North America Phase Converters & Electrical Supply

OPERATION AND INSTALLATION MANUAL

STATIC PHASE CONVERTERS

(Models SPC & HL)

240 VOLTS

WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Introduction and Installation Notes

HIGH VOLTAGE – Risk of Electrical Shock. This equipment is connected to line voltage that can create a potentially hazardous situation.

- Always make certain power is off before servicing this equipment.
- Do not connect control circuits to T3.
- Do not connect a ground or neutral to T3.
- Make sure static phase converter and equipment are properly grounded.
- Wire recommendation is based on the use of copper wire. If using aluminum wire, use the copper equivalent for current amount.
- For indoor use.
- Immediately turn phase converter off if amber light stays on more than 3 – 5 seconds.
- Humming and clicking noise is normal when power is applied to converter.
- Installation of this equipment must comply with all national, state and local electrical codes.
- Installation must be performed by qualified licensed electrician who should have experience working with this line voltage.

Wire and Breaker/Fuse Sizing

Refer to the tables below.

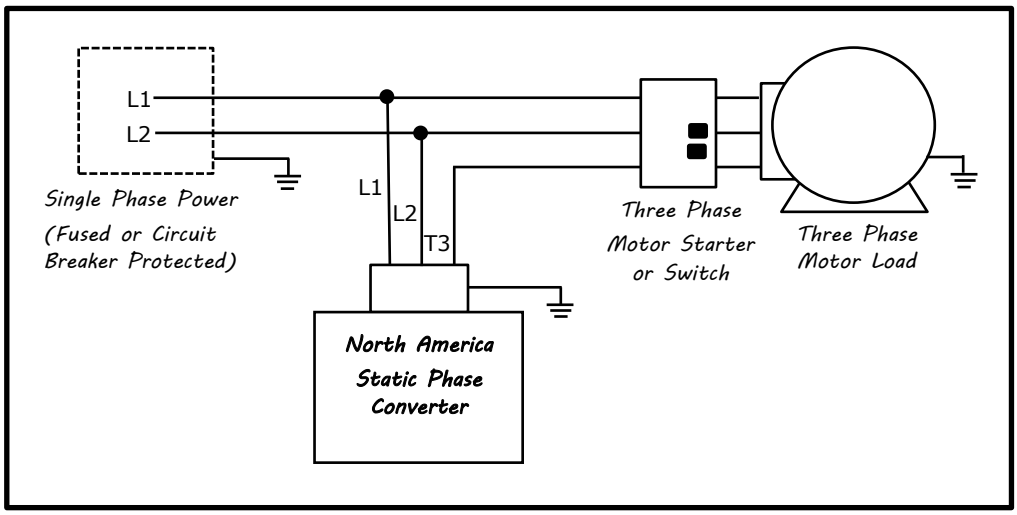
Model	HP Range	Breaker Size	Wire Size
SPC-3/4	1/3 - 3/4	15	14
SPC-1.5	3/4 - 1.5	15	14
SPC-3	1 - 3	20	12
SPC-5	3 - 5	30	10
SPC-8	4 - 8	40	8
SPC-10	7.5-10	50	8

Model	High Low HP Units	Breaker Size	Wire Size
HL-1.5	1/3 - 1.5	15	14
HL-5	1 - 5	30	10
HL-8	3 - 8	40	8
HL-10	4 - 10	50	8

Wire recommendations are minimums. Voltage drop is dependent on wire length and gauge. Increase wire one (1) additional size for every fifty (50) feet of wire run.

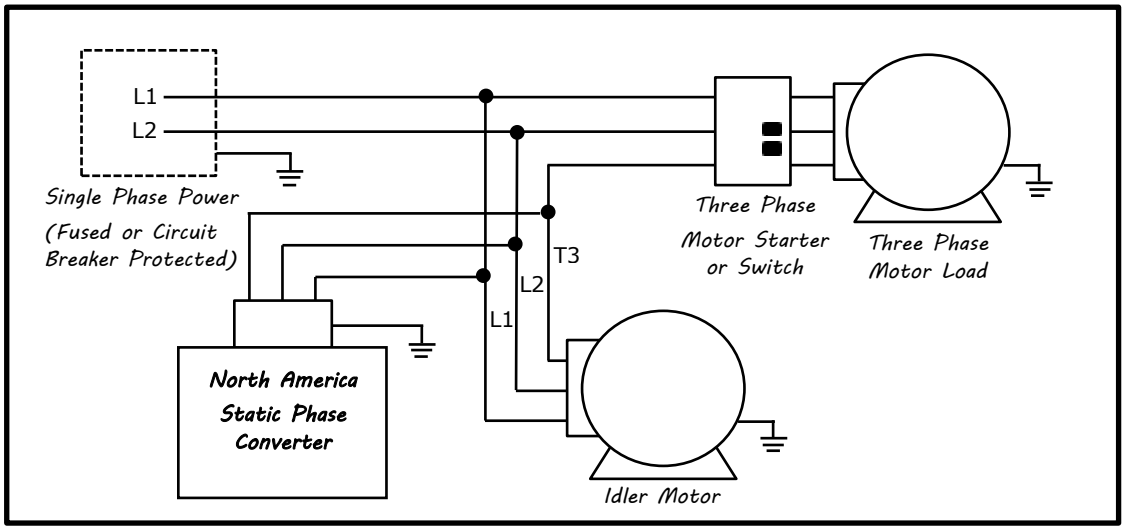
Wiring and Connection

Wiring Method #1



- Single phase power connects through L1 and L2. T3 is the generated phase.
- Equipment with magnetic controls must operate from L1 and L2, the single phase lines. To identify these lines, connect the two (2) single phase lines to any input terminals/lines on the machine and press the start button. When the correct combination is found the magnets work the motor will buzz. Try switching leads until the correct wire combination is found. Then connect T3 to the remaining terminal/line.

Wire Method #2 (Idler Motor Method)



Initial Start Up and Checking Voltage

- Turn power on to the static converter. You may hear a clicking noise from the contactor pulling together. This is normal.

- Check Voltage

Voltage – Load "Off"
L1 to L2 – 208 – 250 Volts L1 to L3 – 208 – 250 Volts (Same as L1 to L2) L2 to L3 – 0 Volts

- Start load motor. **Watch amber indicator light.** If the light stays on for more than 3-5 seconds while starting motor, shut motor off immediately. This indicator light only illuminates during motor start up.

- If motor runs backwards, switch any two (2) motor leads.

- Always start machine out of gear or in lowest possible speed/gear.

- Always start the largest motor when running multiple motors.

- If motor does not start:
  -Check (L1-L2) input for correct voltage.
  -Static Converter may be too small or too large.
  -Make sure input wire is correct size.
  -Check load motor for correct wiring.

- If you hear a humming noise coming from the static converter, this is normal.

- Do not start motor more than six (6) times an hour.