ADCOLE CORPORATION

669 FOREST STREET
MARLBOROUGH, MA 01752, USA
TEL. 508-485-9100 • FAX 508-481-6142

SPINNING FINE SUN SENSOR
Typical Model

CONFIGURATION

- REDUNDANT SYSTEM: 2 Sensors (with redundant electronics)
- NO. OF MEASUREMENT AXES: 1 plus sun pulse (each sensor)

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°
- RESOLUTION: Coarse Angle: 1°
  Fine Angle: < 0.015° (limited only by spacecraft A/D converter).
- INPUT POWER: 28 ± 7 V_{DC} (other ranges available)
  (Typical power dissipation 0.4 W).
- OUTPUT:
  - Sun Pulse (one per revolution)
  - Parallel Coarse Data
  - Fine Data (V_{SINE}, V_{COSINE}, V_{BIAS})
- WEIGHT
  - Sensor: 0.24 lb (109 g) nominal
  - Electronics[1]: 1.05 lb to 1.6 lb (477 g to 726 g)
- SIZE
  - Sensor[2]: 2.6”×1.3”×1.0” (66×33×25 mm)
  - Electronics[2]: 2.0”×3.2”×3.5” (51×82×89 mm)

HERITAGE

ERG, BSAT-2, IMAGE, INDOSTAR, KOREASAT, INMARSAT, GPS IIR, GGS, AURORA, GEOTAIL, DBS, MS-T5, VIKING, SAN MARCOS, SCATHA, ISEE-C, TELSAT, BSE, SATCOM.

APPLICATIONS

- Attitude Determination of Spinning Spacecraft
- Sun Acquisition
- Fail-Safe Recovery

NOTES

1. Depending on processing and power.

2. Exclusive of connectors.