

## BD5-G1-AH

Brushless DC Drive for 30W 42mm motor

1pc. - 186.00  
 50pc. - 139.50



### Product Features

- Velocity control
- Simple setup
- Compact design
- 1.75 A rms cont., 3.5 A rms peak
- Runs on 12-48 VDC
- 8 digital inputs, 1 analog input
- 2 digital outputs
- Performance-matched motors available



### Description

The BD5-G1-AH is a compact and efficient drive for use with Applied Motion's BL030-H03-G series 42mm 30W brushless DC motors. It provides stable velocity control over a wide speed range. Motor speed can be controlled by an on-board trimpot, a 0-5 volt analog input, or via the drive's digital inputs. Dedicated stop and enable inputs are available, along with a dynamic braking feature that brings the motor to zero speed in a quick and controlled fashion. Each drive comes pre-configured for use with the matching brushless DC motor.

The mating I/O connector, populated with connector pins and 12" flying leads, is included with each drive. The mating DC power connector is also included.

The BL motors can plug directly into the BD drives. Extension cables are also available for longer distances between the drive and motor. Part number 3004-272-1M is a 1 meter extension cable and 3004-272-3M is a 3 meter extension cable.

## Specifications

|                                     |   |
|-------------------------------------|---|
| <b>Model Number:</b>                | BD5-G1-AH   |
| <b>Part Number:</b>                 | 5000-255-001  |
| <b>Supply Voltage:</b>              | 12-48 VDC   |
| <b>Supply Voltage Type:</b>         | DC  |
| <b>Control Modes:</b>               | Velocity Control  |
| <b>Output Current, Continuous:</b>  | 1.75  |
| <b>Output Current, Peak:</b>        | 3.5   |
| <b>Feedback:</b>                    | Halls   |
| <b>Setup Method:</b>                | Switch / potentiometer                                      |
| <b>Digital Inputs:</b>              | 8   |
| <b>Digital Outputs:</b>             | 2   |
| <b>Analog Inputs:</b>               | 1 (0 to 5 Vdc, 12 bit)                                      |
| <b>Dimensions:</b>                  | 3.9 x 2.6 x 1.2 inches                                      |
| <b>Weight:</b>                      | 6.0 oz  |
| <b>Operating Temperature Range:</b> | 0 to 100 °C   |
| <b>Ambient Temperature Range:</b>   | 0 to 40 °C  |
| <b>Ambient Humidity:</b>            | 90% max, non-condensing                                     |
| <b>Status LEDs:</b>                 | 1 red, 1 green  |
| <b>Circuit Protection:</b>          | Short circuit<br>Over-voltage<br>Under-voltage<br>Over-temp |

## Downloads

|                             |   |
|-----------------------------|---|
| <b>Manuals:</b>             | <a href="#">BD5-10 QuickSetup Guide 920-0066C.pdf</a><br><a href="#">BD_HardwareManual_920-0065D.pdf</a>                        |
| <b>Datasheet:</b>           | <a href="http://s3.amazonaws.com/applied-motion-pdf/BD5-G1-AH.pdf">http://s3.amazonaws.com/applied-motion-pdf/BD5-G1-AH.pdf</a> |
| <b>Family Datasheet:</b>    | <a href="#">BLDC_Datasheet_925-0013A.pdf</a>  |
| <b>2D Drawing:</b>          | <a href="#">BLDC_Controller_RevA.pdf</a><br><a href="#">BLDC_Controller_3D-PDF.pdf</a>  |
| <b>3D Drawing:</b>          | <a href="#">BD5_Drive_SimpleModel.igs</a>   |
| <b>Speed-Torque Curves:</b> | <a href="#">BLDC_speed-torque.pdf</a>   |

## Pricing

|               | <b>BD5-G1-AH</b><br>Part No. 5000-255-001               |
|---------------|---|
| <b>1pc.</b>   | \$186.00  |
| <b>25pc.</b>  | \$159.96  |
| <b>50pc.</b>  | \$139.50  |
| <b>100pc.</b> | <a href="#">Request a Quote</a> for 100+ piece pricing. |

