

BLY17MDCUSB

Programmable Brushless DC Motor Controller



FEATURES

- Programmable PI Controller
- 2-Quadrant Operation
- Hall Sensor Feedback
- 0-5VDC Analog Input Speed Control
- Short Circuit Protection
- Requires 24VDC
- Run/Stop Input
- TTL-CMOS Compatible Inputs
- Motor Frame: 1.7" Square



DESCRIPTION

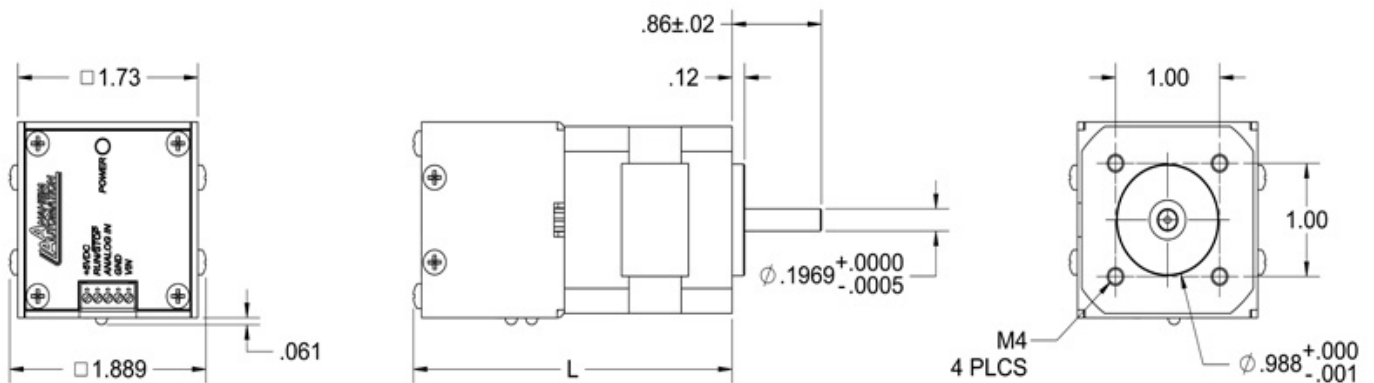
The BLY17MDCUSB Series is a compact microcontroller-based Programmable Brushless DC Motor Controller with Hall Sensor feedback for accurate speed measurement. With the two parts combined into one casing, the need to wire up the motor has been eliminated. It provides flexible, independent control of a Brushless DC motor from computers, or any machine controller with a serial port. It is also capable of standalone operation, making it an embedded machine controller. The easy-to-use Windows software, BMC100, can be used to directly control the BLY17MDCUSB for Real Time Motion through serial communication.

The BLY17MDCUSB provides accurate control of motor speed, direction, coast and brake for a Brushless DC Motor. It is embedded with a Proportional-Integrator (PI) controller. Proportional and Integrator Constants, Kp and Ki, can be programmed using the BMC100 Windows Software or in Direct Mode. The controller has two modes through which it can control the speed of the motor: Analog Mode and Digital Mode. In Digital Mode, the user directly sets the desired speed. The Analog Mode provides standalone functionality to the controller with a dynamic DC voltage input (0-5V) to control the speed of the motor.

Ideal Applications:

Automated machinery or processes that involve food, cosmetic, or medical packaging, electronic assembly, robotics, factory automation, medical diagnostics, inspection and security devices, conveyor and material handling systems, pump flow control, or wherever speed control is required.

