

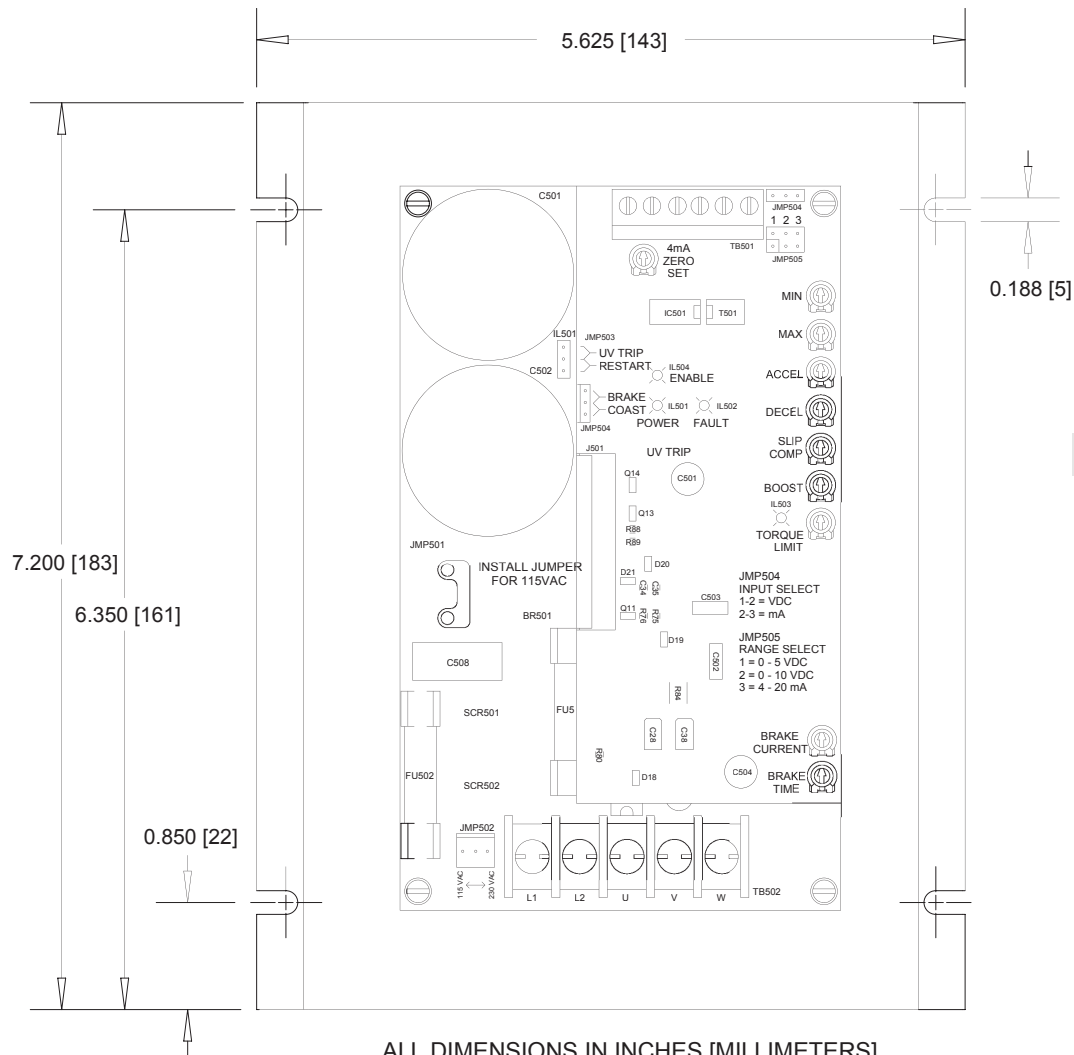


# VFD05-D230-PCM

Variable Frequency Drives  
for 3-phase & single phase AC motors

## QUICK START GUIDE

### DIMENSIONS



### SPECIFICATIONS

1-Phase Input	... ± 115/230 VAC
1 or 3-Phase Output	... 230 VAC
Maximum Horsepower	... 1.5 HP
Maximum Continuous Output Current	... † 5.0 AC
AC Amps In	... .18 / 10 amps
AC Voltage Input Range	... .115/230 VAC ± 10%
	50/60 Hz single phase
Standard Carrier Frequency	... .16 KHz
Adjustable Braking Current	... 0 - 5 ADC
Adjustable Braking Time	... .1 - 10 Sec.
Adjustable Minimum Speed	... 0 - 30 Hz
Output Frequency Range	... 0 - 120 Hz
Adjustable Maximum Output Frequency Range	... .30 - 120 Hz
Acceleration Time Range	... .1 - 12 secs
Deceleration Time Range	... .1 - 12 secs
Analog Input Voltage Range	
(S1 [-] to S2 [+])	... 0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA
Input Impedance, S1 to S2	... ~ 100K ohms
Vibration	... .05G max (20 - 50 Hz)
	0.1G max (> 50 Hz)
Weight	... .12 lbs
Ambient Operating Temperature Range	... .10° - 40° C

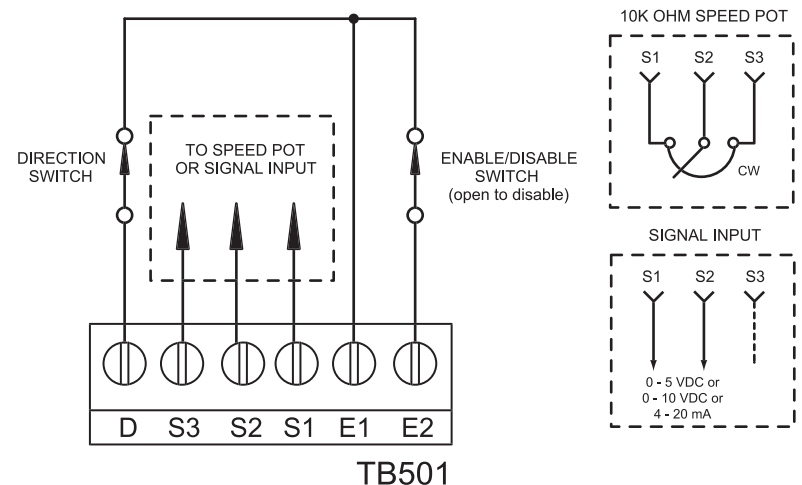
\* Connect only 115 VAC line input to the 115 VAC terminals. Application of 230 VAC line input when set for 115 VAC will result in severe damage to the motor and drive, and possibly explosion and injury.

