MC300D-HV DIGITAL 2-AXIS 600Vdc BRUSHLESS MOTOR CONTROLLER

This series of digital militarized high voltage controllers is designed to provide torque, velocity and position loop closure. The controller accepts command signals from any fire control system (FCS), in either digital or analog format, and interfaces with a control handle. The advanced space vector algorithms provide optimum performance for new or existing motors to provide superior power densities. There is a soft start circuit utilized to control inrush current upon application of high voltage power. There is also an IGBT (Insulated-Gate Bipolar Transistor) shunt regulator that can be routed to an external resistor to control regen energy if required. Additionally, there are a wide range of end user programmable software features, as listed below.

PROGRAMMABLE SOFTWARE FEATURES

- Extensive built in test
- No-fire zones
- Obstacle avoidance zones
- End-damping limits

- HUMS (Health Usage Monitoring System)
- Acceleration limits
- Comprehensive loop tuning
- Tracking/Stabilization Modes

- Field weakening
- Joystick shaping function
- Analog and digital I/O
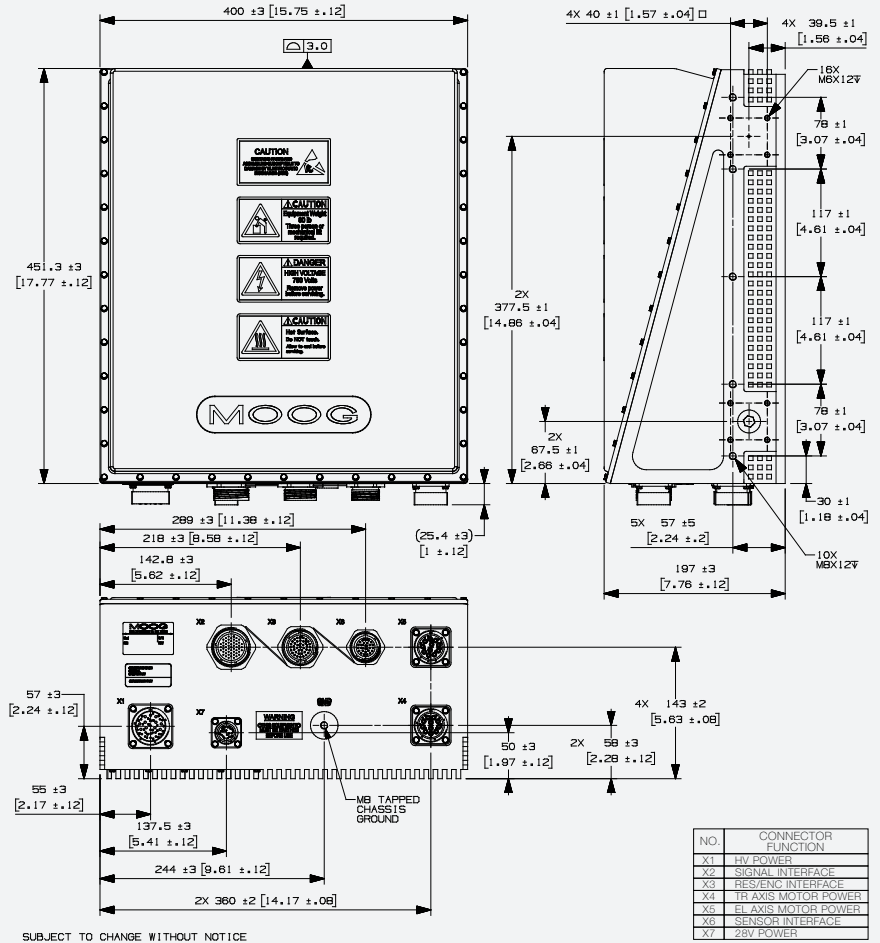- Status and fault history
- Data logging
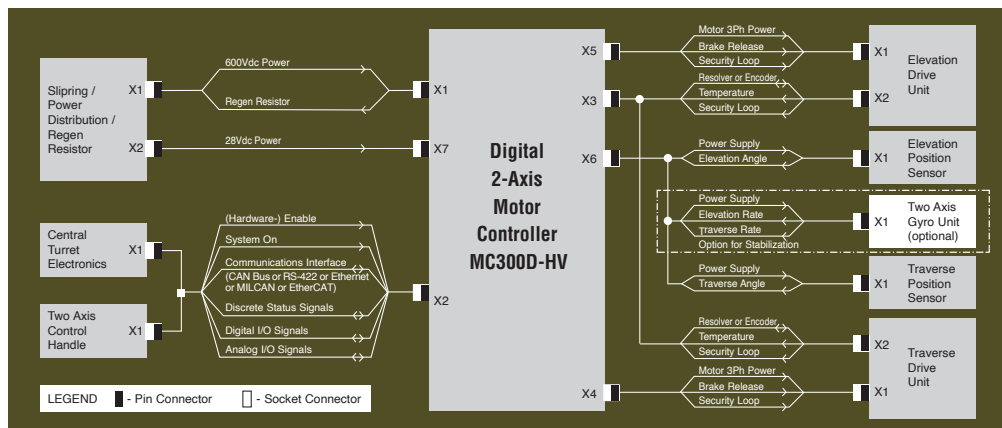
Note: All of our products are flexible and customizable to meet your specific needs. Please contact us for more information.

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SPECIFICATIONS

Parameter	Performance
Power Supply (Control Electronics)	18Vdc – 32Vdc (per Mil-Std-1275)
Power Supply (Motors)	700Vdc Maximum
Temperature (Ambient)	-40°C to 65°C
Environmental Specification	Complies with Mil-Std-810
Command Communication Interfaces	CAN-BUS or RS-422 or Ethernet or MILCAN or EtherCAT
EMC Specification	Complies with Mil-Std-461
Weight	36kg (79.2lb)
Position Sensor Interface	SSI or EnDat Serial Interface
Motor Commutation Sensor	Resolver or Encoder
Envelope	451 x 400 x 197mm (17.8 x 15.7 x 7.8 in)
Self Protection	Over-Temperature and Over-Current
Output Current (for each axis)	150A peak
Option: Stabilization Kit	2-Axis Gyro Interface

DIMENSIONS mm (in)

NO.	CONNECTOR FUNCTION
X1	HV POWER
X2	SIGNAL INTERFACE
X3	RES/ENC INTERFACE
X4	TR AXIS MOTOR POWER
X5	EL AXIS MOTOR POWER
X6	SENSOR INTERFACE
X7	28V POWER

SUBJECT TO CHANGE WITHOUT NOTICE

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