MOOG | SPACE | SPACECRAFT CONTROLLERS | SMALL SADE

SMALL SATELLITE SOLAR ARRAY DRIVE ELECTRONICS (SADE)



The small satellite Solar Array Drive Electronics (SADE) controller is compact solution for interfacing with our small satellite Solar Array Drive Assembly (SADA). The SADE consists of a serial RS-422 interface to receive commands and send telemetry to the spacecraft host. The SADE is a motor driver capable of controlling current and speed of the motor via

commands provided by the spacecraft host. The SADE is comprised of space rated radiation tolerant components capable of operating in a LEO environment.

KEY FEATURES

- LEO orbit capable/radiation tolerant
- RS-422 serial interface for spacecraft communications
- Stepper motor current and speed control
- Onboard temperature sensor
- Compact driver design









SMALL SATELLITE SOLAR ARRAY DRIVE ELECTRONICS (SADE)

SPECIFICATIONS	
Features	Units
Unit Weight	1.76 lbm [0.8 kg] max.
Dimensions (L W H)	3.5" [88.9 mm] x 4.0" [101.6 mm] x 1.9" [48.3 mm]
Operating Voltage	22 to 34 VDC
Standby Current Draw	0.1 A max
Standby Power	3.4 W Max
Command Interface	RS-422 Serial
Telemetry Outputs	Six pass-through circuits; Onboard temperature sensor
Motor Type Compatability	2-phase stepper motor drive (3-phase motor drive coming in 2026)
Vibration Grms	11.6 Grms
Shock Peak G's	650 G
Operating Temperature	-30°C to 66°F
Total Inonizing Dose (TID) Level	50 krad
Single Event Latchup (SEL) LET Threshold	61 MeV-cm ² /mg
Input Connector Type	15-Socket SDD D-Sub Connector
Output Connector Type	15-Pin SDD D-Sub Connector





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