

Flywheel

The flywheel is essential in controlling the satellite's flying attitude under the steady state. Its control system guarantees the reliability and lifecycle of satellites in orbit. With the adoption of an integrated design of flywheel body and control circuits, the product, minor in size and weight and supporting both speed and torque controlling modes, has already been applied to many of the in-orbit satellites of Jiin-1 series.



The main technical indicators

Technical Specifications	
Items	Specifications
Operating mode	Counteraction
Rated output torque	$\geq 50\text{mN}\cdot\text{m}$ (Rated velocity:6000rpm)
Rated angular momentum	$2\text{Nm}\cdot\text{s}$ (@6000rpm)
Rated speed	4800rpm
Speed control accuracy	$\pm 1\text{rpm}$ (speed $\geq 1000\text{rpm}$)
Control pattern	Speed control / Torque control
Output interface	RS422/CAN
Supply voltage	28V
Power consumption under static state	$\leq 3\text{W}$
Power consumption under steady state	$\leq 10\text{W}$ (@6000rpm)
Peak power consumption	$\leq 70\text{W}$
Environment suitability	Temperature: $-10^{\circ}\text{C}\sim +45^{\circ}\text{C}$
External envelope dimension	160mm \times 160mm \times 120mm
Weight	3kg \pm 0.5kg
Designed lifecycle	5 Years
Homologous products	1Nms/2Nms/5Nms
Delivery cycle	6-10 Months



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