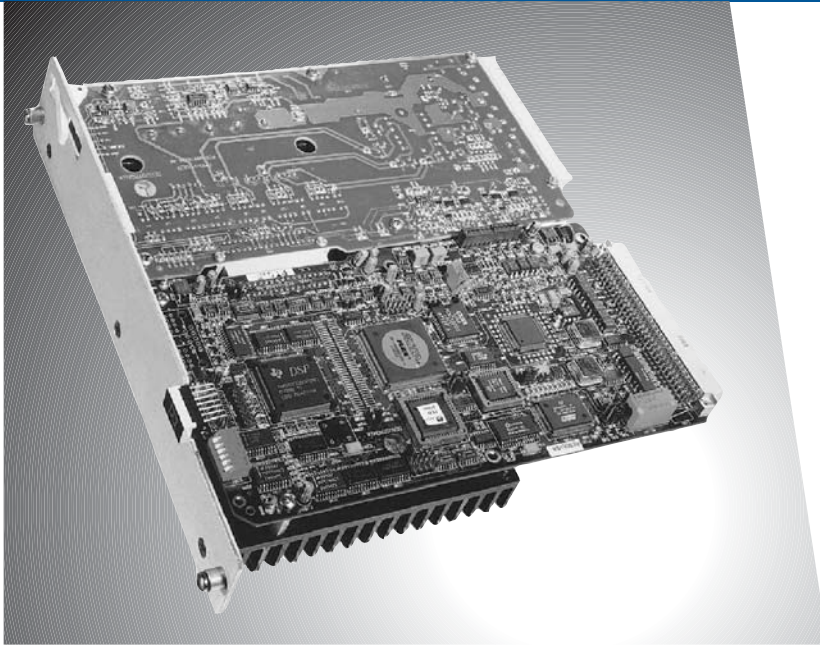


RACK MOUNT SERVO DRIVE

www.DanaherMotion.com



DESCRIPTION

The Rack Mount Module (RMM) is a High Performance servo drive.

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.

- Fully digital servo loops
- Three power ratings
- SERCOS or ± 10 VDC Analog command
- Sinusoidal Commutation
- Self-protecting power stage
- Opto-isolated inputs and outputs
- 300 VDC Bus voltage
- Encoder, resolver, or sine encoder feedback
- Easy setup using MOTIONLINK® for Windows™

RATIONALE

The motivating factor behind this development effort was the need to have more reliable alternative to the existing brush motor system. At the same time, the new products had to meet:

- Reduce number of cables and wiring
- Meet aggressive cost target
- Fit into minimal size cabinet

SOLUTION

Rack Mounted module that fits into a 19" rack. The RMM communicates with the controller via SERCOS .

The backplane reduces the number of the cables for interconnections among the drives, single pair of SERCOS cables for the host controller to the rack, and single machine I/O cable from the robot cell to the rack reduces the number of cables.

Applications

- Used by a robot manufacturer in a wide range of anthropomorphic robots
- Used by a systems integrator in a four-axis servo power module, with an integrated high voltage power supply and a rack supplied by Danaher Motion
- Used by a wood processing machining builder

FEATURES

Feedback

- Encoder feedback supported to 12 MHz
- Secondary encoder feedback, used to close a Dual Loop around the load, or as an input for handwheel or pulse-and-direction operation
- Resolver
- Sine Encoder

Servo Control

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

Position Command

- 14 bit Analog-to-Digital conversion for ± 10 VDC operation
- Serial command
- SERCOS operation, designed for use with Danaher Motion's Kollmorgen SERVOSTAR™ MC multi-axis motion controller
- Pulse following control, configured as an encoder follower, up/down counter, or pulse/direction counter

Motion Indexing

- Stores up to 4 motion profiles in memory
- Start motion through serial command or digital input
- Homing functions

I/O's

- Three digital inputs and 1 digital output, can be configured to a variety of functions

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 of motor and drive

Rating

- $3 A_{RMS}$ continuous: $8 A_{RMS}$ peak
- $6 A_{RMS}$ continuous: $20 A_{RMS}$ peak
- $15 A_{RMS}$ continuous: $45 A_{RMS}$ peak
- 300 VDC bus voltage