



SERVOSTAR™ CD Series 5 High Performance Servo Amplifier

Description

The ServoSTAR™ CD is a high-performance digital servo motor amplifier, supporting Current, Velocity or Position mode. Numerous Position Control options are offered, ranging from the classical ± 10 Vdc command, through encoder following and pulse-and-direction, all the way to SERCOS control. Choose from three velocity control algorithms to optimize performance on your system, and use the Auto-tune function to quickly and easily achieve high performance operation. It has been designed to be a multifaceted amplifier, capable of driving a vast product basket of motors and their assorted feedback devices. The drives come in standard packages of 3, 6, 10 and 20 amp sizes. All are packaged in a small frame size for minimizing cabinet space.

- Fully digital current, velocity and position servo loops
- Sinusoidal Commutation
- Encoder, Resolver and Sine Encoder feedback
- SERCOS, Serial or ± 10 Vdc Analog command
- 3 amps to 20 amps continuous current
- Single- and three-phase power
- Self protecting power stage
- PWM switching frequency up to 16kHz
- Optional 24VDC logic input supply, to separate from mains supply
- Easy tuning and setup using MOTIONLINK® for Windows™
- Optional DeviceNet Position Controller interface
- Six digital inputs, one digital output, one analog input, one analog output
- Up to 16 steps Motion buffer for indexing applications



Ratings

Model	Output Continuous Current per Phase (RMS/Phase) @ 45°C	Output Peak Current per Phase (RMS/Phase)	AC Line Input Voltage (VAC)
Cx03	3 Amps	9 Amp. (0.5 sec)	115 - 1 phase 230 - 1 phase 3 phase, 110 V per phase
Cx06	6 Amps	18 Amp. (0.5 sec)	115 - 1 phase 230 - 1 phase 3 phase, 110V per phase
Cx10	10 Amps	20 Amp. (2 sec)	3 phase, 110V per phase
Cx20	20 Amps	40 Amp. (0.5 sec)	3 phase, 110V per phase



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Features

Feedback

- Resolver, Incremental Encoder, Sine Encoder (including Heidenhain EnDat support and 5V Stegmann Hipurface support) or halls-only operation
- Auxiliary encoder feedback, used for Dual loop or Master / Slave operation
- Commutation initialization without motion

Servo Control

- Fully digital current, velocity and position loops
- Advanced patented sinewave commutation technology provides smooth, precise low-speed control as well as high-speed performance
- Accurate torque control due to precision balanced current loops with closed loop sensors
- Patented torque angle control enhances motor performance
- Velocity loop bandwidths up to 400Hz
- Self-tuning velocity loop algorithm

Reference Command

- 14 bit Analog-to-Digital conversion for $\pm 10\text{Vdc}$ operation
- SERCOS operation, designed for use with Kollmorgen's SERVOSTAR™ MC multi-axis motion controller
- Pulse following control, configured as an encoder follower, up/down counter, or pulse / direction counter
- Serial command
- DeviceNet position controller

Motion Options

- Point-to-point, incremental or absolute
- Stores up to 16 motion indexing profiles in memory
- Homing functions

Configurable I/O

- 6 digital inputs and 1 digital output, configurable to a variety of functions
- Analog output for monitoring various parameters

Robust Design

- Self-protecting power modules
- Full protection against short circuit, over-voltage, under-voltage, motor and drive over-temperature, over-current and feedback loss
- Flexible current foldback protection

Ordering Information

Please note: some models are not standard, but are available upon request.

The SERVOSTAR™ CD Series 5 model number is built as follows:

