BLY34MDA Integrated BLDC Motor/Controller

- Constant Velocity Mode Within 5%
- 0.5V to 5V External Voltage Speed Control
- 2-Quadrant Operation
- Hall Sensor Feedback
- Short Circuit Protection
- Maximum Current Limit at 30.0 Amps Peak
- Speed Out
- Run/Stop, Direction, and Freewheel Inputs
- TTL-CMOS Compatible Inputs
- Compact Size
- Screw Type Terminal Block

The BLY34MDA Series is a compact construction that implements a DC Brushless controller and a DC Brushless motor in one streamline package. With the two part combined into one casing, the need to wire the motor has been eliminated. The DC Brushless controller operates off a 24VDC or 48VDC power supply. The high-speed DC Brushless motor can operate at 3000RPM, can generate up to 300 oz-in of continuous torque, and deliver as much as 700W, with the BLY134MDA4 offering. Using hall sensor feedback, the DC Brushless controller operates in a constant velocity mode. The driver is protected against over current (cycle-by-cycle), hall sensor error and under voltage. An external potentiometer (10K) or external voltage (0.5-5VDC) can be used to control the speed. The direction of the motor can be preset by the direction control input. A Stop function can be done by grounding the Run/Stop input.

<table>
<thead>
<tr>
<th>Model #</th>
<th>NEMA Frame Size</th>
<th>Max Speed (RPM)</th>
<th>Rated Torque (oz-in)</th>
<th>Peak Torque (oz-in)</th>
<th>Max Power (W)</th>
<th>Max Torque Constant (oz-in/A)</th>
<th>Rotor Inertia (oz-in-sec²)</th>
<th>L Length (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLY34MDA1-48V-3200</td>
<td>34</td>
<td>3200</td>
<td>49.6</td>
<td>148.7</td>
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<td>3200</td>
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<td>BLY34MDA4-48V-3200</td>
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<td>704.3</td>
<td>17.0</td>
<td>0.033964</td>
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</tr>
</tbody>
</table>

Winding Type: Star, 8 Poles
Max Radial Force: 49.5 lbs. @ 20mm from Flange
Hall Effect Angle: 120 Degree Electrical Angle
Max Axial Force: 13.5lbs - Force
Shaft Run Out: 0.5mm
Insulation Class: Class B
Radial Play: 0.02mm@450g
Dielectric Strength: 500VDC for one minute
End Play: 0.08mm@450g
Insulation Resistance: 100Mohm, 500VDC

*All units are in inches