† Derate current by 2% per degree if the operating temperature is above 40°C. Under no circumstances may the ambient temperature exceed 55°C.

### CONNECTIONS

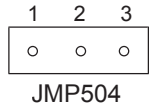
#### STEP #1

Connect the enable/disable switch, direction switch, and speed potentiometer or signal input to TB501 on the TOP board using 20 - 24 AWG wire as shown below.

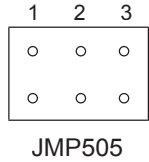


**STEP #2**

Configure jumpers JMP504 and JMP505 on the top board for the appropriate signal input.



JMP504 (on top board)  
Pins 1 & 2 for Voltage Input, or using a speed pot.  
Pins 2 & 3 for Current Input



JMP505 (on top board)  
1 for 0 - 5 VDC Voltage Input, or using a speed pot  
2 for 0 - 10 VDC Voltage Input  
3 for 4 - 20 mA Current Input

**STEP #3**

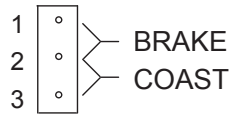
Configure jumpers JMP503 on the bottom board and JMP506 on the top board.

JMP503



JMP503 (on bottom board)  
Pins 1 & 2 to Trip  
Pins 2 & 3 to Restart

TRIP: Drive has a low voltage fault & must be manually re-enabled to restart.  
RESTART: Drive has a low voltage fault & will momentarily stop then auto-restart when input voltage returns to minimum level.