DIMENSIONS

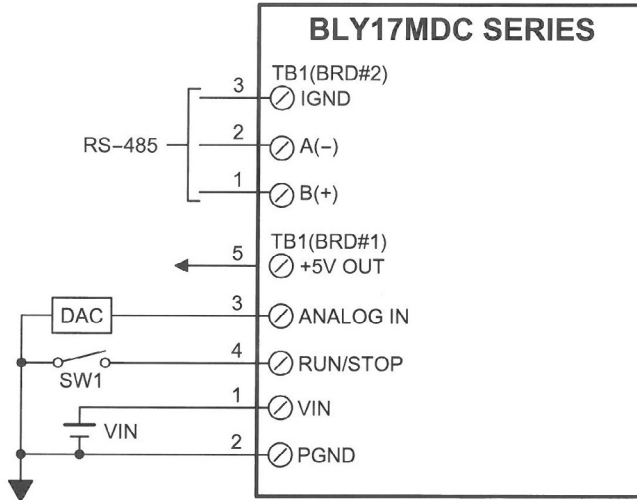


Model	L (in)
BLY17MDCUSB1	2.97
BLY17MDCUSB2	3.75
BLY17MDCUSB3	4.57
BLY17MDCUSB4	5.33

Dimensions are in inches

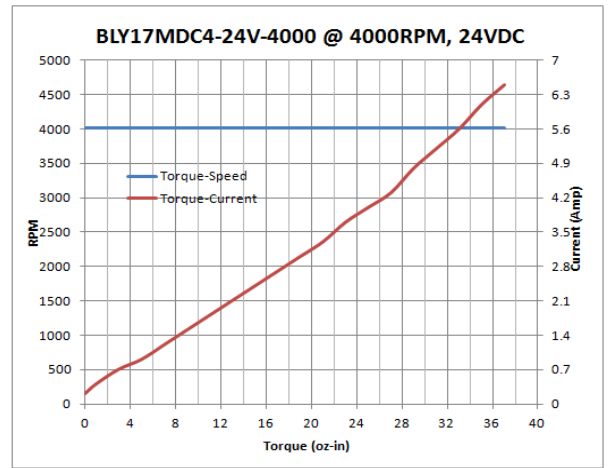
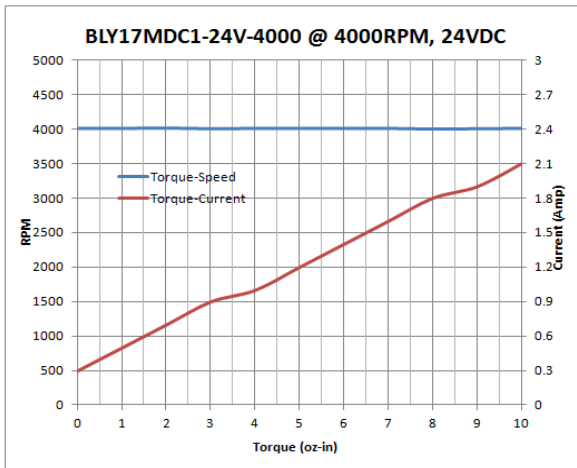
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WIRING DIAGRAM



Position	Description
1	Power 24VDC
2	Power Ground
3	Analog Speed Input
4	RUN/STOP Input
5	5VDC Output
1	RS485 A(-)
2	RS485 B(+)
3	RS485 Isolated Ground

TORQUE CURVES



SPECIFICATIONS

Model #	Motor Frame	Rated Voltage (V)	Rated Speed (RPM)	No Load Speed (RPM)	Peak Torque (oz-in)	Torque Constant (oz-in/A)	Rated Power (W)	Weight (lbs)	L Length (inch)
BLY17MDCUSB1S-24V-4000	1.7 in. Square	24	4000	5900	27	5.0	26	0.66	2.97
BLY17MDCUSB2S-24V-4000	1.7 in. Square	24	4000	5100	54	5.8	53	0.99	3.75
BLY17MDCUSB3S-24V-4000	1.7 in. Square	24	4000	5000	79	5.4	77	1.43	4.57
BLY17MDCUSB4S-24V-4000	1.7 in. Square	24	4000	5300	106	5.3	104	1.76	5.33

Winding Type:	Delta, 8 Poles	Max Radial Force:	28N @ 10mm from Flange
Hall Effect Angle:	120 Degree Electrical Angle	Max Axial Force:	10N - Force
Shaft Run Out:	0.025mm	Insulation Class:	Class B
Radial Play:	0.02mm@450g	Dielectric Strength:	500VDC for one minute
End Play:	0.08mm@450g	Insulation Resistance:	100Mohm, 500VDC

Model #	Description
PSAM24V2.7A	DC Power Supply 24VDC at 2.7 Amps