

# 2-Axis DMC Sun Sensor

## Applications

- LEO Missions
- Earth Observation Missions
- Space Science Missions
- Momentum Unloading

## Features

- Reliable attitude determination
- The output from each axis consists of 2 analog 0 - 5 Volt signals (A & B) which are combined and linearized using a calibration polynomial function to obtain the relevant sun angles
- Temperature sensing

## Interfaces

- Analog inputs/outputs
- D-type DC connector

## Key Specifications

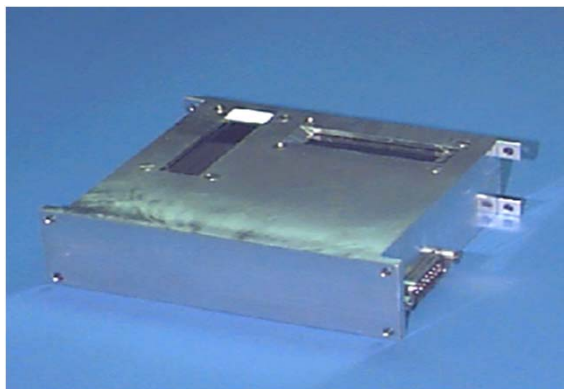
- Sensors: 2 orthogonal axes
- Sensor field of view:  $\pm 50^\circ$
- Accuracy:  $1.0^\circ$  (95%)
- Analog output: 4x 0-5 V per channel

## Heritage (63+ orbit years)

- FASAT-Bravo
- Uosat-12
- TopSat
- DMC-4

## Other Surrey AOCS Products

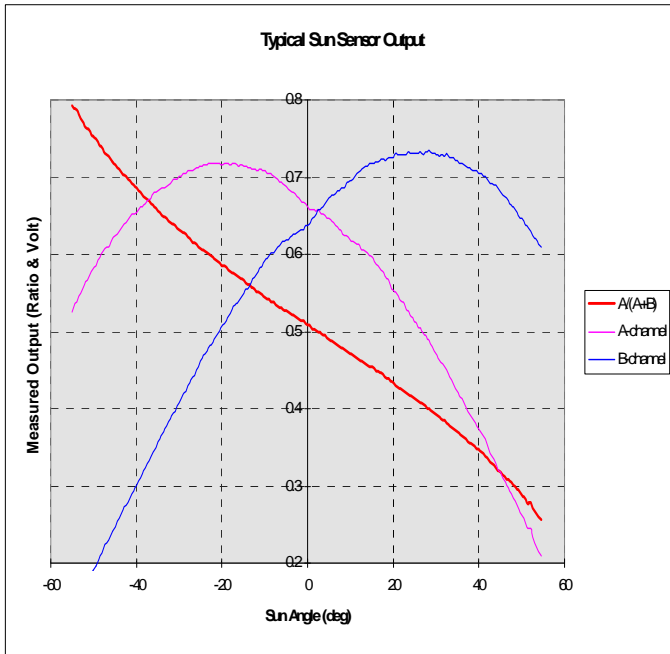
- Reaction Wheels
- Star Trackers
- Magnetometers
- Gyros
- Magnetorquer



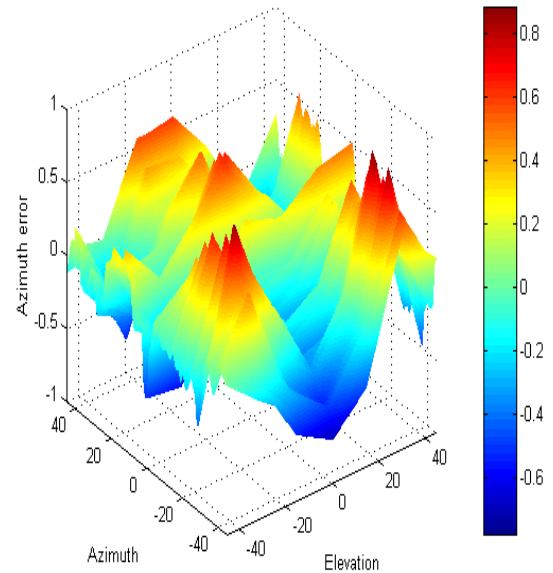
Bare sun sensor unit. Can be supplied with a variety of applied thermal surfaces

Sensors	2 orthogonal axes
Sensor field of view	$\pm 50^\circ$
Accuracy	$1.0^\circ$ (95%)
Analog output	4x 0-5 V per channel
Mass	300 g
Dimensions	95 x 107 x 35 mm
Power consumption	Sunlit: <100 mW; Dark: <10 mW
Power Supply	$\pm 12$ V
Temperature	-20 to +50°C operating -40 to +80°C non-operating
Random Vibration	15 Grms in all axis
Radiation Tolerance	20 kRad (Si)

# 2-Axis DMC Sun Sensor



Typical sun sensor output



Errors in azimuth and elevation following calibration

## Surrey is ISO9001:2008 certified

Subsystems are manufactured to:

- ECSS Q-ST-70-08C
- ECSS Q-ST-70-38C
- All work overseen by ESA-trained assembly staff

Standard delivery service includes:

- Compliance testing
- Vibration test
- Thermal cycling
- User manual
- Test results
- Export license and shipping
- Thermal vacuum testing available
- Unit can be supplied prior to environmental testing

## Surrey Satellite Technology

Surrey Satellite Technology (SST) has launched 34 satellites gaining almost 200 years in-orbit experience. SST draws on its world-class expertise in both small satellite platform technology and high and medium resolution imagers. SST provides complete turnkey system solutions: spacecraft, ground station, launch, operations, and image data processing.

SST is unique in the space industry—able to design, manufacture, and integrate multiple satellites in-house in its three specifically designed facilities in the United Kingdom, with this capability soon to be replicated in the U.S.A.

*Changing the economics of space*

[www.sst-us.com](http://www.sst-us.com)