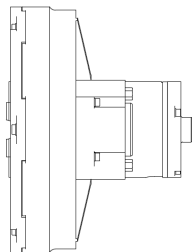
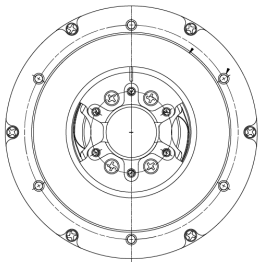


SOLAR ARRAY DRIVE ASSEMBLY (SADA)

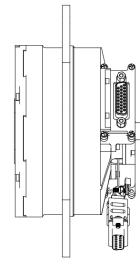
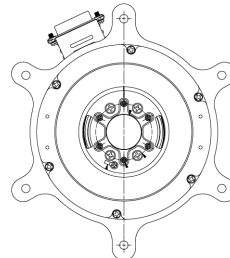
MicroSat SADA (Standard & Enhanced)

Our MicroSat SADA is designed for smaller satellites with tighter cost constraints. It leverages commercial off the shelf (COTS) components and incorporates a twist capsule to provide 250 to 500 watts of power transfer. The matching drive electronics offer a flexible RS-422 UART for command and control and supports input voltage range of 22 to 34 volts. Both the SADA and its compatible control electronics have been in production since 2018 and have extensive flight heritage.

Standard MicroSat SADA



Enhanced MicroSat SADA



Drawings not exact to scale.

SOLAR ARRAY DRIVE ASSEMBLY (SADA)

MicroSat SADA (Standard & Enhanced)

Parameters	Units	Standard	Enhanced
Mass	lbm [kg]	< 2.0 [0.91]	< 3.2 [1.45]
Diameter (twist capsule)	inches [cm]	4.50 [11.43]	4.50 [11.43]
Diameter (mounting flange)	inches [cm]	4.50 [11.43]	6.60 [16.76]
Length	inches [cm]	3.45 [8.64]	3.45 [8.64]
Motor	type/cardinal step	1.8° stepper	1.8° stepper
Output Step Angle	degree	0.018	0.018
Maximum Output Rate	deg/sec	≥1.0	≥1.0
Gearing	type/ratio	Harmonic drive/100:1	Harmonic drive/100:1
Solar Array Inertia	kg-m ²	3	3
Output Torque (1 deg/sec)	lbf-in [N·m]	13.0 [1.47] (minimum)	13.0 [1.47] (minimum)
Holding Torque (unpowered)	lbf-in [N·m]	4.4 [0.50] (minimum)	4.4 [0.50] (minimum)
Torsional Stiffness	lbf-in/rad [N·m/rad]	1,200 [136] (minimum)	1,200 [136] (minimum)
Total Power Transfer	W	800W @ 100V	1600W @ 100V
Twist Capsule Transfers	A	16 power @ 1.1 each 12 signal @ 0.10 each	25 power @ 1.5 each 13 signal @ 0.50 each
Operating Temperature Range	° F [° C]	-31° to +142° [-35° to +61°]	-31° to +142° [-35° to +61°]
Rotation Range	deg	> 350	> 350
Position Sensor	-	Potentiometer	Potentiometer

Release Date: 2024-05-03



CONTACT US

Request more information at <https://www.blueorigin.com/contact-product-sales>