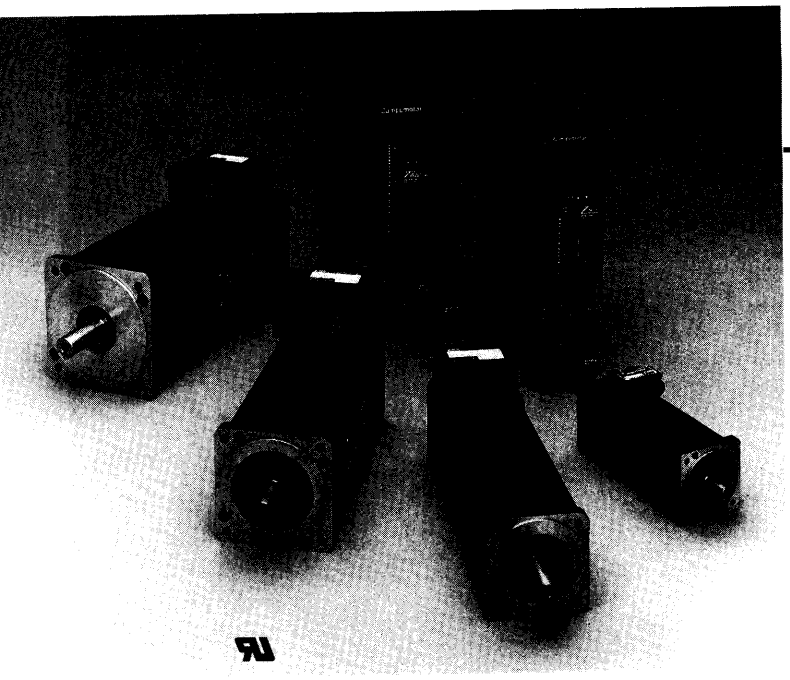


Z, ZX and ZXF Series

Brushless Servo Systems

The Z Series is a brushless positioning system consisting of a brushless servo motor, a brushless resolver for feedback, and a Digital Signal Processor (DSP) based servo amplifier. Digital electronics simplify the system's operation and maintenance.

The Z Drive accepts a digital (step and direction) input and can be configured in a position mode. The Z Series offers maximum speeds of 7,000 RPM, maximum continuous torques of 9,000 oz-in (64 Nm) and maximum peak torques of 18,000 oz-in (127 Nm).

Closed-loop performance is obtained by DSP control of a sophisticated servo control algorithm. The onboard processor compares the commanded input position to the resolver feedback and then determines the proper phase current levels to apply to each of the motor's stator windings. All servo performance parameters are stored in battery backed RAM (random access memory) to retain the values after turning the drive off. An additional microprocessor handles the communication interfaces and error diagnostics. Tuning is entirely digital, eliminating potentiometer adjustments required in analog only systems.

Z Drive systems are easily installed and operated by personnel with little or no training in servo systems. Z Series motor/drives are supplied as packaged systems that are factory compensated for typical load and performance requirements. In most applications, no adjustments are required. When adjustments are required, changes to the drive can be made simply and effectively from two interfaces. Simple pushbutton adjustments and an RS-232C interface are provided to modify all servo parameters.

The power amplifier section of the Z Drive utilizes a bipolar 7 kHz pulse width modulation (PWM) sinusoidal current control scheme. This type of amplifier improves reliability, power regulation, and low speed smoothness.

Z Series Features

- Brushless servo motor
- Digital Signal Processor (DSP) control
- High noise immunity due to optical isolation and brushless resolver technology

Performance

- Brushless resolver feedback
- Speeds to 7,000 RPM
- Torques up to 9,000 oz-in (64 Nm) continuous; 18,000 oz-in peak (127 Nm)
- User-programmable resolutions (200-65,536 steps/rev, 5,000 steps/rev standard)
- Digital tuning: no analog pots to adjust, no drift
- 7kHz PWM switching frequency
- Accepts standard TTL step and direction input signals
- Positioning mode
- Pseudo-encoder output for interfacing with counters or PLCs
- Servo parameters are stored in battery backed RAM

Protection

- Full short circuit protection—phase-to-phase and phase-to-ground
- Motors include overtemperature sensor

Physical

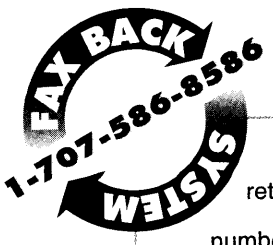
- Fan-cooled drive enclosure
- Simple pushbutton and RS-232C interfaces make changing drive parameters simple
- Alpha-numeric display for fault and user-defined messages

ZX and ZXF Drive/Controllers

The Models ZX and ZXF combine the functions of an indexer and brushless servo drive in a single compact package. Each system is capable of storing up to 100 sequences in battery-backed ram, which can be selected via RS-232C, BCD switches or the front panel on the drive/indexer.

Both the ZX and ZXF utilize the extended edition X version programming language. Some programming features include: registration, move capabilities, complex motion profiling, high level conditional branching and math capabilities. Program debugging tools are an integral portion of the operating system and help reduce software development time to a minimum.

System flexibility, all-digital drives, a powerful command language, and a compact package all add up to a complete and powerful single axis brushless servo system.



For complete specifications by return fax, please call us at this number and request Document 1030.

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