

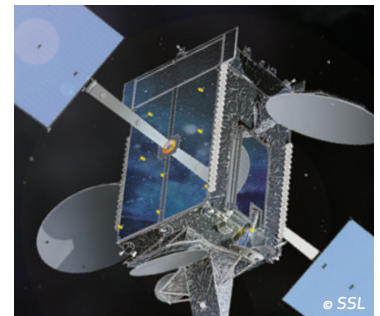
TYPE 2 SIDE-DRIVE SOLAR ARRAY DRIVE MECHANISM



The Side-Drive Solar Array Drive Mechanism (SADM) consists of a slip ring assembly and an actuator coupled by a spur gear set, which, when driven by suitable drive electronics, will position the Solar Array toward the sun for maximum power and transfer the collected energy to the spacecraft power bus. The SADM unit is an integrated assembly of actuator, slip ring with integral position

feedback potentiometer, and the output spur gear set. The gearbox, which contains the output spur gear set, is configured with the spacecraft-mounting interface, and also serves as the member, which integrates the other components of the SADM.

The slip ring assembly is of the proven metal-on-metal construction, with a multi-ring rotor and multi-wire brush-type contactors. The slip ring assembly is located on the rear face of the output gearbox, and the rotating cable bundle exits on the centerline of the slip ring assembly.

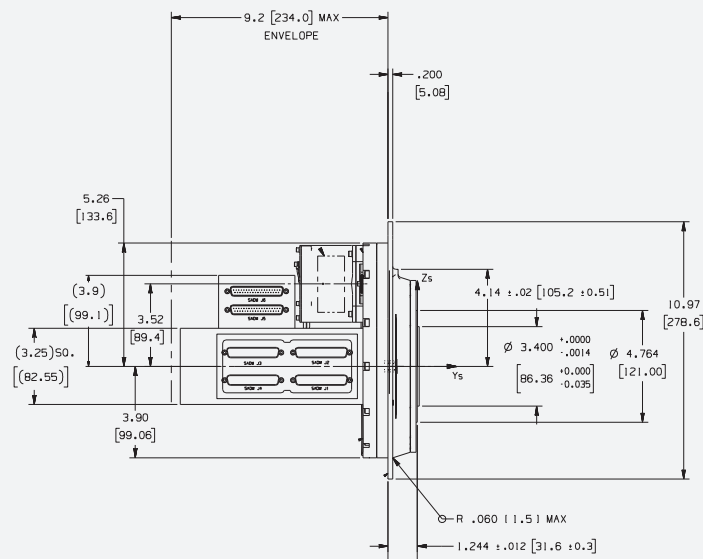


TYPE 2 SIDE-DRIVE SOLAR ARRAY DRIVE MECHANISM

SPECIFICATIONS

Description	Value
Motor Winding Resistance	0.02 Degrees
Potentiometer Resistance	>18 (N-m)
Output Step Size	>15 (N-m)
Output Torque	15 W
Unpowered Holding Torque	-30° C to +65° C
Power Consumption	5 Kg
Operating Temperature Range	>12 Kg.m ²
Mass	Potentiometer ± 1.5 deg. linearity
Slip Ring Complement	Medium: 24 Power @ 3A plus 19 Signal @ 1 A High: 32 Power @ 3A plus 19 Signal @ 1A

SADA DIMENSIONS



Solar array drives are a long-established product at Moog. Moog has experience with solar array drives, for both Earth orbit and planetary missions, stretching back to 1980. The solar power application is one of the most mature for Moog actuators and biaxial gimbals. Solar array drives have traditionally been very mission-specific in their configuration. As with all Moog mechanisms, a variety of design options are available. Custom power transfer requirements are easily accommodated upon request. The design represented on this data sheet is qualified and provides an option that has cost and schedule benefits. The Type 2 Side-Drive SADM easily interfaces with the Moog 2 or 4 channel Electronic Control Unit for a complete system solution. Contact Moog Sales & Marketing for assistance with your application.



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