

# Coolant Pump SiC Controller 610Vdc



The 1067000G1 is a 610 Vdc silicon carbide (SiC) based inverter and motor controller designed to drive an electric engine coolant pump motor. The design utilizes GE's discrete SiC MOSFETs. Advanced Planar Magnetic technologies have been developed by GE to compliment the SiC devices, yielding high power density and reduced weight. Advanced thermal management technologies are employed to enable reliable performance and allow the electronics to be mounted around the coolant pump water jacket to reduce the space claim for power electronics



## Features:

- ◆ Best-in-Class SiC MOSFETs
- ◆ Digitally Controlled Operation
- ◆ Fault Reporting over CANBus
- ◆ High Efficiency
- ◆ Reduced weight versus Silicon
- ◆ High Reliability
- ◆ MIL-PRF-GCS600AVDC Input
- ◆ Overcurrent & Overvoltage Protection.
- ◆ EMI – MIL-STD-461F
- ◆ 105°C coolant
- ◆ Derating – NAVMAT-P-4855-1
- ◆ AEC-Q101 SiC device qualification
- ◆ Nuclear Event Detection Circuitry
- ◆ Submergible (up to 2 meters water)

## Physical: (See ICD 1067001)

Weight: 7.25kg (16 lbs.) (controller with water jacket)  
Dimensions: Controller: (L) 228.6mm (9in.) x(Dia.) 208.25 mm (8.2in.)  
Connector: Input, Control: MIL-C-38999

## Environmental:

Operating Temperature: -46°C to +90°C ambient  
Temperature Shock: MIL-STD-810G,  
Shock: MIL-STD-810G,  
Vibration: MIL-STD-810G Method 514.4, Procedure I category 20, ground vehicles  
Humidity: MIL-STD-810G,  
Immersion: MIL-STD-810G, 2 meters for 2 hours

## Electrical I/O:

J1-A: HVIL	J2-A: 28Vdc Control
J1-B: +305Vdc	J2-B: 28Vdc Control Return
J1-C: HVIL Return	J2-C: CANBus High
J1-D: -305Vdc	J2-D: CANBus low

Part Number	Input Voltage	Output Voltage	Output Current (A)	Output Power (W)
1067000G1	610 VDC (nom)	120 VAC (60 Hz or 400 Hz)	4.3A (RMS)	2 kW



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