The Troubleshooting Guide is pertinent to our Commander SE Drives

Problem: The drive will not run when the command to do so is given

The Commander SE can be operated by activating digital inputs. The keypad or a field buss network can also be used. In terminal mode the digital inputs on the control terminal strip must be taken high to +24VDC on pin 7 or 14. The drive can be configured for negative logic by setting parameter #0.34 to OFF. If negative logic is selected the digital inputs must be taken low to 0vdc on pin 1 or 4. We will use positive logic examples in this document show how the drive will work in a default condition. If #0.05 = PAd the only terminal strip connections needed to run the drive are Pin 7 to 9 for drive enable.

The first step is to read the display and see what state the drive is in. The following read outs should be seen for the corresponding command.

Pin 7 to Pin 9 is open = The drive displays inh (Inhibited)
Pin 7 to Pin 9 is closed = The drive displays rdy (Ready to run)
Pin 7 is connected to Pins 10, 11, or 13 = The drive displays run

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**TERMINAL CONTROL**

As default - in positive logic (connect terminals to +24V to activate),

Parameter 5 set to A1, A2.

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**KEYPAD CONTROL**

Connect terminals 7 & 9

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Parameter #0.05 can be set for PAd or 4 other terminal mode configurations. The digital inputs will be reassigned as you change between different Speed Reference selections. Measure the voltage on the pins you are trying to activate. See if they are changing states between 0vdc to +24VDC. If they are, you can use SE Soft and the CT Comms Cable to monitor the digital inputs. SE Soft is available for free download at: http://www.emersonct.com/download_usa/software_drives.htm

When the digital input is activated the corresponding Terminal Monitor parameter should also change from a 0 to a 1. The parameter designated by the destination parameter will also change to a 1. This is seen in the Drive Sequencer.
The drive sequencer is set up by #0.35 (#6.04) and operates as follows:

<table>
<thead>
<tr>
<th>Parameter 35</th>
<th>Terminal 9</th>
<th>Terminal 10</th>
<th>Terminal 11</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Enable</td>
<td>Run Forward</td>
<td>Run Reverse</td>
<td>Non Latching</td>
</tr>
<tr>
<td>1</td>
<td>Not Stop</td>
<td>Run Forward</td>
<td>Run Reverse</td>
<td>Latching</td>
</tr>
<tr>
<td>2</td>
<td>Enable</td>
<td>Run</td>
<td>Forward/Reverse</td>
<td>Non Latching</td>
</tr>
<tr>
<td>3</td>
<td>Not Stop</td>
<td>Run</td>
<td>Forward/Reverse</td>
<td>Latching</td>
</tr>
</tbody>
</table>

If the digital inputs and the drive sequencer are working properly there could be a problem with the speed reference. The speed reference most commonly is a 0-10VDC signal on pin 2 with pin 1 as common. The speed reference can also be a preset selected by the digital inputs, a reference from a field buss network, or a current signal.

When the speed reference is applied to terminal 2 or 5 the Monitoring Parameters should change from 0% to 100%. This would indicate the analog input is working correctly. The next step is to follow the reference to the destination. The destination parameter should change with the voltage/current change on the analog input. Follow the reference through menu 1, 2, and 3. It should end up in #2.01. If it does not there may be a configuration problem in one of these menus.
If the Digital Inputs, Drive Sequencer, and Speed Reference all check out good then contact the Americas’ Service Center.

For questions call Control Techniques Technical Support-USA at 716-774-1193
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