

Motion Controller

4 Quadrant PWM Amplifier

For combination with:
Brushless DC-Servomotors

Series MVP 2001A

		PWM MVP2001A	
Power supply	U _B	12 to 40	V DC
Max. continuous output current	I _{continuous}	8	A
Max. peak output current	I _{max}	30	A
PWM switching frequency	f _{pwm}	24.58	kHz
Total standby current	I _{nom}	150	mA
Output voltage for external use	V _{CC}	5	V DC
– Max. load current	I _{cc}	250	mA
Program memory	serial EEPROM	8,190	Bytes
Speed command / analog input (9 bit)	voltage range	0 - 5	V DC
	frequency bandwidth	500	Hz
	speed range	250 1,000 5,000 10,000 20,000	rpm
Outputs	analog	1 12 bit signed output for external amplifier	±10 VDC
	analog	1 12 bit signed output	±10 VDC
	PWM	1 0-100% digital output for external amplifier	TTL
	PWM	1 50% - 50% digital output for external amplifier	TTL
	direction bit	1 digital output for external amplifier	TTL
Inputs (optically isolated)	external events	2	
	hard limits	2	
	emergency stop	1	
Encoder inputs (optically isolated) 2 channel, + 5 VDC, TTL compatible	max. signal frequency	4	MHz
Serial interface CAN (DeviceNet®)	RS232 / RS485	9,600 19,200 38,400 57,600 (N, 8, 1)	Baud
		125,000 250,000 500,000	Baud
Operating temperature range		0 to +70 (32 to +158)	°C (°F)
Storage temperature		-25 to +85 (-13 to +185)	°C (°F)
Humidity tolerance		80% Rh, non-condensing	
Weight		14.08	oz

General information

The MVP2001A motion controller is a single axis intelligent drive with integrated 200 watt servo controller and amplifier, designed specifically for controlling FAULHABER® brand motors.

Modes of operation:

Speed and Position control:
control parameters, acceleration and deceleration ramps, speed, and PID terms are programmable via serial interface

Torque / current control:
Max. torque / current is programmable
Amplifier output is short circuit-proof

Stand-alone mode:
speed control: 0-5 volt input command signal
speed and position control: macro programming

Programming

The MVP2001A is controlled using simple ASCII commands sent serially via RS232 or RS485. Up to 63 motor axes can be controlled using an RS485 multidrop interface or the DeviceNet® (CAN) protocol.

All MVP2001A controllers have on-board flash memory facilitating the storage of data, configuration and motion routines (macros) to support "stand-alone" operation.

Options:

A Developer's Kit is available which contains all the necessary parts to get the first time user up and running.

A din rail mounting adapter is available.

A Power Conditioning module is available for high current applications.

Using an optional Multi Purpose Module (MPM) provides 8 optically isolated I/O, a secondary encoder input and a high resolution A/D analog to digital converter.

Source code, documentation and free demo software is available at www.micromo.com

Custom solutions optimized for OEM applications.

Controller Series: Driver and Communication

MVP2001A01 PWM, RS232C
MVP2001B01 Linear, RS232C

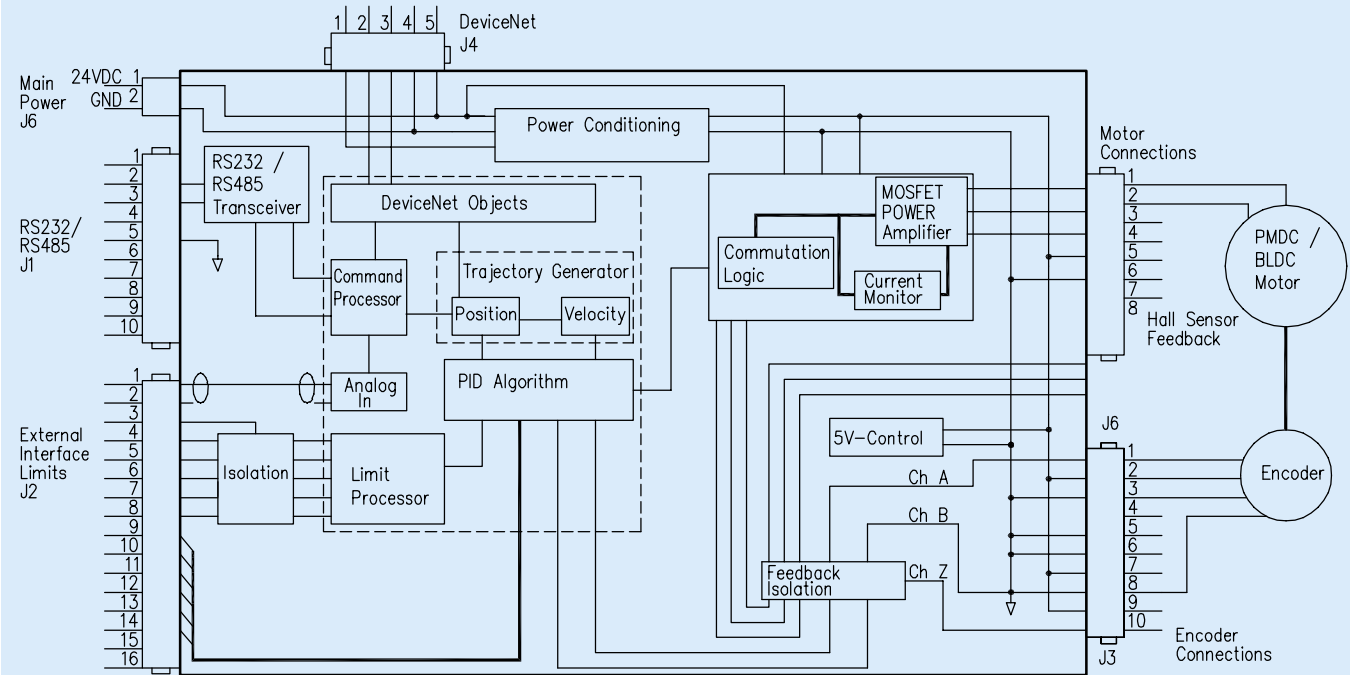
MVP2001A02 PWM, RS485
MVP2001B02 Linear, RS485

