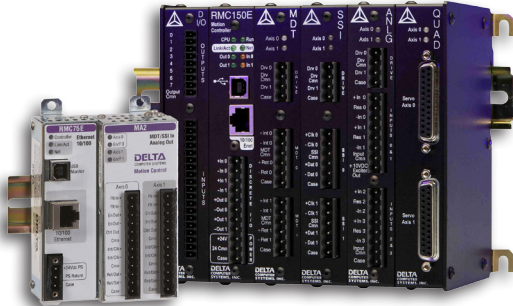


DELTA

COMPUTER SYSTEMS
Motion Control



Fluid power excels in applications requiring high power density, shock tolerance, and precise position, velocity, pressure and force control. Delta Computer Systems, Inc. and Mitsubishi Electric now bring two unique product portfolios together to offer customers easy and reliable closed-loop control of electro-hydraulic applications.

Delta Computer Systems' RMC motion controllers easily communicate with Mitsubishi Electric PLCs via Ethernet. This affords the Mitsubishi Electric customer all the advantages of the RMC's connectivity to the sensors and valves of closed-loop hydraulic systems, as well as the specialized algorithms necessary for high-performance hydraulic control.

Key Features

- Connectivity to sensors and valves of hydraulic systems with control algorithms designed specifically for high-performance hydraulic control
- Delta's RMC's apply RMCTools software for easy setup, tuning and diagnostics
- Creating motion sequences in the RMC offloads motion complexity from the PLC program, and provides fast response to motion events at the 1 millisecond loop time of the RMC
- Mitsubishi Electric PLCs can easily start motion sequences in the RMC and communicate with up to 16 multiple RMCs simultaneously
- One-time price for hardware, with free firmware and software, including future updates
- Includes built-in simulator for testing control sequences at your desk



Create motion sequences with user programs

Delta and Mitsubishi have developed function blocks for easy Ethernet communication between Mitsubishi PLCs and the RMC motion controller, for easy creation of simple or advanced motion sequences and advanced mathematical calculations. User programs offload complex motion logic from the PLC, freeing up both logic space and processing time. The PLC retains the option of full control of the RMC, but needs only start sequences and monitor progress.

RMCTools' Indirect Data Map coordinates data reading and writing with PLC

Typically, PLCs need to read from and write to a number of items in the RMC. These data registers can be scattered in many different address locations in the RMC. Using RMCTools' Indirect Data Map, all of these items can be mapped to one location. The PLC then simply reads and writes from the Indirect Data Map, instead of from many different locations.

Performs a motion sequence.

0 Move and waits for to encounter a force.

Command: Move Absolute (20) Position (µm) 10.0 Speed (µm/s) 10.0 Accel Rate (µm/s²) 100.0 Decel Rate (µm/s²) 100.0 Direction Nearest (0) Commanded Axes Axis0

Link Type: Link Condition: Wait For Axis[0].ActFrc < 1000.0

1 Switch to force control and ramp to desired force.

Command: Enter Prs/Frc Control (Auto) (4) Prs/Frc (Fz) 2000.0 Ramp Type S-curve (1) Int Preload (%) 0.0 Commanded Axes Axis0

Link Type: Link Condition: Wait For Axis[0].StatusRts.InPos

2 Perform specified number of sinusoidal cycles on the force.

Command: Sine Start (72) Offset (µm) 2000.0 Amplitude (µm) 200.0 Frequency (Hz) 5.0 Cycles 1000.0 Start Location Auto (0) Commanded Axes Axis0

Link Type: End

