ACSS

Advanced Coarse Sun Sensor
Analog Interface and Redundancy

*Advanced Coarse Sun Sensor (ACSS) is a device for sun-tracking and **attitude determination**. This sensor measures the incident angle of sun ray in two orthogonal axes, providing a high sensitivity based on the geometrical dimensions of the design.*
*ACSS sun sensor offers the highest **reliability** and **radiation hardness** for the most demanding LEO missions. ACSS technology has **flight heritage** since 2019 with hundreds of flight units delivered, and its manufacturing process has been developed and industrialized for **mass production**.*

Technical Specifications:

Sun sensor	Double redundancy
Type	2 orthogonal axes
Field of View	± 60º
Accuracy	< 1 º (3sigma, calibration)
Electrical interface	Analog, 15-pin micro connector
Power supply	15-30V, 3 mA
Operating Temperature	-40º to 85º Celsius
Mechanical interface	65 x 47 x 13 mm
Mass	40 g
Housing	Aluminum 6082 Alodine + Black anodizing

Analog
Space Qualified
Industrialized for Mass Production

Qualification and Verification data:

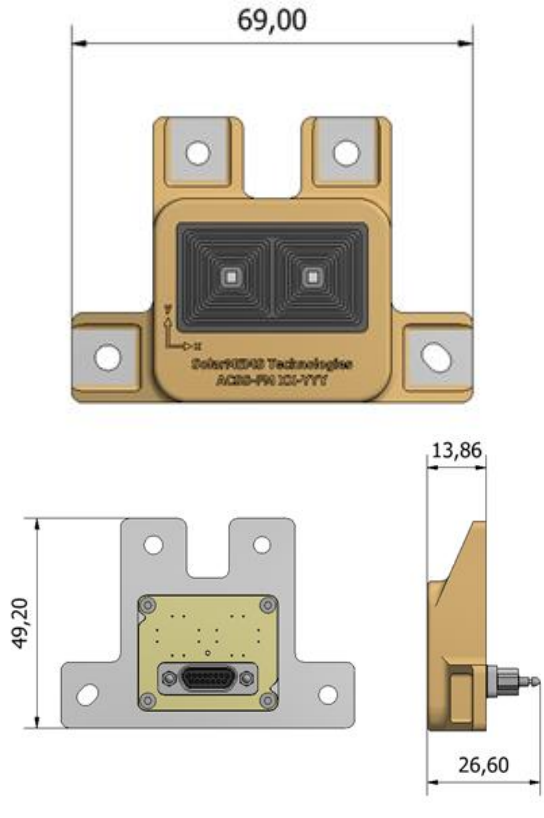
Qualification Temperature	-55 to 105º Celsius
Radiation tests	200 kRad (gamma) 8e11 10 MeV (protons)
Mechanical tests	Shock 2000 g 18.3 g @ 20-2000 H
Endurance tests	600 cycles from -55 to 105ºC 2000h at 125ºC
EMC/ESD	ECSS-E-ST-20-07C MIL-STD-461F

ACSS is based on the CSS sensor designed and developed for OneWeb Constellation.

Industrial Specifications:

Mass production	Up to more than 100 ss/month
Quality control	> 50 inspection points/KC
Acceptance control	Each ACSS is characterized and tested

Mechanical specifications:



measuring scale: [mm]

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