

MSS -01,-02 Medium Sun Sensors

Space Micro celebrates its 13-year anniversary in 2015 and continues to support the Space Industry with innovative, affordable and high performance Digital/Image Processing, RF Communication and Attitude Determination Sensor Products.

Space Micro's Medium Sun Sensor is a low cost, two axis, medium-resolution sun sensor with >20 years of cumulative flight heritage. They are designed to provide attitude determination information during various mission modes including launch vehicle separation, initial attitude acquisition, emergencies and off-nominal modes. They can also provide coarse sun vector determination as a backup to higher resolution sensors.

The medium sun sensor, which draws no power (completely passive) is comprised of a small housing containing a diode assembly with four individual quadrants. Calibration data is provided with the sensor, to be store on the satellite computer for computing sun angle from four signal outputs. The sensor housing also serves as the aperture, reducing mechanical complexity and precisely masking solar light.

Our Medium Sun Sensors have flown successfully on several different spacecraft, including ALEXIS, HETE, TERRIERS and FASTSAT, and are compatible with virtually all launch environments.

FEATURES

- >20 Years of Flight Heritage
- Very low size and weight
- Compatible with all launch environments
- Standard lead time and pricing
- Long(MSS-01) and short (MSS-02) baffle configurations
- Simple reliable design



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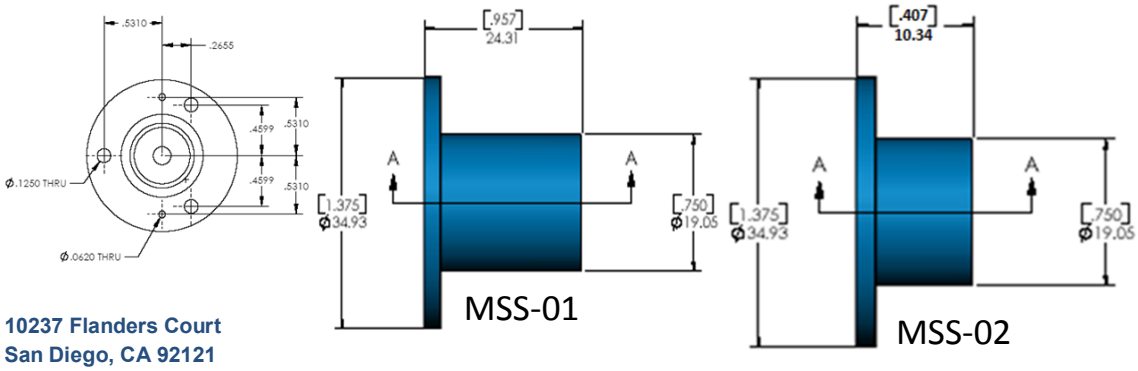
SPECIFICATIONS

	MSS-01	MSS-02
Field of View	48° full-angle circular field of view	120° full-angle circular field of view
Accuracy	±1° of 2-axis knowledge	
		(accuracy guaranteed within center 60° full-angle circular field of view)
Temperature Range	-40C to +93C	
Vibration Range	14.1g grms	
Shock Range	60g Protoqual	
Interface	Four 0 to 4.5mA (typical) current sources on five flying leads: 50 inch (1.27 m) in length, M22759/33-26, 26 AWG wire	
Mounting	Three #4 through holes, 120° apart on a 1.062 inch (2.70 cm) diameter pattern with two 0.064 diameter alignment holes (see figure below).	
Power	None required	
Housing diameter	.75” (1.91cm)	
Flange diameter	1.375” (3.49 cm)	
Sensor height	0.957” (2.43 cm)	0.407” (1.034 cm)
Volume	0.957” (2.43 cm) Height X 1.375 (3.49CM) Diameter	0.407” (1.034 cm) Height X 1.375 (3.49 cm) Diameter
Mass	0.08lbs (36 grams) with 1.27m flying leads	0.06lbs (25.5 grams) with 1.27m flying leads



10237 Flanders Court
San Diego, CA 92121
Tel: 858.332.0700
Email: sales@spacemicro.com
www.spacemicro.com

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