## Products in the Series *Brushless DC Motors and Drives*

| Number                    | Frame Size | Continuous Torque | Peak Torque | Motor Length | Rated Power | Rotor Inertia | 1pc./50pc.          |
|---------------------------|------------|-------------------|-------------|--------------|-------------|---------------|---------------------|
| <a href="#">-255-001</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$186.00 / \$139.50 |
| <a href="#">-255-002</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$186.00 / \$139.50 |
| <a href="#">-255-003</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$186.00 / \$139.50 |
| <a href="#">-255-004</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$186.00 / \$139.50 |
| <a href="#">-255-005</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$186.00 / \$139.50 |
| <a href="#">-260-001</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$223.00 / \$167.25 |
| <a href="#">-260-002</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$223.00 / \$167.25 |
| <a href="#">-260-003</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$223.00 / \$167.25 |
| <a href="#">-260-004</a>  | NA         | NA                | NA          | NA           | NA          | NA            | \$223.00 / \$167.25 |
| <a href="#">i0-H03-G</a>  | 42 mm      | 0.58              | 1.15        | 1.81         | 30          | 5.49E-04      | \$120.00 / \$90.00  |
| <a href="#">H03-GP005</a> | 42 mm      | 2.38              | 4.77        | 4.41         | 30          | 0.00055       | \$269.00 / \$269.00 |
| <a href="#">H03-GP014</a> | 42 mm      | 5.92              | 11.8        | 4.93         | 30          | 0.00055       | \$296.00 / \$296.00 |
| <a href="#">H03-GP019</a> | 42 mm      | 8.28              | 16.6        | 4.93         | 30          | 0.00055       | \$296.00 / \$296.00 |
| <a href="#">H03-GP029</a> | 42 mm      | 12.5              | 25.0        | 4.93         | 30          | 0.00055       | \$296.00 / \$296.00 |
| <a href="#">H03-GP051</a> | 42 mm      | 20.5              | 41.0        | 5.45         | 30          | 0.00055       | \$324.00 / \$324.00 |
| <a href="#">H03-GP100</a> | 42 mm      | 40.1              | 80.1        | 5.45         | 30          | 0.00055       | \$324.00 / \$324.00 |
| <a href="#">i0-H03-G</a>  | 42 mm      | 1.15              | 2.30        | 2.76         | 60          | 1.02E-03      | \$160.00 / \$120.00 |
| <a href="#">H03-GP005</a> | 42 mm      | 4.77              | 9.56        | 5.36         | 60          | 0.001         | \$309.00 / \$309.00 |
| <a href="#">H03-GP014</a> | 42 mm      | 11.8              | 23.7        | 5.87         | 60          | 0.001         | \$336.00 / \$336.00 |
| <a href="#">H03-GP019</a> | 42 mm      | 16.6              | 33.1        | 5.87         | 60          | 0.001         | \$336.00 / \$336.00 |
| <a href="#">H03-GP051</a> | 42 mm      | 41.0              | 82.0        | 6.39         | 60          | 0.001         | \$364.00 / \$364.00 |
| <a href="#">i0-H03-H</a>  | 57 mm      | 1.28              | 2.56        | 2.15         | 60          | 2.09E-03      | \$160.00 / \$120.00 |
| <a href="#">i0-H03-G</a>  | 42 mm      | 1.90              | 3.98        | 3.94         | 90          | 1.61E-03      | \$200.00 / \$150.00 |
| <a href="#">H03-GP005</a> | 42 mm      | 8.25              | 16.4        | 6.54         | 90          | 0.0016        | \$344.00 / \$344.00 |
| <a href="#">H03-GP014</a> | 42 mm      | 20.5              | 41.1        | 7.05         | 90          | 0.0016        | \$374.00 / \$374.00 |
| <a href="#">j0-H03-I</a>  | 80 mm      | 2.12              | 4.24        | 1.97         | 100         | 5.38E-03      | \$200.00 / \$150.00 |
| <a href="#">i0-H03-H</a>  | 57 mm      | 2.56              | 5.13        | 3.25         | 120         | 3.95E-03      | \$200.00 / \$150.00 |
| <a href="#">i0-H04-H</a>  | 57 mm      | 3.80              | 7.61        | 4.74         | 180         | 6.46E-03      | \$240.00 / \$180.00 |
| <a href="#">j0-H04-I</a>  | 80 mm      | 4.24              | 8.49        | 2.67         | 200         | 0.74          | \$250.00 / \$187.50 |
| <a href="#">j0-H04-I</a>  | 80 mm      | 6.37              | 12.75       | 3.31         | 300         | 1.53E-02      | \$300.00 / \$225.00 |