

Lab ELECTRICAL PROCEDURE
UNOLS East Coast Van Pool
Cold Lab #2 (2409-02)
3-Phase – Variable Voltage

Connection to “Shore” Power or 208V “Ship” Power:

1. Plug female end of power cable into lab outlet marked “120/208V Shore” power.
2. Ensure main breaker and individual breakers in distribution panel are in “off” position.
3. Set the transfer switch in the lab to the “Shore” position.
4. Supply suitable male plug on end of lab power cable and plug into supply circuit. Verify incoming voltage as 120/208V with hand meter.
5. Energize circuit.
6. Energize main and individual breakers in distribution panel. Verify correct operation of lights, fume hood blower, main chiller unit and control panel, and receptacles.
7. **CHECK PHASE ROTATION ON MAIN CONDENSING UNIT.** The main chiller unit is the only 3-phase component in the lab and is fitted with phase protection monitor. After energizing chiller, view the phase monitor through the viewing window on the main condensing unit (outside in recess). If “Front Fault” LED is lit, and the condenser does not come on, the phase is incorrect. Turn off the appropriate breakers and switch **ANY TWO LEADS AT THE INCOMING POWER PANEL. DO NOT SWITCH LEADS INSIDE THE LAB ELECTRICAL PANEL OR THE CONDENSER.**
8. Re-energize circuit and check for proper operation.
9. Set the emergency light switch in the “Normal” mode and verify operation.

Connection to 240 or 480 “Ship” Power:

1. Plug female end of lab power cable into outlet marked “Ship Power”.
2. ENSURE CIRCUIT IS NOT ENERGIZED and install the appropriate fuses in the fused disconnect:
 - 480 V = 30 A (requires “Buss” No. 663 adapters),
 - 240 V = 60 A
3. Set the voltage selector switch in the lab to the appropriate incoming voltage.
4. Supply suitable male plug on end of lab power cable and plug into supply circuit.
5. Energize circuit. Verify incoming voltage matches selector switch on the meter provide in the panel.
6. Ensure main breaker and individual breakers in distribution panel are in “off” position.
7. Close the disconnect cover and switch “ON”.
8. Set the transfer switch in the lab to the “Ship” position.
9. Energize main and individual breakers in distribution panel. Verify correct operation of lights, fume hood blower, receptacles, and main chiller unit and control panel.
10. **CHECK PHASE ROTATION ON MAIN CONDENSING UNIT.** The main chiller unit is the only 3-phase component in the lab and is fitted with phase protection monitor. After connecting to power, view the phase monitor through

the viewing window on the main condensing unit (outside at front of recess). If “Front Fault” LED is lit, and the condenser does not come on, the phase is incorrect. Turn off the appropriate breakers and switch **ANY TWO LEADS AT THE INCOMING POWER PANEL. DO NOT SWITCH LEADS INSIDE THE LAB PANEL OR THE CONDENSER.**

11. Re-energize circuit and check for proper operation.
12. Set Emergency Light switch in the “Normal” mode and verify operation.

Disconnecting:

1. Put the emergency light switch in the “Off” position.
2. Turn off all circuit breakers in the distribution panel including the main breaker.
3. Turn off the power source.
4. Unplug and remove male plug from cable as required. Place the cover over the lab-mounted receptacle.