

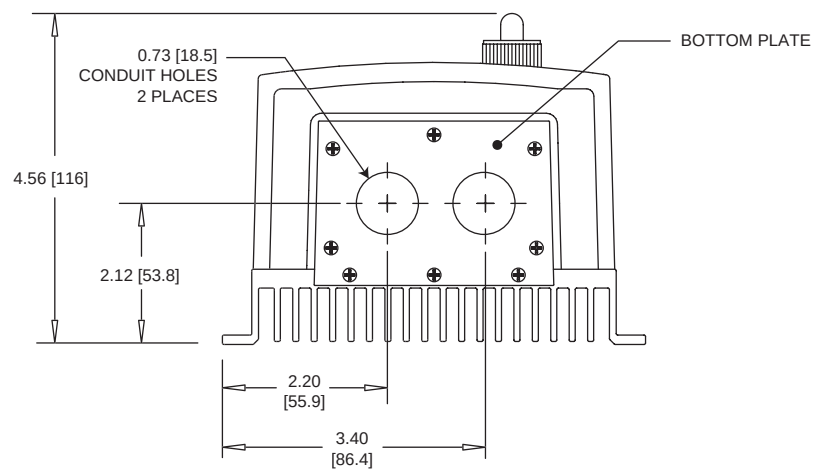
Technical drawing of the Minarik AC Motor Control unit. The unit is rectangular with a control panel on the right side. The control panel includes a power switch, a speed selector knob, and a reversing switch. The unit is labeled "Minarik" and "ADJUSTABLE SPEED REVERSING AC MOTOR CONTROL". Dimensions are provided in inches and millimeters.

Dimensions:

- Overall width: 5.625 [143]
- Overall height: 7.200 [183]
- Control panel height: 6.350 [161]
- Control panel width: 0.850 [22]
- Mounting flange thickness: 0.188 [5]

Controls and Labels:

- POWER** (switch)
- FWD** (Forward)
- OFF** (Stop)
- REV** (Reverse)
- SPEED** (selector knob with positions 0, 1, 2, 3, 4, 5, 6, 7, 8, 9)
- Minarik** (brand name)
- ADJUSTABLE SPEED REVERSING AC MOTOR CONTROL** (unit description)

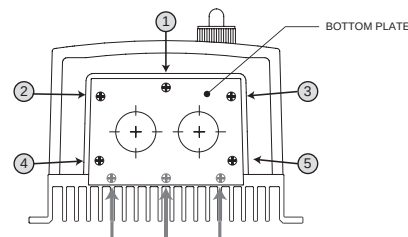
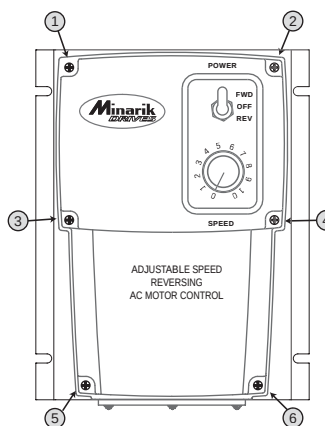


ALL DIMENSIONS IN INCHES [MILLIMETERS]

SPECIFICATIONS

1-Phase Input	115/230 VAC
1 or 3 -Phase Output	.230 VAC
Maximum Horsepower	.1 HP
Maximum Continuous Output Current	4.0 AC
AC Amps In	.15 / 10 amps
AC Voltage Input Range	115/230 VAC $\pm$ 10%, 50/60 Hz single phase
Standard Carrier Frequency	.16 KHz
Adjustable Braking Current	.0 - 4 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

* Jumper settings **MUST** match input line voltage. Application of 230 VAC line input when jumpers are set for 115 VAC will result in severe damage to the drive.



DO NOT REMOVE
THE THREE (3) SCREWS SECURING
THE BOTTOM PLATE TO THE HEATSINK

REMOVING THE CASE COVER

1. Remove the six (6) phillips screws on the front case.

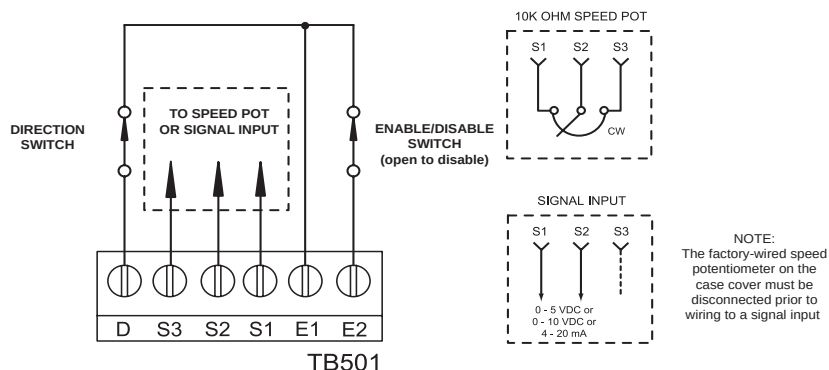
NOTE: The two shorter screws (#6 - 32 x 2 1/2) on the front case are used at hole locations 5 & 6.

