

# MSS-01,02 Medium Sun Sensors

Space Micro has earned a strong reputation in the Space industry for innovative, affordable and high performance RF communication and digital computer products. We are an engineering driven small business focused on technology advancement and product implementation.

Space Micro's Medium Sun Sensor is a low cost, two axis, medium-resolution sun sensor with 20 years of 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 sun sensor, which draws no power (completely passive) is comprised of a small housing containing a set of four photodiodes. 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, and TERRIERS, and FASTSAT .

## FEATURES

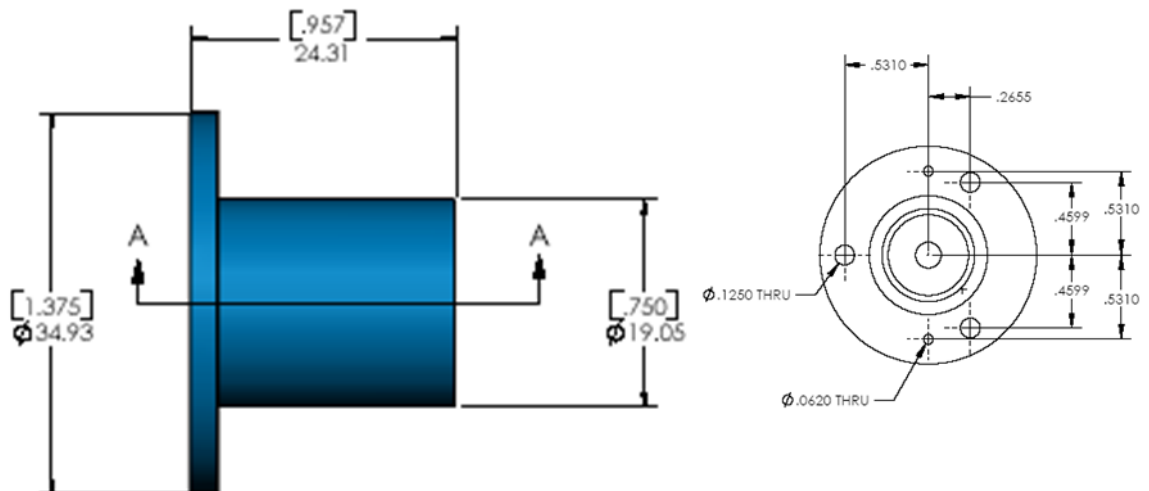
- 20 Years of Flight Heritage
- Very low size and weight
- Compatible with all launch environments
- Standard lead time and pricing
- Front and back mount configurations
- Simple reliable design



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## SPECIFICATIONS

|                          |                                                                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field of View</b>     | 60° full-angle circular field of view                                                                                                        |
| <b>Accuracy</b>          | ±1° of 2-axis knowledge.                                                                                                                     |
| <b>Temperature Range</b> | -40C to +93C                                                                                                                                 |
| <b>Vibration Range</b>   | 14.1g grms                                                                                                                                   |
| <b>Shock Range</b>       | 60g                                                                                                                                          |
| <b>Interface</b>         | Four 0 to 3.0mA (typical) current sources on five flying leads: 50 inch (1.27 m) in length, M22759/33-26, 26 AWG wire                        |
| <b>Mounting</b>          | 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 at right). |
| <b>Power</b>             | None required                                                                                                                                |
| <b>Size</b>              |                                                                                                                                              |
| <b>Housing diameter</b>  | .75" (1.91cm)                                                                                                                                |
| <b>Flange diameter</b>   | 1.375" (3.49 cm)                                                                                                                             |
| <b>Sensor height</b>     | 0.957" (2.43 cm)                                                                                                                             |
| <b>Volume</b>            |                                                                                                                                              |
| <b>Mass</b>              | 0.08lbs (36 grams) with 1.27m flying leads                                                                                                   |



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