



FINE SPINNING SUN SENSOR ($\pm 64^\circ$)

RAD-HARD HI-REL

The Redwire Fine Spinning Sun Sensor $\pm 64^\circ$ provides better accuracy and resolution than the Miniature Spinning Sun Sensor. The unit is Rad hard to 100 krad (Si).

Redwire Spinning Sun Sensors are uniquely designed to provide sun aspect angle and sun crossing pulses for spinning spacecraft. This information is used to determine Spin rate and spin axis orientation relative to the sun.

This redundant system consists of one optical head per redundant electronics channel. It is used for attitude determination of spinning spacecraft, sun acquisition, and fail-safe recovery.



APPLICATIONS

- + Attitude Determination of Spinning Spacecraft
- + Spin Rate Determination
- + Sun Acquisition
- + Fail-Safe Recovery

PARAMETERS

$\pm 64^\circ$ FAN SHAPED (each sensor)

Field of View

$\pm 0.1^\circ$ at 0°
 $\pm 0.3^\circ$ at 40°
 $\pm 0.6^\circ$ at 64°

Sun Pulse Accuracy

$\pm 0.1^\circ$ at 40°
 $\pm 0.25^\circ$ at 40° to 64°

Aspect Angle Accuracy

28 ± 7 VDC (OTHER RANGES AVAILABLE)
 (TYPICAL POWER DISSIPATION 0.4 W)

Input Power

SUN PULSE (one per revolution)
 PARALLEL COARSE SUN ANGLE DATA
 FINE DATA (V_{sine} , V_{cosine} , V_{bias})

Output

SENSOR 0.24 LB (109 g nominal)
 ELECTRONICS 1.05 LB. TO 1.6 LB.
 (475 g TO 725 g)

Mass

SENSOR 2.6" X 1.3" X 1.0" (66x33x25) MM
 ELECTRONICS 2.0" X 3.2" X 3.5" (51x82x89) MM

Dimensions

Sun Sensors are export controlled through an ECCN (Export Control Classification Number) issued by the United States Department of Commerce, ECCN 7A104. Export shipment requires successful application for an export license.



MADE IN THE USA

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CONFIGURATION

1 ASPECT ANGLE AXIS, PLUS SUN PULSE

Number of Measurement Axes

2 SENSORS (WITH REDUNDANT ELECTRONICS)

Redundant System



MISSION HERITAGE

- + BEPI COLOMBO
- + ARASE (ERG)
- + AKATSUKI (PLANET C)
- + IMAGE

- + GEOTAIL
- + BSAT 2c
- + IKAROS

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HERITAGE

Redwire is a new leader in mission critical space solutions and high reliability components for the next generation space economy. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit www.redwirespace.com.

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