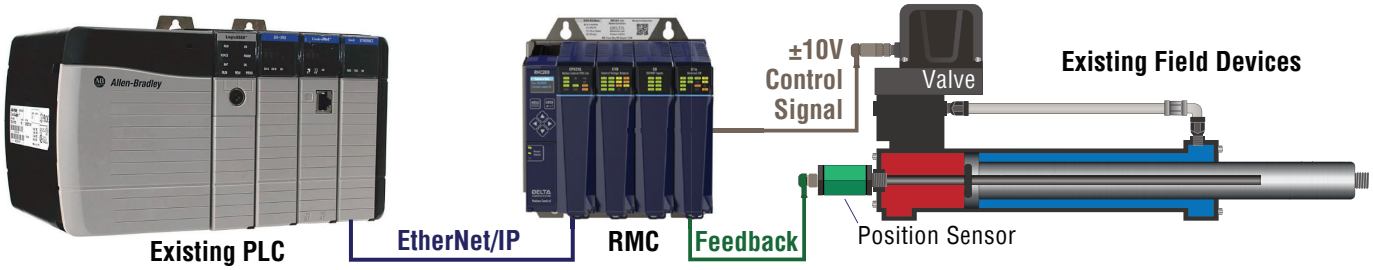
ControlLogix Analog Motion Replacement Option:
Delta's RMC Motion Controllers

The Allen-Bradley 1756-HYD02, 1756-M02AS, and 1756-M02AE motion modules have been workhorses in industrial applications for decades. These two-axis ControlLogix modules connect to a hydraulic valve or motor drive via an analog ±10V signal and support a variety of feedback types:

	1756-HYD02	1756-M02AS	1756-M02AE
Analog Output	±10V	±10V	±10V
Feedback	Start/Stop & PWM	SSI	Encoder (A,B,Z)

Rockwell Automation is discontinuing these 'analog' motion modules in 2024 without a direct plug-in replacement option. RA recommends that OEMs and systems integrators consider RMC Motion Controllers from Delta Motion as an alternative for these modules. Delta's stand-alone motion controllers communicate efficiently with AB PLCs via EtherNet/IP and connect to all of the same field devices:



RMC Motion Controllers can duplicate the function of the discontinued ControlLogix 'analog' motion modules.

Replacement Features of Delta's RMC Motion Controllers

- ±10V outputs (some RMCs also have ±20mA and 4-20mA options)
- Connection to feedback inputs: Quadrature, SSI, PWM, Start-Stop (Analog options are also available)
- Single and multi-axis: RMCs are available from 1 to 50 axes for tightly synchronizing axes

Additional Features of Delta's RMC Motion Controllers

- Command-based programming keeps most control in the PLC, or
- RMC User Programs can offload critical motion-related tasks from the PLC
- Easy-to-use and powerful RMCTools software (freely downloadable)
- Analog and load cell inputs for position, pressure or force feedback
- Extensive control algorithm options, including dual-loop position-pressure or position-force control
- Knowledgeable and responsive technical support 24/7/365

Using RMCs with AB PLCs

	2 Axes	1 or 2 Axes	Up to 50 Axes
Feedback	1756-	RMC75E	RMC200L, RMC200*
Start/Stop, PWM	HYD02	MA1, MA2	S8, CV8, CA4, U14
SSI	M02AS		
Quadrature	M02AE	QA1, QA2	Q4, CV8, CA4, U14

*RMC200 Lite or Standard requires one or more I/O modules depending on the number of axes

DELTA MOTION

Delta Motion has 40 years of expertise in servo-hydraulic and servo-electric motion control. Delta co-developed the 1756-HYD02 and -M02AS in conjunction with AB and has been supplying them under a Private Label agreement since their introduction in 2003.

Choosing an RMC Motion Controller

1. Choose a Delta Motion controller:

1 or 2 Axes	RMC75E
Up to 18 Axes	RMC200 Lite
Up to 50 Axes	RMC200 Standard

2. Choose Modules:

RMC75E (supports one Axis Module)

Axis Module	Outputs	Inputs
MA1	(1) ±10V	(1) Start/Stop, PWM, or SSI
MA2	(2) ±10V	(2) Start/Stop, PWM, or SSI
QA1	(1) ±10V	(1) Encoder (A,B,Z)
QA2	(2) ±10V	(2) Encoder (A,B,Z)

See **deltamotion.com/products/motion/rmc70/** for details, including expansion modules.

RMC200 Standard or Lite (supports multiple modules)

Module	Outputs	Inputs
CA4	(4) ±10V or ±20 mA	-
CV8	(8) ±10V	-
S8	-	(8) Start/Stop, PWM, or SSI
Q4	-	(4) Encoder (A,B,Z)
U14	(2) ±10V or ±20 mA	(2) Start/Stop, PWM, SSI, or Encoder (A,B,Z)

See **deltamotion.com/products/motion/rmc200/** for details, including choosing base modules, power supplies, and other modules.

3. Configure a controller and request a quote: deltamotion.com/rmcquote/rmcselect.php

Next Steps:

1. Visit **deltamotion.com/abtormc** for complete details on using RMCs with AB PLCs

   Additional Resources

   RMC Training Options: **deltamotion.com/education/**

   ControlLogix and RMC Comms Video: **deltamotion.com/controllogixvideo**

   RMC Training Videos: **deltamotion.com/education/tutorials/training/**

   ControlLogix and RMC Comms Step-by-Step Instructions: **deltamotion.com/controllogixtormc**

2. Call Delta Motion at **+1 360-254-8688** or email us at **sales@deltamotion.com**