Productivity Suite Software

- Spin the motors and toggle the PS-AMC I/O with the built-in software test tool. Great way to confirm hardware operation & physical wiring.
- Productivity CPU auto-discovers any PS-AMC controllers on the remote Ethernet network and Productivity Suite is used to configure hardware parameters and modify data tags.
- Productivity PLC and user program contain the PS-AMC configuration and motion instructions including:
  - Real-time Status & Diagnostics
  - Read/Write I/O
  - Start/Stop Motion
  - Homing, Jogging, Relative Moves, Absolute Moves, Simple Moves, Multi-Axis Blended Moves, Linear Interpolation Moves, Linear or S-curve Acceleration, Position Capture, Registration Correction Moves, and Electronic Gearing
  - Instructions for Rotary Table, Flying Cutoff and Smart Belt

10/100 Ethernet (RJ45) with support for Productivity Series Remote I/O protocol (LEDs to indicate link established and port active)

PS-AMC motion controller is compatible with any Productivity Series CPU with a Remote I/O Port.

Productivity PLC

Motion Control Enable (EN+, EN-)

Motion Control Ready (Dry Contact)

Note: ***The PS-AMC is not a stand-alone motion controller. A Productivity PLC is required as part of the control system.***

Two rotary switches used to set unique node ID between 1-99 for each AMC. Image shows Node ID 64.

Status LEDs for motion controller ready, external 24VDC present, optional auxiliary 24VDC present and 5VDC encoder supply present.

PS-AMC Motion Controller (per axis)

Position Capture

Selection of source for electronic geartrain

Any encoder axis or real axis within the same PS-AMC

Motion Profile Generator
- Homing Operations
- Velocity Move
- Simple Move
- Blended Move (up to 64 segments using the Motion Sequencer)
- Linear Interpolation Move
- Rotary Table Application

Position Capture

Selection of source for real axis (PTO = Pulse Train Output)

Virtual master for other drivetrains in the same PS-AMC

Electronic Drivetrain
- Gearing
- Flying Cutoff Application
- Automatic & Manual Registration including Smart Belt Application

Position Capture

+

Registration Correction Move

Instruction Type	Instruction Name	Description	Controls Real Axis Output	Can Be Virtual Axis Master	Supports Linear Interpolation	Supports Encoder Master	Supports Position Deviation Monitoring	Supports Position Capture	Supports Position Correction
Motion Profile Generator	SMOV	Simple Move	✓	✓			✓	✓	
	MSEQ	Motion Sequencer	✓	✓			✓		
	MMSEQ	Multi-axis Motion Sequencer	✓	✓	✓		✓		
	HOME	Homing Operations	✓	✓			✓	✓	
	VMOV	Velocity move	✓	✓			✓	✓	
	RTA	Rotary Table Application	✓	✓			✓		
Electronic Drivetrain	GEAR	Electronic Gearing	✓	✓		✓	✓		
	MREG	Manual Registration	✓	✓		✓	✓	✓	✓
	AREG	Automatic Registration	✓	✓		✓	✓	✓	✓
	FCO	Flying Cutoff	✓	✓		✓	✓	✓	

Refer to Productivity Suite Software Online Help for detailed explanations of any PS-AMC instructions

PS-AMC provides optional 5VDC supply for external encoder (200 mA max)

Optional Encoder

Quadrature Encoder with noise-resistant Line Driver up to 1MHz (A+, A-, B+, B-, Z+, Z-)

PTO up to 1MHz

Pulse Train Output (PTO) with noise-resistant Line Driver (Step +, Step -, Dir +, Dir -)

Servo or Stepper Drive

Servo or Stepper Motor

Motor Mounted Encoder (many stepping systems do not have a motor mounted encoder)

Drive Ready

General Purpose Input

Position Capture (Registration Switch)

Negative Limit Switch

Positive Limit Switch

Home Switch

Six motion-specific optically isolated sinking inputs that can be reconfigured as general-purpose inputs

Three motion-specific optically isolated sinking/sourcing outputs that can be reconfigured as general-purpose outputs

General Purpose Output

At Rest Output

Drive Enable Output

24VDC External Power

Optional 24VDC to power the field I/O or a jumper is used to share one power supply

Note: Diagram is per axis. The PS-AMC has 1, 2, 3 and 4 axis models. The P1 CPU with Remote I/O Port controls one PS-AMC with up to 4 axes of motion control while the P2/P3 CPUs with Remote I/O Port control up to four PS-AMC units with up to 16 axes of motion control. Except for the Ethernet cable, all connections are made with screw-type pluggable terminal blocks. Wire size can range from 30 AWG to 12 AWG (stranded conductor). There is only one Ethernet port, Motion Control Enable and Motion Control Ready per PS-AMC.

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