

## 25A DC Motor Controller *with Electronic Assistant*®

Axiomatic releases a rugged **25A DC Motor Controller** for speed, torque or PID control of a unidirectional or bidirectional brushed DC motor for efficient machine control. Using CAN, the motor controller can network with other devices in the machine control system.



Axiomatic P/N AX100100

### Features:

- Unidirectional or bi-directional brushed DC motor control
- Up to 25A output current to the motor
- Flexible control provided by a variety of user configurable options, including:
  - speed control (open loop linear, closed loop linear or setpoint);
  - torque control (linear or setpoint); or
  - PID control (linear or setpoint).
- 2 inputs are user configurable from the following: 0-5V; 0-10V; 0-20 mA; 4-20 mA; PWM; frequency (RPM); or digital.
- The control input to drive the motor can be mapped to either of the 2 command inputs or the controller can respond to messages from a CAN bus.
- User configurable response to an enable input connected to a digital command input
- 4 configurable and independent ramps soften changes in motor voltage and current.
- A configurable E-stop shutdown (ramp) parameter is provided.
- Additional 2 current outputs (2A proportional or hotshot digital) are available to drive accessories such as hydraulic valves or relays for machine control or safety interlock.
- 1 0-5V output provides a feedback signal of the duty cycle being applied to the motor.
- Outputs are configurable to send a feedback message to the bus.
- A reference voltage is provided to power an external sensor or potentiometer.
- Highly efficient and robust design with isolation for drive and processing circuits
- Operational from 9 to 36VDC (24VDC nominal)
- CAN (SAE J1939) is provided (CANopen on request)
- A PC-based Electronic Assistant provides for user configuration, saving and writing settings to additional controllers during set-up. An USB-CAN converter links the PC to the CAN bus.
- Compact size for easy mounting on a vehicle
- Suitable for moist, high shock and vibration environments
- Fully sealed with a rugged IP67 corrosion resistant aluminum housing
- Operational from -40 to 85°C (-40 to 185°F)

**Applications:** Lift Equipment, Electric Vehicles for Material Handling, Cranes and Hoists, Hydraulic Tail Lifts and Winches, Golf Carts, Military Equipment, Mobile Pumps and Hydraulic Powerpacks

### Electronic Assistant®

*The Electronic Assistant ® runs on any modern PC with the Microsoft Windows® 2000 operating system or higher. It comes with a royalty-free license for use. With connection to the bus, the EA finds all the devices on the bus, and recognizes the Axiomatic controls. The user can quickly configure an Axiomatic control for its desired performance over a wide variety of applications. An Axiomatic **CAN Assistant – Scope and Visual** is also offered to monitor CAN messages in a text format. The CAN tools are useful PC-based diagnostic and debugging tools for J1939 or CANopen networked devices.*

Axiomatic is a provider of electronic machine controls, components, and systems to the off-highway, military, power generation, material handling and industrial OEM markets. We provide efficient, innovative solutions that focus on adding value for our customers. We emphasize service and partnership with our customers, suppliers, and employees to build long term relationships and mutual trust.

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