**Important User Information**

**VXM-1J Jog / Autoreverse Controller**

**User’s Guide**

**CAUTION:**
Controller and AC power supply should be operating in a well-ventilated area. Do not use in a wet, dirty, or explosive environment. In industrial environments, repackaging into a NEMA grade enclosure is required. Do not disconnect motor while running. Keep Motor and Limit cables minimum of 2” apart. Only operate with designated motor. Do not alter cables in any way without first consulting Velmex.

**WARNING:**
TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT ATTEMPT TO REMOVE COVERS ON POWER SUPPLY OR CONTROLLER. THERE ARE NO USER SERVICEABLE PARTS INSIDE. Any servicing should be done by Velmex qualified service personnel.

**Features**
- Simple Variable Speed/Direction Operation
- More Precise than Legacy AC/DC Controls
- 100% Standalone Operation (No Computer Required)
- Up to 6000:1 Speed Ratio
- Autoreverse Teach for Start Point, Reverse Point, and Speed
- Variable or Fixed Speeds each Direction
- Switchless Reversing for Longest Cycle Life & Highest Accuracy
- Automatic Referencing to Limit Switch for Absolute Repeatability
- Switchable Continuous and Momentary Jogging / Reversing
- Low Cost, Reliable Brushless, Stepping Motor Operation
- Trigger Pulse Output at Reversing Points**
- Digitally Controlled Speeds for Precision Scanning
- Can be User reconfigured for different Size Motors**
- Auto-deetects presence of (N/C to run) Limit Switches

**Motor Wiring**

| Pin | Motor | Cable | Bit-Syn (6 wires) | Vexta | Pacific Scientific*
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BC</td>
<td>W</td>
<td>W/ W &amp; W/ R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B2</td>
<td>Gn</td>
<td>Gn</td>
<td>Bu</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>AC</td>
<td>Bk</td>
<td>Bk</td>
<td>Y</td>
<td>W/Bk &amp; W/O</td>
</tr>
<tr>
<td>4</td>
<td>A2</td>
<td>Wr</td>
<td>Wr</td>
<td>Bk</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>A1</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>Gk</td>
</tr>
<tr>
<td>6</td>
<td>B1</td>
<td>Bk</td>
<td>W/Gn</td>
<td>R</td>
<td>Y</td>
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* 8 lead motor with wires combined at AC and BC for 6 lead configuration

**Limit Switch Wiring**

<table>
<thead>
<tr>
<th>Min Switch</th>
<th>Cable</th>
<th>NC</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner</td>
<td>C</td>
<td>1</td>
<td>C</td>
</tr>
<tr>
<td>Motor End*</td>
<td>NC</td>
<td>2</td>
<td>R</td>
</tr>
<tr>
<td>Outer</td>
<td>NC</td>
<td>3</td>
<td>Gk</td>
</tr>
<tr>
<td>(End Plate)</td>
<td>C</td>
<td>4</td>
<td>Bk</td>
</tr>
</tbody>
</table>

Amp 1-480703-0 (w/ 1-480704-0 on Cable)

* Negative direction on VXM controllers

**CAUTION:** The VXM puts 24VDC on the limit switches, do not connect limit inputs to any +5V logic devices

**Warranty**
Stepping Motor Controllers manufactured by Velmex are warranted to be free from defects for a period of two (2) years on all parts. Velmex’s obligation under this warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligence, accidents, or unauthorized repairs, alterations, or cables/connectors that require replacement due to wear. Claims must be authorized, and a return authorization number issued before a product can be returned.

The warranty does not cover items which are not manufactured or constructed by Velmex, Inc. These components are warranted by their respective manufacturer. Under the above warranty, Velmex will, at its option, either repair or replace a nonconforming or defective product.

The above warranty is the only warranty authorized by Velmex. Velmex shall in no event be responsible for any loss of business or profits, downtime or delay, labor, repair, or material costs, injury to person or property or any similar or dissimilar incidental or consequential loss or damage incurred by purchaser, even if Velmex has been advised of the possibility of such losses or damages.

Inasmuch as Velmex does not undertake to evaluate the suitability of any Velmex product for any particular application, the purchaser is expected to understand the operational characteristics of the product, as suggested in documentation supplied by Velmex, and to assess the suitability of Velmex products for this application.

This limited warranty give you specific legal rights which vary from State to State.

Record Controller and Motor information here for future reference:

**Model:** VXM-1J

**Serial #:**

This Controller was Factory set to run the following Motor:

- Vexta PK245
- Vexta PK264
- Vexta PK266
- Vexta PK268
- Vexta PK296

For more information on setting for a motor go to www.velmexcontrols.com

**Contact Information**

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**Go to www.velmexcontrols.com for more information**
Setup
1. Connect the cables to motor and limit switches (if actuator has limit switches.)
2. Connect cable from DC power supply to VXM
3. Plug the DC power supply into an AC outlet.
4. Turn on the VXM by pressing the right side of the rocker switch located on the front panel. Both On-Line and Power LEDs will light for 1 second, the On-Line will go out, then the Power LED will flash 6 times.

Jog + Continuous

Jog - Continuous

Speed Change

Autoreverse (Variable Speed Both Directions)

Autoreverse (Variable Speed Out, Fixed Speed Back)

Autoreverse (Fixed Speed Out, Variable Speed Back)

Autoreverse (Stop at 2nd Point / Wait for Run)

Autoreverse Continuous

Autoreturn from Jogging (Run To Set Point)

NOTE: Pressing Stop ends autoreverse program in progress. Next Run will start from first move not the last. Since the VXM maintains absolute position, all moves will still end on the correct Start and Stop points.

NOTE: The default Start point after power-up is the current position. For highest repeatability it is recommended that Autoreversing Referencing Limit Switch be used.

Specifications

**Go to www.velmexcontrols.com for more information**