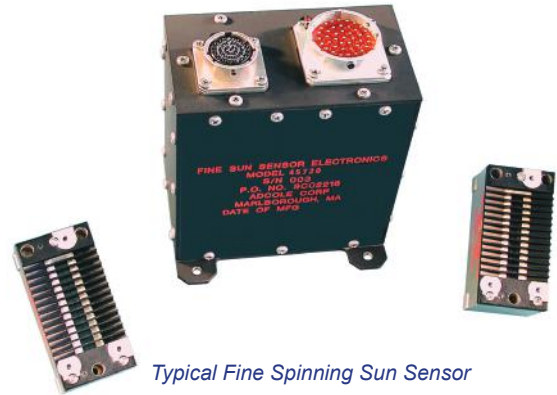


Fine Spinning Sun Sensor



Typical Fine Spinning Sun Sensor

The Fine Spinning Adcole Sun Sensor provides better accuracy and resolution than the Miniature Spinning Sun Sensor. It is a redundant system consisting of one optical head per redundant electronics channel. It is used for attitude determination of spinning spacecraft, sun acquisition, and fail-safe recovery.

Mission Heritage

ERG, BSAT-2, IMAGE, INDOSTAR, KOREASAT, INMARSAT, GPS IIR, GGS, AURORA, GEOTAIL, DBS, MST5, VIKING, SAN MARCOS, SCATHA, ISEE-C, TELSAT, BSE, SATCOM.

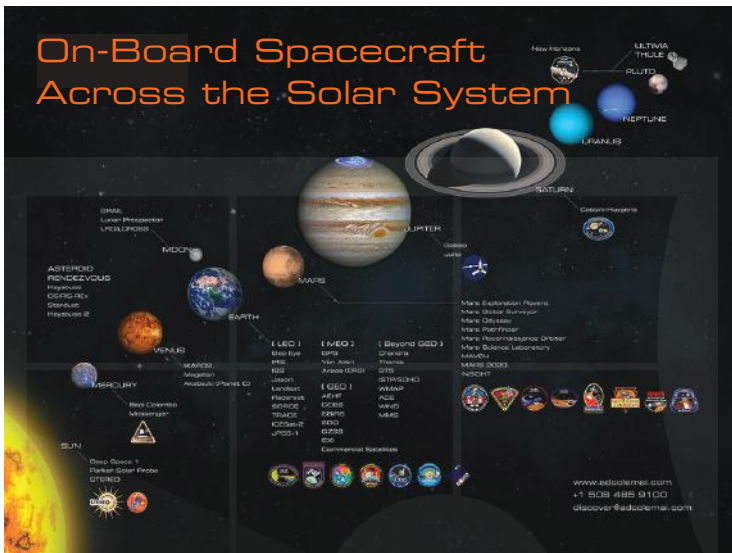
Company Heritage

Founded by Addison Cole in 1957, the sun sensors designed by Adcole have flown on numerous space exploration missions, including all Mars Rovers, New Horizons, Juno, and the Parker Solar Probe. An engineer by trade, Cole invented a sun angle sensor that enables rockets and satellites to maintain their orientation in space. Cole's invention, which is in use by space agencies today, provided the impetus behind the launch of Adcole Corporation.

Specifications at a Glance

The Fine Spinning Sun Sensor is a single detector model used for applications including solar array pointing, sun acquisition, and fail-safe recovery.

On-Board Spacecraft Across the Solar System



Parameters

Field of View	±64° Fan-shaped (each sensor)
Accuracy	Sun Pulse: ± 0.1° at 0° ± 0.3° at 40° ± 0.6° at 64° Aspect Angle: ± 0.1° 0° to 40° ± 0.25° 40° to 64°
Size	Sensor: 2.6"×1.3"×1.0" (66×33×25 mm) Electronics: 2.0"×3.2"×3.5" (51×82×89 mm)

Fine Spinning Sun Sensor Detector Specifications

APPLICATIONS	Attitude Determination of Spinning Spacecraft Sun Acquisition Fail-Safe Recovery
WEIGHT	Sensor: 0.24 lb (109 g) nominal Electronics: 1.05 lb to 1.6 lb (475 g to 725 g)
SIZE	Sensor 2.6"×1.3"×1.0" (66×33×25 mm) Electronics 2.0"×3.2"×3.5" (51×82×89 mm)
CONFIGURATION	
Number of measurement axes	1 Plus Sun pulse (each sensor)
Redundant System	2 Sensors (with redundant electronics)
PARAMETERS	
Accuracy	Sun Pulse: ± 0.1° at 0° ± 0.3° at 40° ± 0.6° at 64°
Aspect Angle:	± 0.1° 0° to 40° ± 0.25° 40° to 64°
Field of View	±64° Fan-Shaped (Each Sensor)
Input Power	28 ± 7 VDC (other ranges available) (Typical power dissipation 0.4 W)
Output	Sun Pulse (one per revolution) Parallel Coarse Data Fine Data (Vsine, Vcosine, Vbias)