75kW High Voltage Motor Controller

GE Aerospace

The high voltage motor controller, part number 4Y3-0500G1, can deliver 75kW / 100hp to a Permanent Magnet machine. High frequency and high temperature operation are enabled by GE Silicon Carbide Power Modules; greatly improving SWaP-C over traditional silicon-based Inverters/Controllers. GE SiC combined with advanced digital controls enables 50kHz operation which improves the output power quality thereby improving the efficiency of the driven machine. The high voltage motor controller can power a variety of PM machines used in fans, pumps and compressors. With addition of low pass filter will operate as 1 or 3 phase Inverter.

Physical: (see 4Y3-0501 ICD)

Dimensions: 322mm (12.7") x 124mm (4.88") x 198mm x (7.8")
Weight: < 15 kg (< 33 lbs)
Mounting: ARINC 600, 4MCU
Connector Description: ARINC Size 2 (See ICD for pinout)
Optional I/O:
J1 (GTC030R32-1S): Input Power
J2 (GTC030-36-3P(LC)): Output Power
J3 (D38999/20WD19PN): Resolver / Temp
J4 (D38999/20WD35PN): CAN BUS, Discrete Sensors

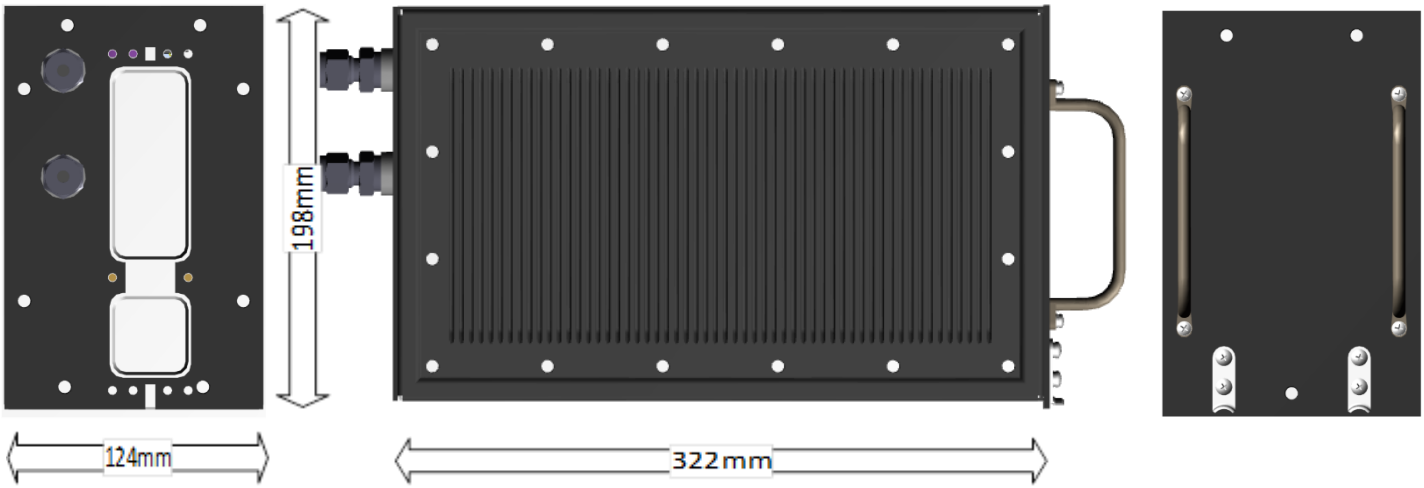
Features:

- High Efficiency > 99%
- Input: 600Vdc per MIL-PRF-GCS600A or 800-1200Vdc
- Output: Three-phase, Variable Frequency
- Liquid cooled
- Over Current, Over Voltage and Short Circuit Protection
- Total Harmonic Distortion (THD): < 5%.
- High Voltage Interlock (HVIL) for input and output
- Programmable Machine parameters
- Accepts resolver input signals
- Available Graphical User Interface

Environmental:

Coolant: EGW 50/50 or 60/40 ; 8lpm at <10 psid
Coolant Temp.: -40C to +105C
Ambient Operating Temp. : -40 oC to +71oC
Environmental Requirements : ATPD-2404 (Interior location)
Electromagnetic Interference & Compatibility: MIL-STD-461 CE 102, CS101, CS114, CS115, CS116, RE102, RS103

Chassis: ARINC 600 4MCU
Coolant I/O: SAE 9/16-18



Connector:
ARINC Series 2 (as shown)

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