MVP2001A-MPM PWM, RS485 with MPM Module
MVP2001B-MPM Linear, RS485 with MPM Module

MVP PWR COND Optional power conditioning for HPD amplifier
MVP 2001 CONV RS232 to RS485 serial converter

Series MVP 2001A

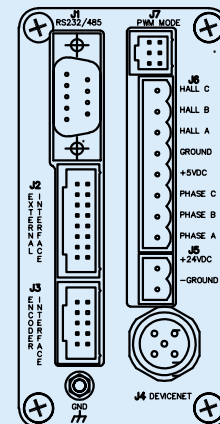
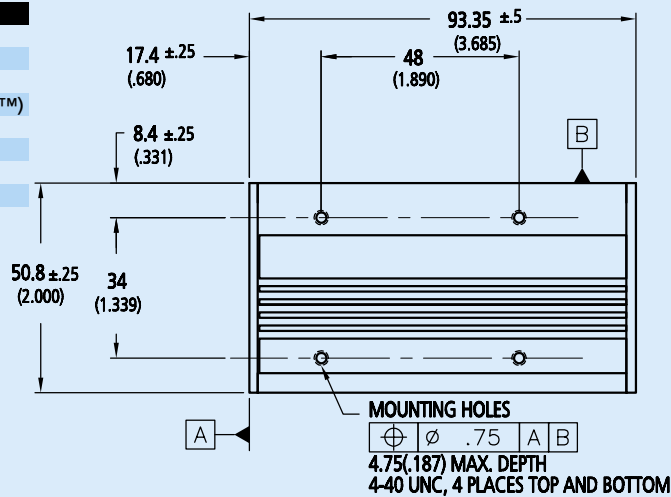
Basic Block Diagram



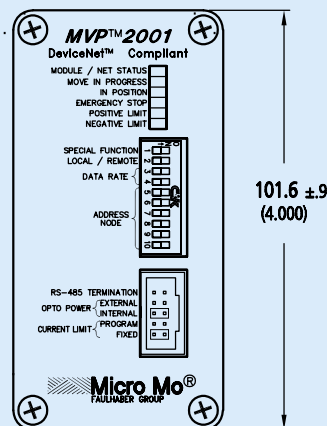
Dimensional drawing and connection information

Output connections

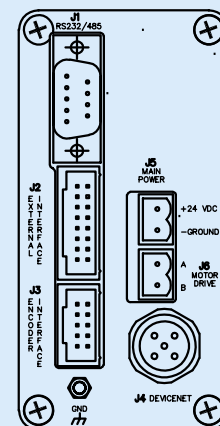
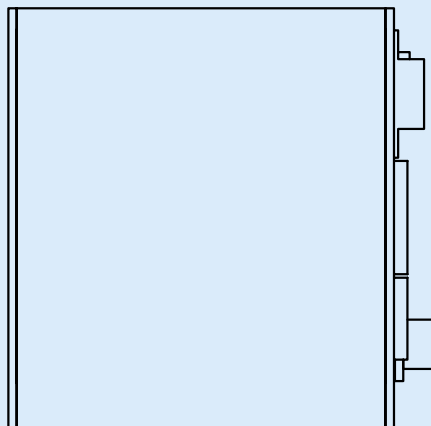
J1	RS232 or RS485
J2	External Interface
J3	Encoder Interface
J4	Can Bus (Device Net™)
J5	Main Power
J6	Motor Drive
J7	PWM Mode
GDN	Ground



PWM OUTPUT
Rear View



ALL MODELS
Front View



LINEAR OUTPUT
Rear View