

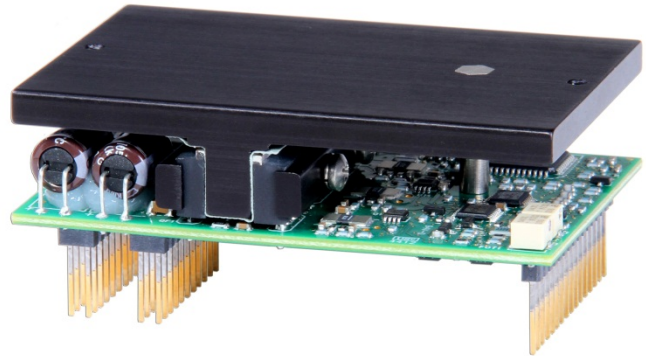
**Description**

The AZBE40A8 PWM servo drive is designed to drive brushless DC motors at a high switching frequency. To increase system reliability and to reduce cabling costs, the drive is designed for direct integration into your PCB. The AZBE40A8 is fully protected against over-voltage, under-voltage, over-current, over-heating, invalid commutation, and short-circuits. A single digital output indicates operating status. The drive interfaces with digital controllers that have analog  $\pm 10V$  output. The AZBE40A8 can utilize either quadrature encoder inputs or Tachometer feedback for velocity control. This servo drive requires only a single unregulated isolated DC power supply, and is fully RoHS (Reduction of Hazardous Substances) compliant.

See Part Numbering Information on last page of datasheet for additional ordering options.

**Power Range**

Peak Current	40 A
Continuous Current	20 A
Supply Voltage	10 - 80 VDC



**Features**

- ▲ Four Quadrant Regenerative Operation
- ▲ Direct Board-to-Board Integration
- ▲ Lightweight
- ▲ High Switching Frequency
- ▲ High Performance Thermal Dissipation
- ▲ Differential Input Command
- ▲ Digital Fault Output Monitor
- ▲ 12VDC Operation
- ▲ Encoder Velocity Mode
- ▲ Current Monitor Output
- ▲ Compact Size
- ▲ High Power Density

**HARDWARE PROTECTION**

- Under-Voltage
- Over-Voltage
- Over-Current
- Over-Temperature
- Short-circuit (phase-phase)
- Short-circuit (phase-ground)

**INPUTS/OUTPUTS**

- Digital Fault Output
- Digital Inhibit Input
- Analog Current Monitor
- Analog Command Input
- Analog Current Reference

**COMMUTATION**

- Trapezoidal

**FEEDBACK SUPPORTED**

- Encoder
- Hall Sensors
- Tachometer ( $\pm 60$  VDC)

**MODES OF OPERATION**

- Current
- Duty Cycle (Open Loop)
- Encoder Velocity
- Tachometer Velocity

**MOTORS SUPPORTED**

- Three Phase (Brushless)
- Single Phase (Brushed, Voice Coil, Inductive Load)

