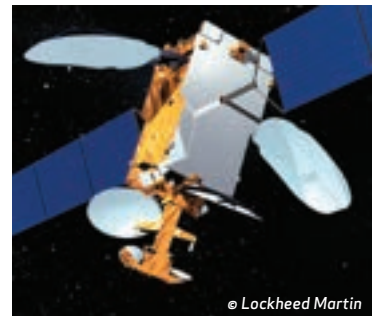
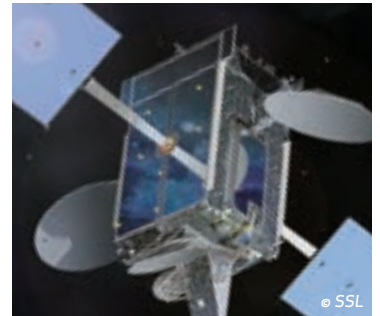


## HIGH POWER TYPE 5-TC SOLAR ARRAY DRIVE ASSEMBLY



The single axis High Power Solar Array Drive Assembly (SADA) is based on the Type 5 Rotary Incremental Actuator. This standard SADA meets up to 10 kilowatts of power transfer. The design is configured with a Harmonic Drive gear set driven by a Moog discrete permanent magnet stepper motor, potentiometer for position sensing and a high power Twist Capsule assembly for power transfer.

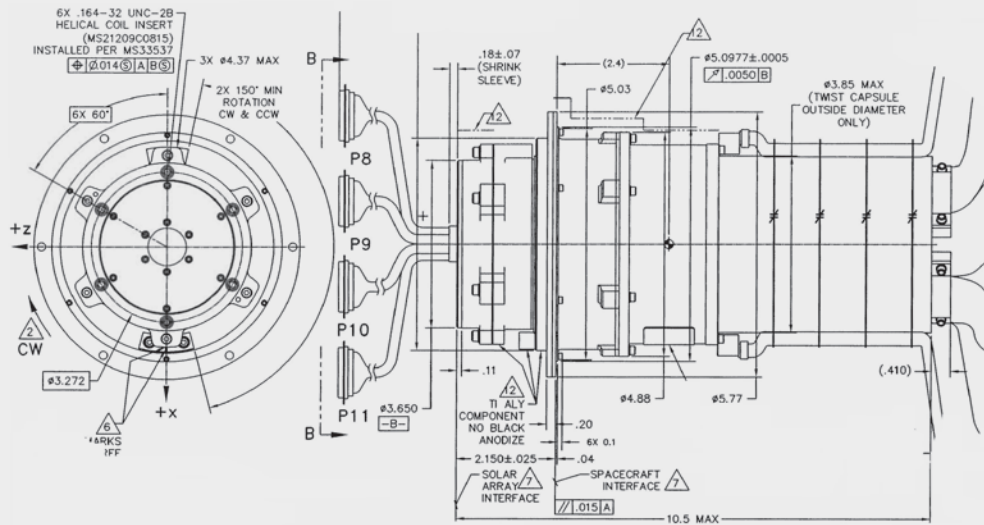


# HIGH POWER TYPE 5-TC SOLAR ARRAY DRIVE ASSEMBLY

## SPECIFICATIONS

Parameter	Units	Basis	Data
Output Step Angle	Degrees	Standard	0.0075
Steps per Revolution	Steps	Standard	48000
Max. Output Step Rate	Steps/sec (Deg/sec)	Maximum	300 (2.25)
Backlash	Degrees	Maximum	zero backlash
Operating Temperature Range	°C	Maximum	-24 to +61
Torsional Stiffness	lb-in/Rad	Minimum	350,000
Moment Stiffness	lb-in/Rad	Minimum	500,000
Axial Stiffness	lb/in	Minimum	200,000
Radial Stiffness	lb/in	Minimum	800,000
Output Load Capability Axial	lbf	Nominal	370
Radial Stiffness	lbf	Nominal	370
Moment	Lb-in	Nominal	430
Output Torque	Lb-in	Minimum	500
Mechanical Accuracy	Degrees	Better than	+/- 0.02
Unpowered Holding Torque	Lb-in	Minimum	300
Powered Holding Torque	Lb-in	Minimum	600
Twist Capsule Power Circuits	75 circuits derated at 2.6 A each (150 lines)		
Twist Capsule Signal Circuits	47 lines derated at 0.50 A each		
Range of Motion	Degrees	Maximum	+/-150°
Actuator Power Consumption	Watts	Maximum	12
SADA Weight (without Harness)	Lb	Maximum	11.00
Flight Heritage	Over 20 SADAs in Flight on GPS Satellites		

## DIMENSIONS



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