MIO-Achsco
Positioning Controller for DC Motors (2 Axes) and EC Motors (1 Axis), 24 V to 48 V / 5 A



- Compact axis controller with integrated power stage for DC or EC motors.
- Can be used as a two-axis controller for DC motors or as a single-axis controller for EC motors
- Supply voltage:
  Logic supply: 24 VDC
  Power supply: 24 VDC to 48 VDC
- Interfaces: USB 2.0, CAN, RS-485, JTAG
- Inputs:
  4 limit switch inputs (24 V)
  2 encoder inputs (differential signals), optionally configurable as Hall sensor inputs for commutation
- Point-to-point positioning operation
- Maximum output current:
  DC motor, single-axis operation: 10 A
  DC motor, two-axis operation: 5 A per axis
  EC motor: 5 A
- Housing options: DIN rail mounting,
  Open-frame version

MIO-Achsco is a universal positioning controller supporting up to two axes.

The controller can operate either two DC motors or one EC motor. In combination with an encoder or linear feedback system, it provides closed-loop position and speed control.

For EC motor applications, a commutation system with three Hall sensors can be connected to one of the encoder inputs.

Through CAN bus networking, up to 32 controllers can operate within a single system.

Speed, position, and acceleration are processed with 32-bit resolution.

Point-to-point positioning is supported using triangular or trapezoidal motion profiles.

The logic supply voltage is 24 VDC, while the power stage operates from a 24 to 48 VDC supply.

The maximum phase current is 5 A.

Four PLC-compatible inputs are available and may be used either as limit switch inputs or as general-purpose programmable inputs.

Configuration and parameterization are performed from a PC via a USB interface.
triangular or trapezoidal velocity profiles.

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MIO Achsco Positioning Controller – Technical Specifications

Operating Modes:	2 DC motors or 1 EC motor: Closed-loop operation • Positioning control • Speed control • Torque control
Motor Types:	EC motors DC motors
Supply Voltage	Logic supply: 24 VDC Power supply: 24 VDC to 48 VDC
Motor Current	DC Motor: 5 A (2-axis operation) DC Motor: 10 A (1-axis operation, parallel connection) BLDC Motor: 5 A
Maximum Power Output	480 W
Power Stage:	Integrated power stage Dual full-bridge output stage with thermal overload protection and overcurrent protection
Connections:	Phoenix COMBICON MCV 1.5/6-G-3.81 and MCV 1.5/8-G-3.81 base connectors for: • Supply voltage: 1 x 6-pin • Motor phases: 1 x 6-pin • Encoder: 2 x 8-pin • Inputs: 1 x 6-pin and 1 x 8-pin
Interfaces	USB 2.0 Full-Speed CAN RS422/RS485, galvanically isolatedUSB 2.0 Full-Speed, Type B connector CAN, galvanically isolated RS485 JTAG
Inputs:	• 4 PLC-compatible limit switch inputs (24 V) • 2 encoder interfaces (5 V, line-driver or TTL)
Status Indicators:	15 status LEDs
Dimensions:	DIN Rail Housing: 132 x 140 x 64 mm Open-Frame Version: 129 x 122 x 35 mm
Operating Temperature Range:	0 ... +50 °C
Storage Temperature Range:	-40 ... +85 °C