**COMMAND SOURCE**

- $\pm 10$  V Analog

**COMPLIANCES & AGENCY APPROVALS**

- UL
- cUL
- CE Class A (LVD)
- CE Class A (EMC)
- RoHS





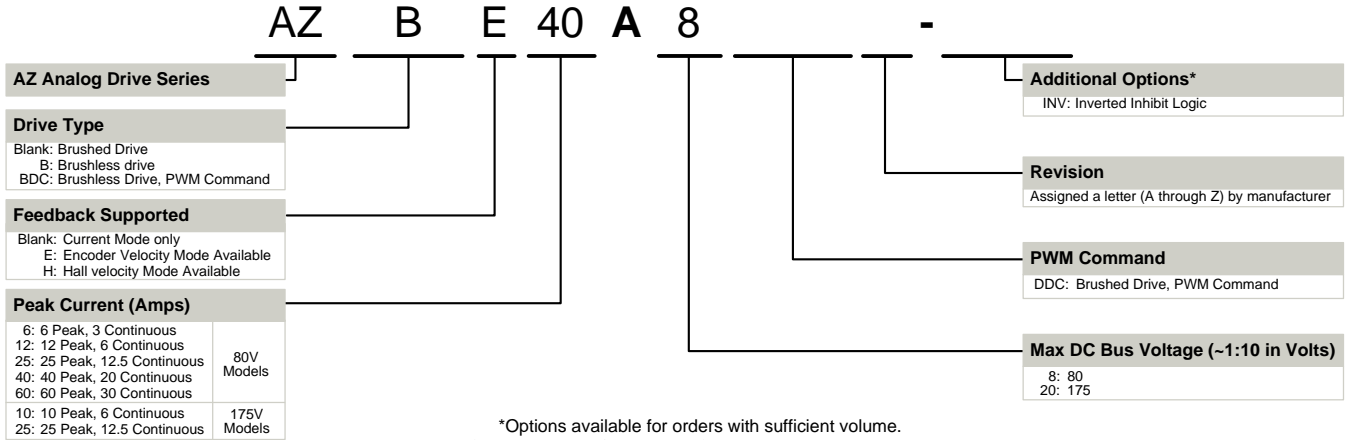








**PART NUMBERING INFORMATION**



ADVANCED Motion Controls AZ series of servo drives are available in many configurations. Note that not all possible part number combinations are offered as standard drives. All models listed in the selection tables of the website are readily available, standard product offerings.

ADVANCED Motion Controls also has the capability to promptly develop and deliver specified products for OEMs with volume requests. Our Applications and Engineering Departments will work closely with your design team through all stages of development in order to provide the best servo drive solution for your system. Equipped with on-site manufacturing for quick-turn customs capabilities, ADVANCED Motion Controls utilizes our years of engineering and manufacturing expertise to decrease your costs and time-to-market while increasing system quality and reliability.

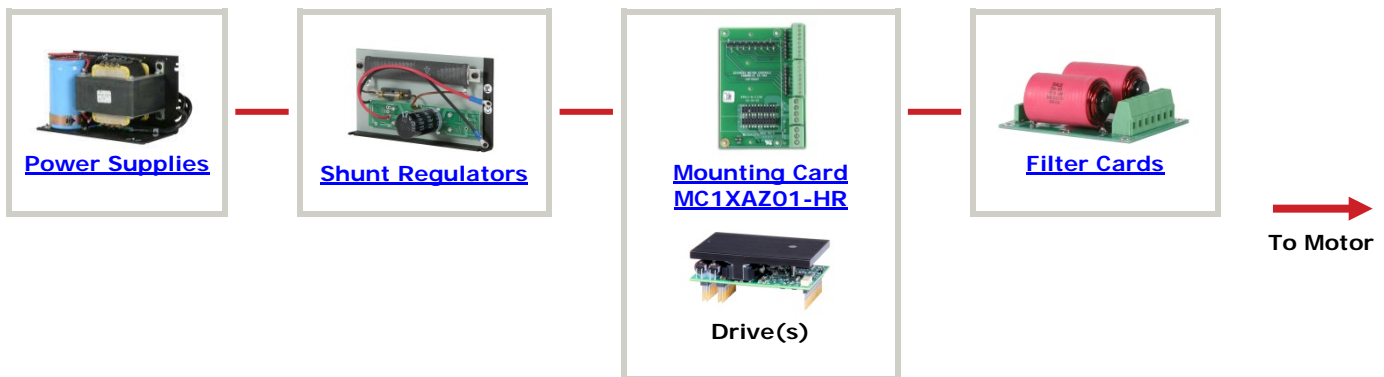
**Examples of Modifications and Customized Products**

- ▲ Integration of Drive into Motor Housing
- ▲ Mount OEM PCB onto Drive Without Cables
- ▲ Multi-axis Configuration for Compact System
- ▲ Custom PCB and Baseplate for Optimized Footprint
- ▲ RTV/Epoxy Components for High Vibration
- ▲ OEM Specified Connectors for Instant Compatibility
- ▲ OEM Specified Silkscreen for Custom Appearance
- ▲ Increased Thermal Limits for High Temp. Operation
- ▲ Integrate OEM Circuitry onto Drive PCB
- ▲ Custom Control Loop Tuned to Motor Characteristics
- ▲ Custom I/O Interface for System Compatibility
- ▲ Preset Switches and Pots to Reduce User Setup
- ▲ Optimized Switching Frequency
- ▲ Ramped Velocity Command for Smooth Acceleration
- ▲ Remove Unused Features to Reduce OEM Cost
- ▲ Application Specific Current and Voltage Limits

Feel free to contact Applications Engineering for further information and details.

**Available Accessories**

ADVANCED Motion Controls offers a variety of accessories designed to facilitate drive integration into a servo system. Visit [www.a-m-c.com](http://www.a-m-c.com) to see which accessories will assist with your application design and implementation.



All specifications in this document are subject to change without written notice. Actual product may differ from pictures provided in this document.