

# Reaction Wheel Type M-A



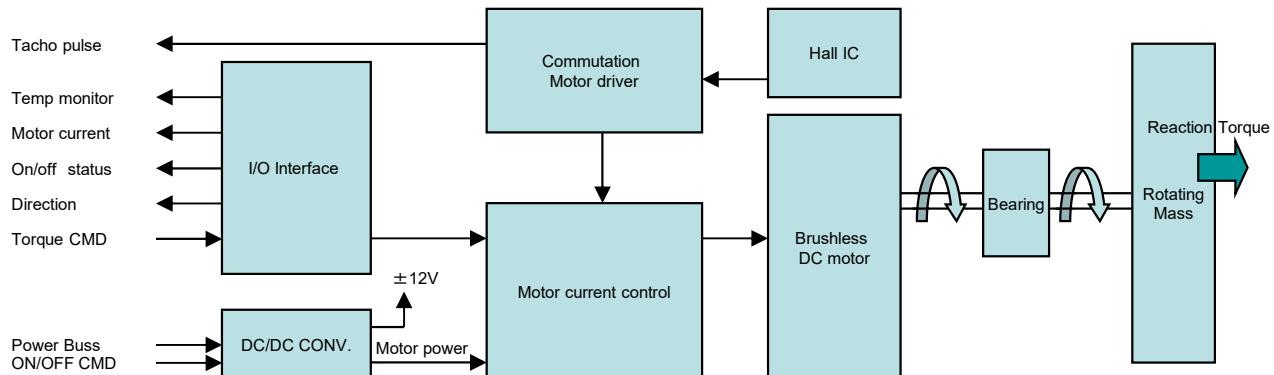
## Features

- Angular momentum 10 to 30Nms selectable rotor momentum mass.
- Output torque 0.2Nm to 0.4Nm
- Low disturbance by well-balanced tuning technology.
- Up to severe environmental condition
- Duplex angular contact bearings
- Lubricant: synthetic oil MAC
- Built-in drive electronics
- Over current protection

## Heritage

GOSAT-2

## Block Diagram



## Performance

| Item                          | Capability   | Remarks      |
|-------------------------------|--|--------------|
| Maximum momentum              | 10 ~ 30 Nms  | @ 6000rpm    |
| Maximum output Torque         | > 0.2 Nm@ 6000rpm<br>> 0.3 Nm@ 3500rpm<br>> 0.4 Nm@ 2000rpm          |              |
| Speed range                   | ±6000 rpm  |              |
| Power consumption             |  |              |
| Peak Torque@ 6000rpm, 0.2Nm   | 208 W TYP  |              |
| Steady state @ 6000rpm        | 23 W TYP   |              |
| Disturbance @ 6000rpm         | Torque 0.1Nm TYP<br>Force 1N TYP                                     | 100 to 200Hz |
| Static Imbalance              | < 0.25 g·cm  |              |
| Dynamic Imbalance             | < 5.0 g·cm <sup>2</sup>  |              |
| Power Bus Voltage             | 30~ 52 VDC, 100VDC available   |              |
| Dimension (Diameter × Height) | Φ279 mm × 145 mm TYP   |              |
| Mass                          | 8.6kgTYP @30Nms  |              |
| Integrated Electronics        | Yes  |              |
| Tachometer                    | 96Pulses/rev   |              |
| Signal Interface              | Analog   |              |
| Operation Temperature Range   | -5 ~ +60 °C  |              |
| Turn on Temperature Range     | -30 ~ +60 °C   |              |
| Random Vibration              | > 196.0 m/s <sup>2</sup> rms(Z)<br>> 183.0 m/s <sup>2</sup> rms(X,Y) |              |
| Radiation Hard                | > 100krad(Si)  |              |
| Design Life                   | > 10years  |              |

Subject to change without prior notice.