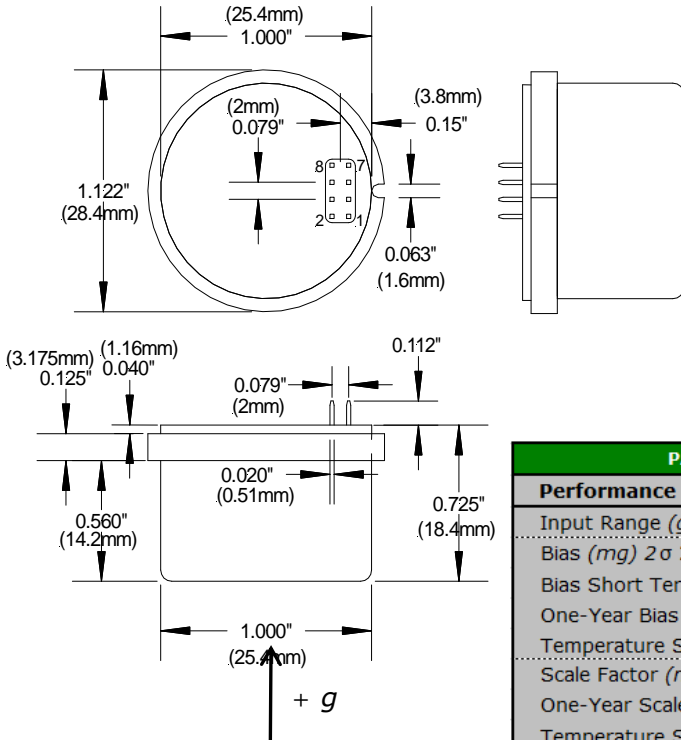


A40 MEMS ACCELEROMETER



A40 Accelerometer Part Numbers

A40-06-200
A40-10-200
A40-15-200

Specification

PARAMETER	A40-06-200	A40-10-200	A40-15-200
Performance			
Input Range (g)	6	10	15
Bias (mg) 2σ 20°C	0.7	1	1.5
Bias Short Term In-Run (mg) 1σ	0.045	0.05	0.1
One-Year Bias Repeatability (mg) 1σ	1.5	2	2.5
Temperature Sensitivity (μg/°C) 1σ	200	200	300
Scale Factor (mV/g) Nominal ±5%	825	460	290
One-Year Scale Factor Stability (ppm)	<1000	<1000	<1000
Temperature Sensitivity (ppm/°C) 1σ	<275	<275	<275
Axis Alignment (mrad) 1σ	5	5	5
Vibration Rectification (mg/g ² rms) 1σ	1	0.15	0.2
Intrinsic Noise (mg/√Hz) 1σ	0.065	0.075	0.10
Resolution/Threshold (mg) @ 1Hz	0.05	0.06	0.07
Bandwidth (Hz)	140	140	140
Self Test (logic "1" applied) delta g	0.15 ± 0.08g	0.15 ± 0.08g	0.15 ± 0.08g
Environments			
Operating Temperature	- 40°C to + 85°C		
Storage Temperature	- 55°C to + 100°C		
Vibration Operating	6gRMS (10g and up)		
Shock	500g, any axis		
Thermal Modeling			
	Available		
Electrical			
Input Voltage	+5V ±0.25V (not ratiometric)		
Power Consumption	9.5mA typical 12mA maximum		
Physical			
Weight (grams)	< 15 grams		
Size (less flange)	1" Diameter X 0.725" (25.4mm Dia. X 18.4mm)		
Case Material	Anodized Aluminum		

Pin No.	Pin Assignment
1	Accel Output Voltage 0V <i>Nominal</i>
2	Temp +2.5V @ 25°C 10mV/°C
3	Power Ground
4	+2.5V Reference Voltage Output
5	+4.75V to +5.25V DC Input
6	Signal Ground
7	Self Test Input
8	Case

Accel output is Pin 1 with respect to Pin 6.
Temperature is Pin 2 with respect to Pin 6.
Self Test On is 3.3V to 5V on Pin 7. Self Test Off is open or < 1V. Accel Load: <100pf >5kΩ Vref and Temp < 500pf >5kΩ

Specification subject to change without notice



Gladiator Technologies
Division of LKD Aerospace
High Performance Inertial MEMS

Gladiator Technologies Division
LKD Aerospace, Inc
8020 Bracken Place SE
Snoqualmie, WA 98065 USA
Tel: 425.396.0829 Fax: 425.396.1129
Email: sales@gladiatortechnologies.com
Web: www.gladiatortechnologies.com

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Bias SF Over Temp

Temp C°	Bias mg	SF mV / g	Temp V	Mis-Alignment mrad	
56.5	0.28	794.63	2.8739	3.2 Connector	
20.1	0.00	795.67	2.49	-1.2 Cross	
-34.8	3.67	795.49	1.9420	2.4 RSS	
Bias TC =	-0.0371 mg/ C°	SF TC =	-12 ppm/C°	Temp SF=	10.21 mV/°C
			Temp Bias @ 20°C=	2.4897 Volts	940 Self Test
				795.67 1g mV	0.18 Delta gs