2. Remove the five (5) phillips screws on the bottom plate.

NOTE: DO NOT REMOVE the three (3) screws securing the bottom plate to the heatsink.

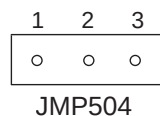
C O N N E C T I O N S

STEP #1-skip this step if provided FWD/OFF/REV and speed potentiometer will be used. Otherwise disconnect factory-wired connections from the FWD/OFF/REV switch and speed potentiometer. 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.

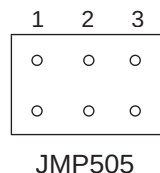


STEP #2

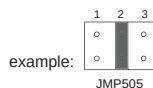
Configure jumpers JMP504 and JMP505 on the top board for the appropriate signal input.



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

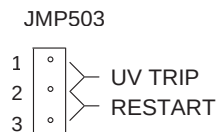


JMP505 (on top board)
Pins in Column 1 for 0 - 5 VDC Voltage Input, or using a speed pot
Pins in Column 2 for 0 - 10 VDC Voltage Input
Pins in Column 3 for 4 - 20 mA Current Input



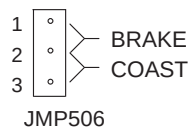
STEP #3

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



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

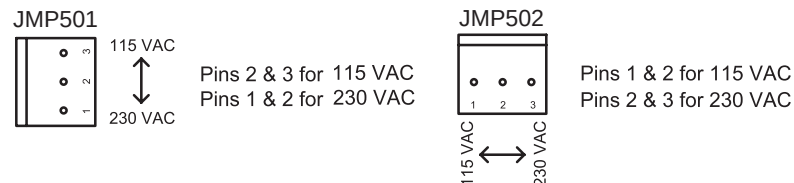
TRIP: Drive has a low voltage fault & must be manually re-enabled to restart.
RESTART: Drive has a low voltage fault & will momentarily stop then auto-restart when input voltage returns to minimum level.



JMP506 (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.



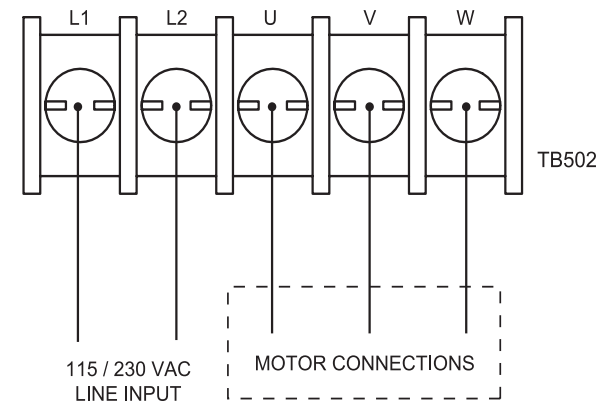
STEP #5

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.

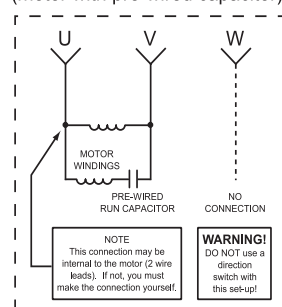
STEP #6

Connect 115 or 230 VAC power input using 12 AWG wire.

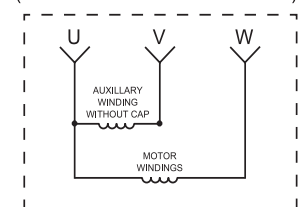
NOTE: Minarik strongly recommends installing an emergency stop switch on both the L1 and L2 inputs.



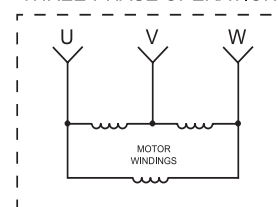
SINGLE-PHASE OPERATION
(motor with pre-wired capacitor)



SINGLE-PHASE OPERATION
(for use with DIRECTION switch)



THREE-PHASE OPERATION



MINARIK DRIVES

www.minarikdrives.com

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