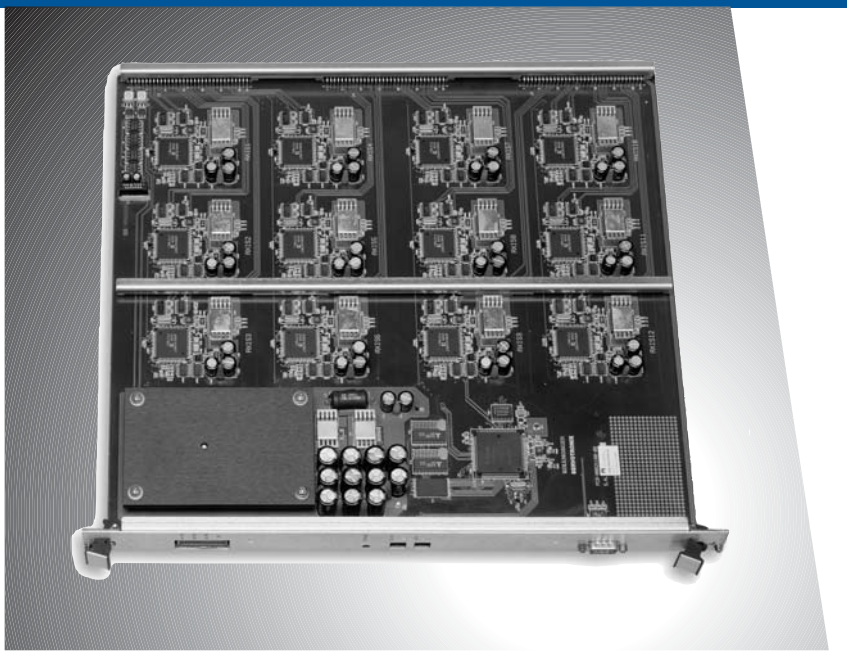
12-AXIS MULTI-DRIVE UNIT

www.DanaherMotion.com



DESCRIPTION

This Multi-Drive Unit (MDU) consists of 12 independent servo drives assembled on a 9U PCB. Depending on the end-user's requirements, anywhere from 100 to 200 of these MDUs may be in use in a single machine. A CAN Communications Processor (CCP) controls the process and communicates with the MDUs.

The servodrives operate in Gear Mode only, following a Master Encoder value that comes from an encoder mounted on the main shaft of the machine. This value is broadcast every 1 milisecond over one of the CAN channels .

RATIONALE

The motivating factor behind the development effort was the need to have easy, faster setup and programming flexibility in controlling up to 2200 axes per machine, replacing a mechanical CAM shaft.

In addition,the new product had to meet:

- Outstanding Compact Size
- CAN communication with host controller.
- Aggressive cost target.
- Very High reliability.

SOLUTION

- Optimal arrangement of 12 axes per module and 8 modules in a rack.
- Centralized CAN operator for each module .

Solutions by DANAHER MOTION

Applications

- Tufting machine (carpet industry)

FEATURES

Operation Modes

- Gearing mode only: the servo drives follow a master encoder. Each servo drive has its own independent gear ratio.

Feedback

- Differential inceremental encoder

Communications

- Dual CAN bus communications between the controller (CCP) and the MDU
- A central CPU on the MDU distributes information to the DSPs over an SSI bus.

Rating

- The servo drives are rated at 1.4 A_{RMS} continuous and 2 A_{RMS} peak
- Rated DC bus voltage 28 VDC

Mechanical Dimensions

1.1" (height) X 5.9" (width) X 4.96" (length)