WHITE	Y, Axis output ³
GREEN	Temperature output ⁴
BLUE	Self, test input



¹ power supply input is reverse, polarity protected

² electrical ground is isolated from the case

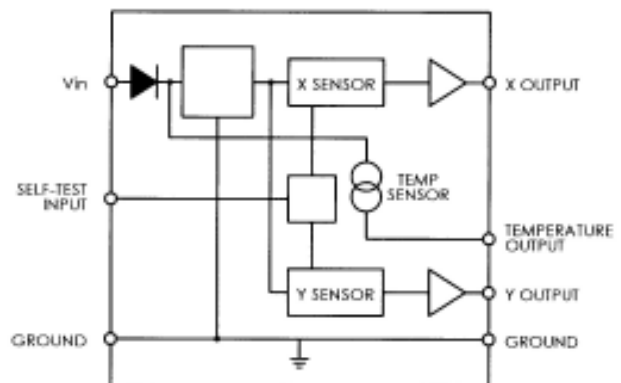
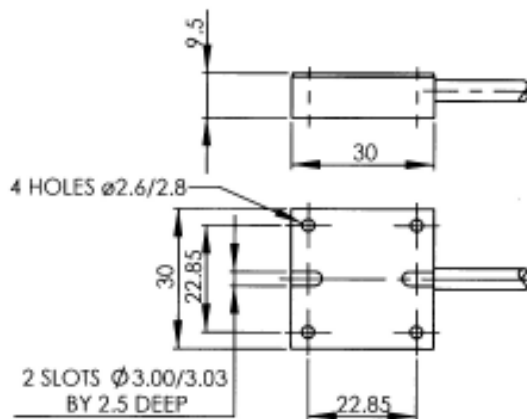
³ for dual axes version

⁴ used on, 0101 version

The Altheris FAA700 range of Solid State Accelerometers measure acceleration in single or dual axes. The accelerometer utilises MEM technology and has positive mechanical stops conferring excellent shock resistance.

The -0101 version incorporates a temperature sensor enabling each sensor to be individually characterised over its operational temperature range. A data sheet containing the characteristic output equation is supplied with each sensor enabling errors due to zero offset, sensitivity error, linearity, thermal zero shift and thermal sensitivity shift to be minimised. By entering the equation coefficients into the host operating software, cost-effective high accuracy acceleration sensing may be achieved.

Designed for operation from an unregulated DC power source, the FAA700 is packaged in a robust aluminium alloy housing with an integral shielded cable connection; the shield is connected to the sensor case. The cable may, as an option, be fitted with an electrical connector.



■ **General specification for -0001 (and -0101 before error correction)**

Full Scale Acceleration	0.5 1 2 5	± g
Signal Output	Analog	
Full Scale Output	±1.000 ±0.020 ±2.000 ±0.040	Volts
Zero Offset Voltage	2.5 ±0.1	Volts
Non, linearity	< ± 0.5	%FSO
Band Width nominal	800	Hz, 3dB
Rise Time	< 1	Second
Warm Up Time	< 60	Seconds
Power Supply	+6.5 to 18	Volts Dc
Power Dissipation	< 30	mW
Electrical Connection	Integral cable	500mm long
Weight	< 50	Grams
Compensated Temperature Range	-18 to +70	Degrees °C
Operating Temperature Range	-25 to +85	Degrees °C
Thermal Zero Shift	0.03	%FRO/°C
Thermal Sensitivity	0.03	%Reading/°C
Mechanical Shock	>3500	g 0.5mS, ½ sine
Humidity/Immersion	IP55	
Insulation Resistance	>100	MmΩ 25 volts dc
Additional Specification for -0101 (after error correction)		
Accuracy X, Axis	< ± 1	milli g
Accuracy Y , Axis	< ± 1	Milli g
Temperature Output	1	nA /kelvin

Characteristic error correction equation supplied with each unit for each axis

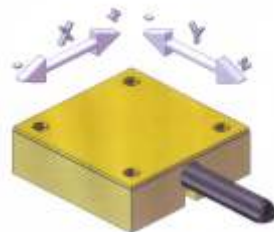
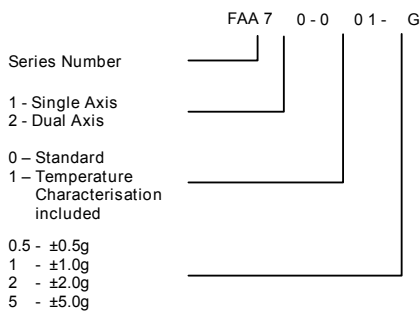
$$\text{Acceleration (g)} = \frac{(V - AT + C)}{G \times (BT + D)} + E$$

where V and T are voltage and temperature outputs respectively from the accelerometer, and A, B, C, D, E and G are calibration constants.

■ **Self-Test Feature**

The sensor is fitted with a self-test feature. When activated by applying 5 volts to the self-test connection the output will change by approximately 4 volts.

■ **Ordering code**



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ALTHERIS bv

Scheveningseweg 15
2517 KS DEN HAAG
The Netherlands

+31 (0)70 3924421

+31 (0)70 3644249

Offices in : Benelux | Germany | France | UK | Italy | USA

www.altheris.com

sales@altheris.nl

