

MCU-200 AIR-COOLED SiC INVERTER

PRODUCT DESCRIPTION

Motion Applied's MCU-200 inverter leverages over a decade of expertise in Silicon Carbide (SiC) technology, in a new ultra-lightweight **air-cooled** design.

Designed primarily for aircraft systems, it is also well-suited for electrification projects across automotive, marine and defence where traditional liquid coolant systems are not possible.



Performance	
Voltage	250 – 900 V
Peak current	240 Arms ¹
Continuous current	140 Arms ²
Efficiency	Over 97% typical, 99% peak
Switching frequency	10 – 32 kHz continuously variable at 1kHz rate
Electrical frequency	Up to 2.5 kHz

Communication and Motor Feedback	
Low voltage input	8 – 32 V nominal
Communication	3 CAN2.0 interfaces
Debugging	1 Ethernet interface
Motor temperature feedback	Supports PT100, PT1000, NTC10k, NTC100k and KTY
Motor position feedback	Supports resolvers and analogue SinCos encoders Support for sensorless control ³

Mechanical	
Mass	<3.0 kg ⁴
Volume	3.4 L ⁴
High voltage cables	Supports 10mm ² and 16mm ² cables, pre-fitted at desired length

Environmental	
Coolant	Forced air cooling, with custom heat sink designs available
Operating temperature	-40°C to +70°C
Ingress Protection	IP67 and IP6k9k

1. Performance dependent on heat sink design. 750 V, 12kHz Fsw, 40 seconds duration, 25°C 126CFM forced air.
 2. Performance dependent on heat sink design. 750 V, 12kHz Fsw, 3 minute duration, 25°C 126CFM forced air.
 3. Requires calibration to paired motor.
 4. Based on B-Sample design, subject to change. Excluding heat sink and cables.