

## Model XP02-115AC-Q Instruction Sheet

### Specifications

Line Voltage	115 VAC, $\pm 10\%$ , 1 $\phi$ , 50/60 Hz
Horsepower Range	1/20–1/8 hp
Armature Voltage Range	0–130 VDC
Maximum Armature Current (continuous)	2 ADC
Ambient Operating Temperature Range	10°C–55°C

### Safety Warnings

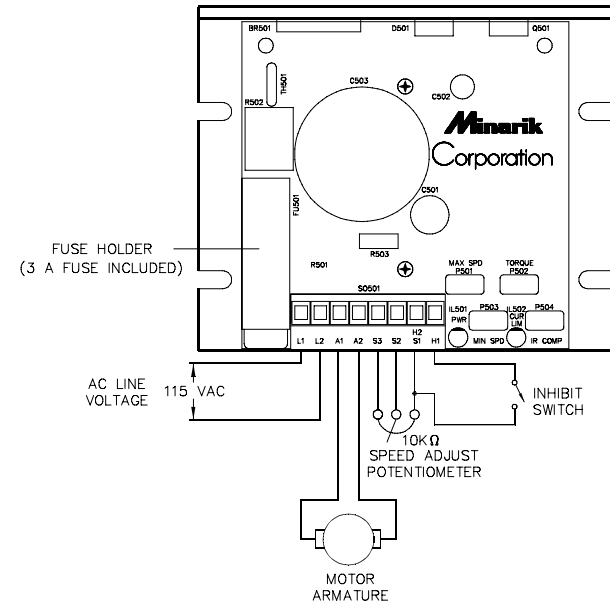
**INSTALLATION...**This equipment should be installed, adjusted, and serviced by qualified electrical maintenance personnel familiar with the construction and operation of the equipment and the hazards involved. Follow the National Electrical Code, sound electrical and safety codes, and the applicable provisions of the Occupational Safety and Health Act (OSHA) when installing this apparatus.

**USE...**The chance of electric shock, fire, or explosion can be reduced by proper use of grounding, overcurrent protection, thermal protection, and appropriate enclosure and by following good maintenance procedure.

**WARNING!...**This control is not isolated from earth ground. Circuits are at least a potential of 115 volts above ground, unless an isolation transformer is in the circuit. Hazardous voltages exist on the printed circuit board and the primary circuit components. Direct contact with these elements could cause serious injury or fatality. Use a non-metallic screwdriver when adjusting the trimpots.

**IMPORTANT...**Controls are not fail safe. If a switching power device shorts, motor will operate at full speed unless power to control is interrupted, by blown fuse or other appropriate response.

### Connections



### Calibration

Each drive is factory calibrated to its maximum horsepower rating. Readjust the calibration trimpot settings to accommodate lower horsepower motors.

All adjustments increase with CW rotation, and decrease with CCW rotation. Use a non-metallic screwdriver for calibration. Each trimpot is identified on the printed circuit board.

**MIN SPD** The MIN SPD setting determines the motor speed when the speed adjust potentiometer is turned full CCW. It is factory set to zero speed.

To calibrate, turn the speed adjust potentiometer full CCW. Adjust the MIN SPD trimpot until the motor has stopped, or is running at the desired minimum speed.

**MAX SPD** The MAX SPD setting determines the motor speed when the speed adjust potentiometer is turned full CW. It is factory set for maximum rated speed.

To calibrate, set the MAX SPD trimpot full CCW. Turn the speed adjust potentiometer full CW. Adjust the MAX SPD trimpot until the desired maximum motor speed is reached.

Note: Check the MIN SPD and MAX SPD adjustments after recalibrating to verify that the motor runs at the desired minimum and maximum speed.

**IR COMP** The IR COMP setting determines the degree to which motor speed is held constant as the motor load changes. It is factory set for optimum motor regulation.

If the motor does not maintain set speed as the load changes, gradually rotate the IR COMP trimpot CW. If the motor oscillates (overcompensation), the IR COMP trimpot may be set too high (CW). Turn the IR COMP trimpot CCW to stabilize the control.

**TORQUE** The TORQUE setting determines the maximum armature current output of the drive. It is factory set at 120% of rated motor current. Recalibrate TORQUE using the following procedure:

1. With the power disconnected from the control, connect a DC ammeter (0–15 A minimum scale) in series with the armature.
2. Set the TORQUE trimpot to minimum (full CCW).
3. Connect power to the drive. The motor should remain stopped.
4. Set the speed adjust potentiometer to maximum (full CW).
5. Lock the motor armature. Be sure that the motor is firmly mounted.
6. Adjust the TORQUE trimpot CW slowly until the armature current is 120% of motor rated armature current.
7. Set the speed adjust potentiometer to minimum and remove the stall from the motor.

**WARNING!** Although the TORQUE can be set to exceed the motor's maximum armature current rating, we recommend you do not run the motor continuously beyond that rating. Continuous operation beyond the maximum armature current rating may cause thermal degradation of the motor and drive.

## Limited Warranty

**A. Warranty** - Minarik Corporation (referred to as "the Corporation") warrants that this product will be free from defects in workmanship and material for five (5) years from date of shipment thereof. Within this warranty period, the Corporation will repair or replace such products that are: (1) returned to Minarik Corporation, 901 East Thompson Avenue, Glendale, CA 91201-2011 USA; and, (2) determined by the Corporation to be defective.

This warranty shall not apply to any product that has been subject to misuse, negligence, or accident; or misapplied; or repaired by unauthorized persons; or improperly installed. The Corporation is not responsible for removal, installation, or any other incidental expenses incurred in shipping the product to and from the repair point.

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