JMP506

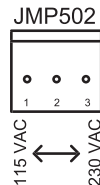
JMP506 (on top board)  
Pins 1 & 2 to Brake  
Pins 2 & 3 to Coast

**STEP #4**

Configure jumpers JMP501 and JMP502 on the bottom board for 115 or 230 VAC Power Input. A jumper must be installed on JMP501 for 115 VAC input. No jumper is necessary on JMP501 for 230 VAC input.



INSTALL JUMPER FOR 115VAC



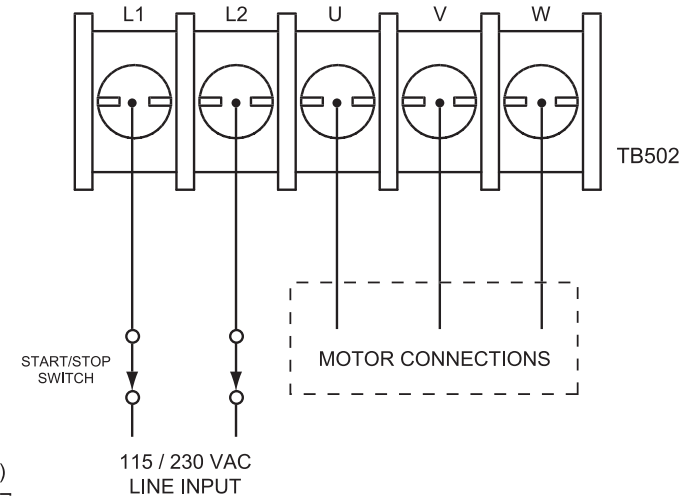
Pins 1 & 2 for 115 VAC  
Pins 2 & 3 for 230 VAC

**STEP #5**

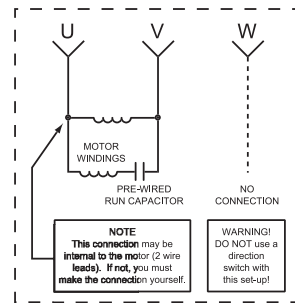
Connect motor leads of a 3-phase motor to U, V, and W (TB502 on BOTTOM board) using 14 - 16 AWG wire as shown in the figure below.

**STEP #6**

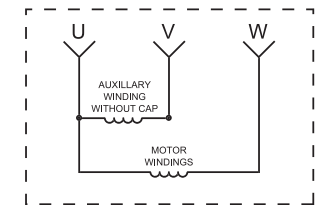
Connect 115 or 230 VAC power input using 12 AWG wire. Include a start/stop switch as shown in the figure below.



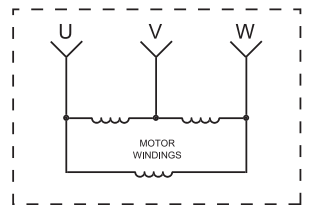
**SINGLE-PHASE OPERATION (motor with pre-wired capacitor)**



**SINGLE-PHASE OPERATION (for use with DIRECTION switch)**



**THREE-PHASE OPERATION**



**MINARIK DRIVES**  
www.minarikdrives.com  
14300 De La Tour Drive, South Beloit, IL 61080;  
Phone: (800) MINARIK (646-2745); Fax: (815) 624-6960  
Document Number: 250-0375, Revision 0; Printed in the U.S.A. - September 2003

Copyright 2003 by Minarik Corporation - All rights reserved. No part of this document may be reproduced or transmitted in any form without written permission from Minarik Corporation. The information and technical data in this document are subject to change without notice. Minarik Corporation and its Divisions make no warranty of any kind with respect to this material, including, but not limited to, the implied warranties of its merchantability and fitness for a given purpose. Minarik Corporation and its Divisions assume no responsibility for any errors that may appear in this document and make no commitment to update or to keep current the information in this document. mvd091903