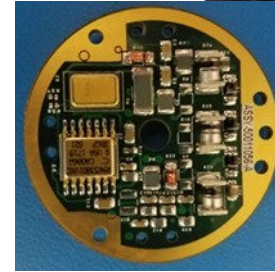


## 100kRAD Compact BLDC Commutator

Motiv's ECHO Commutator line brings simplicity and reliability to the multitude of standard in-space actuations such as deployments and releases commonly integrated within satellite busses and payloads. Utilizing a hall-effect commutated, center tapped, BLDC motor, the ECHO enables minimal power and direction control interfaces which exceed the reliability of prior brushed motor use cases. With its compact 43mm size, the ECHO has the ability to be uniquely packaged for discrete placement in close proximity or directly within the mechanism.

The ECHO architecture is flexible enough to support different mission pedigree needs from COTS/New Space to high reliability 100 kRAD 15 year GEO missions. The ECHO is compatible with standard 28V spacecraft bus voltages making a switch from legacy solutions to the ECHO simple.

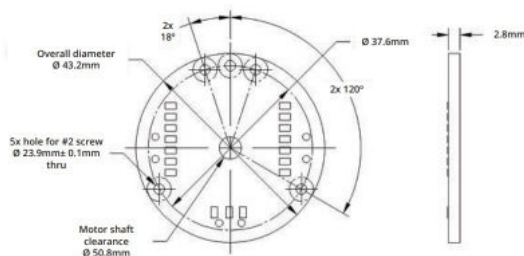
For requests or questions send to: [info@motivss.com](mailto:info@motivss.com)



ECHO Controller and Commutator Board

PERFORMANCE	VALUES
Input Voltage Range	28V (22-36V)
Motor Continuous Current	1.3A rms
Motor Peak Current	2A
Quiescent Power	<1.5W
Commutation Sensing	Hall Effect Sensor
System Interfaces	<ul style="list-style-type: none"> <li>Input Power</li> <li>Discrete Control Line</li> </ul>
Motor Speed Support	0-2,000 RPM (typical)
Interface	Power + Control Signals <ul style="list-style-type: none"> <li>2/3/4 wire configurations</li> </ul> BLDC Motor <ul style="list-style-type: none"> <li>Center Tap Required</li> </ul> Current Sense Available
Control Modes	Brushless Open Loop Drive
Applications	<ul style="list-style-type: none"> <li>Deployment Systems</li> <li>Hinge Mechanisms</li> <li>Door Movement</li> <li>Protective Covering Movement</li> <li>Latch Release Mechanisms</li> <li>Instrument Calibration Devices</li> </ul>

ENVIRONMENTAL	VALUES
Operating Temperature	-55°C to +125°C
Non-Operating Temperature	-65°C to +125°C
Random/Sine Vibration	GEVS Standard
Radiation Tolerance TID SEU LET Threshold	>100 kRad (>75 MeV-cm <sup>2</sup> /mg)
Orbit/Mission Support	LEO, GEO, MEO, Lunar, Deep Space
EMI/EMC Filter	N/A
PHYSICAL	VALUES
Dimension/Diameter (unpackaged)	1.70 in 43.2 mm
Mass/Weight	0.6 oz 17 g
Available EEE Classes	Level 2/3/COTS per EEE-INST-002
Available Hardware Models	EDU/EM/FM



### EXPORT RESTRICTIONS

Export of Motiv Motor Controllers is controlled under Export Control Classification Number (ECCN) 9A515.x and is available for sales in the countries listed in Group A:5.

