

antie

BLDC Motors & Drives





- High performance, low cost, brushless speed control systems
- 30 to 105 watts continuous shaft output
- Operates from 12 to 48V DC power supply
- Driver can supply up to 6.25A continuous, 12.5A peak
- Excellent speed stability
- Eight digital inputs for commanding a variety of functions
- Two digital outputs for interfacing to other equipment
- Two on board potentiometers plus 12 bit analog input for setting speed, acceleration, deceleration

For more information visit: www.applied-motion.com/BLDC

BD5 Drive

CE ROHS

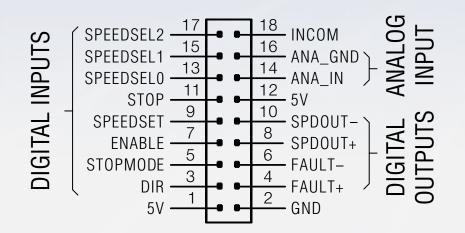
High performance, low cost speed control drive

- Operates from 12 to 48V DC power supply
- Output current: up to 6.25Arms continuous, 12.5A peak
- Eight digital inputs for commanding a variety of functions
- Two digital outputs for interfacing to other equipment
- Two on board potentiometers plus 12 bit analog input for setting speed, acceleration, deceleration

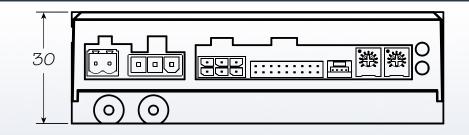
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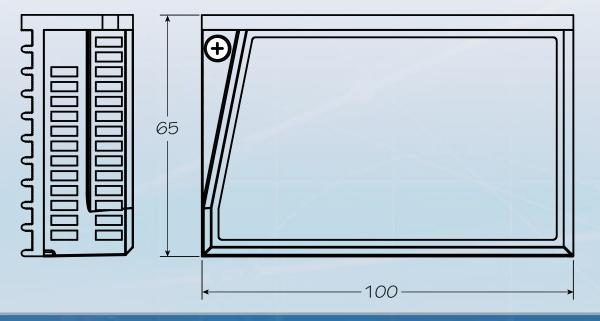
IO Connections

China



BD5 Dimensions







Brushless Drive Technical Specifications

POWER AMPLIFIER:

AMPLIFIER TYPE	Triple half bridge, 4 quadrant					
CURRENT CONTROL	4 state PWM at 10 kHz					
OUTPUT CURRENT	BD5-G1-AH: 1.75Arms cont, 3.5Arms peak (5 seconds max)					
	BD5-G2-AH: 3.6Arms cont, 7.2Arms peak (5 seconds max)					
	BD5-G3-AH: 6.25Arms cont, 12.5Arms peak (5 seconds max)					
POWER SUPPLY	External 12 - 48 VDC power supply required					
	Under-voltage alarm: 8.5 VDC					
	Over-voltage shutdown: 62 VDC					
ONTROLLER:						
MODE OF OPERATION	Velocity control. Speed can be selected by digital input from on-board potentiometer, external analog signal, or 7					
	preset speeds. Accel/decel rate set by on-board potentiometer					
DIGITAL INPUTS	Eight inputs, 5-24 VDC, bidirectional (can be driven by sinking or sourcing signals) 2 kHz max freq response. Com-					
	mon terminal (INCOM) can be connected to an external power supply (5 to 24 VDC), or internally connected to 5V or					
	GND (selected by internal DIP switches)					
	CW/CCW: selects direction of motor shaft rotation					
	STP: commands motor to stop quickly using electromagnetic braking					
	EN/RE: removes power from motor windings					
	M0,M1,M2: selects one of seven preset speeds					
	STMD: selects which mode of stopping is used					
	SPST: selects whether speed is set by on-board pot or external analog signal					
DIGITAL OUTPUTS	30 VDC max, 80 mA max, open collector, open emitter.					
	FLT is a dedicated fault output.					
	SPO is a dedicated tachometer output (30 pulses per revolution).					
	Both outputs can be reconfigred at the factory for qualified OEM applications.					
ANALOG INPUT	AIN referenced to GND, Range = 0 to 5 VDC, Resolution = 12 bits, 5v = 4500 rpm.					
COMMUNICATION INTERFACE	RS-232 (for factory configuration only)					

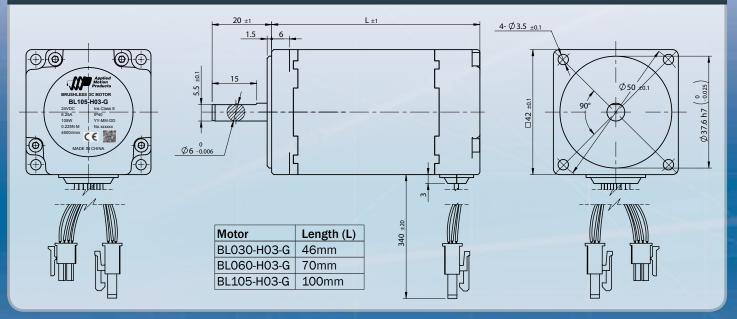
AGENCY APPROVALSRoHS
CE PENDINGPHYSICAL:OPERATING TEMPERATURE0 to 100°C (32 to 212°F) Internal temperature of the electronics sectionAMBIENT TEMPERATURE0 to 40°C (32 to 104°F) When mounted to a suitable heatsinkHUMIDITY90% max, non-condensingMASS6.0 oz (170 g)



Motor Specifications

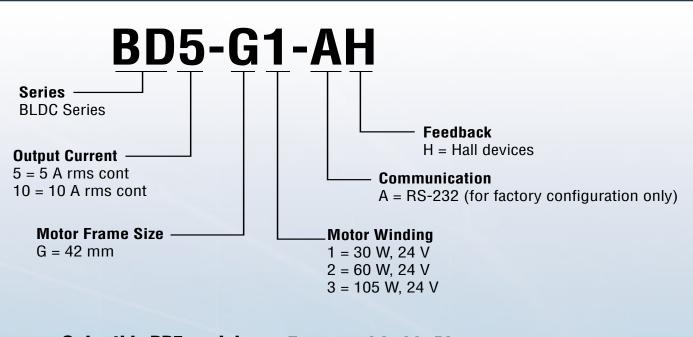
PART #	POWER	RELATED VOLTAGE	RATED CURRENT		RATED TORQUE		KE	ROTOR INERTIA	MASS
	W cont.	VDC	A cont.	A peak	N-M cont.	N-M peak	V/krpm	g-cm ²	g
BL030-H03-G	30	24	1.75	3.5	0.065	0.13	3.65	38.8	320
BL060-H03-G	60	24	3.6	7.2	0.13	0.26	2.7	72	550
BL105-H03-G	105	24	6.25	12.5	0.225	0.45	2.65	114	830

Motor Dimensions



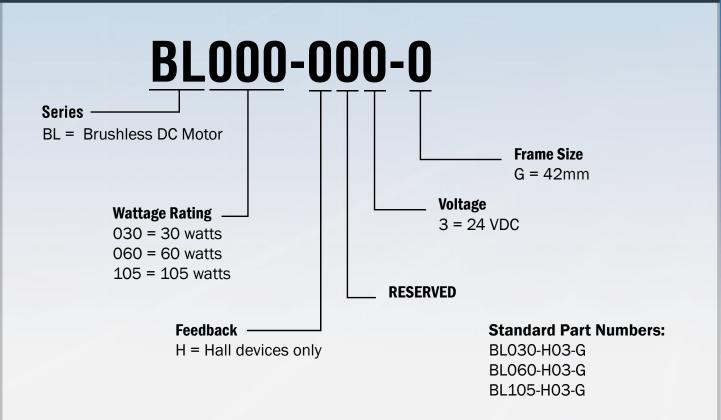


BLDC Drive Part Numbering System



Order this BD5 model	For use with this BL motor
1. BD5-G1-AH	1. BL030-H03-G
2. BD5-G2-AH	2. BL060-H03-G
3. BD5-G3-AH	3. BL105-H03-G

BLDC Motor Part Numbering System





Speed Torque Curves

Accessories

Power Supplies

Applied Motion offers the following DC power supplies for use with the brushless DC drives and motors.

PS50A24: 50 Watts at 24 VDC, recommended for BL030-H03-G motor. PS150A24: 150 Watts at 24 VDC, recommended for BL060-H03-G motor. PS320A48: 320 Watts at 48 VDC, recommended for BL105-H03-G motor.



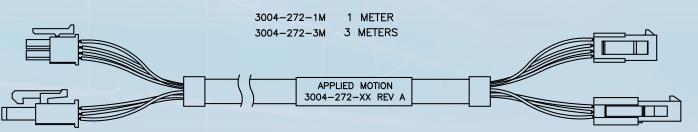


RC-050 Regeneration Clamp

The RC-050 regeneration clamp is for use where regeneration from the motor may be excessive for the power supply. In these cases the RC-050 is connected between the drive and power supply and absorbs regenerated energy.

Extension Cable

For applications where motors and drives are separated by more than 30cm (1 foot)







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