# Quick Start Guide EcoNet® Enabled Unit Coolers

## Before System Installation

1. Verify correct voltage from main power supply to evaporator unit. (115V/230V)
2. Connect main power to the evaporator unit at the L1/L2 terminals on the evaporator terminal board, as shown in the wiring diagram. **CAUTION: RISK OF ELECTRIC SHOCK.** Do not come into contact with the terminal board above the controller while the unit is operating. If maintenance or troubleshooting is needed, disconnect power to the unit and wait for the lights to turn off before touching terminal board.

CONDENSING UNIT

1. If a defrost timer is installed on the condensing unit, make sure it is disconnected/disabled (all switches on time clock should be in the OFF position). All defrost functions are performed by the controller board.
2. Please refer to factory label at condensing unit for correct voltage and amp draw requirements.

## DURING SYSTEM INSTALLATION

1. Refrigerant Line Brazing

   **A.** Cover EXV with wet rag to protect from excess heat from torch

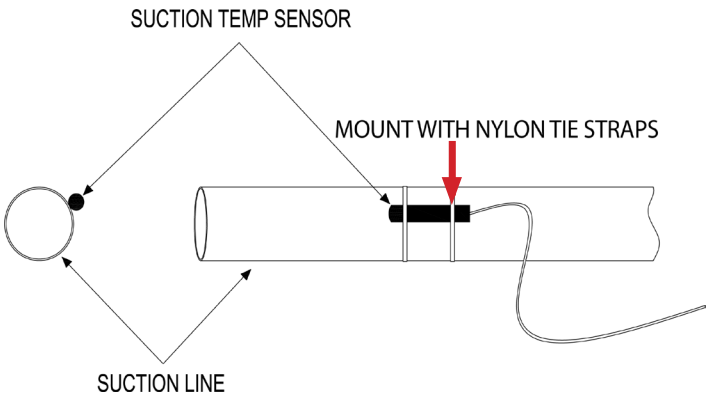
   **B.** Suction Temp Sensor must be removed from the suction line prior to brazing. When brazing is done and suction line has cooled down, secure the sensor to the line.

2. Purging lines (pulling vacuum), two options:

   **A.** To purge lines on system with EXV closed, make sure that controller is off, and pull vacuum from both suction and discharge ports at the condensing unit.

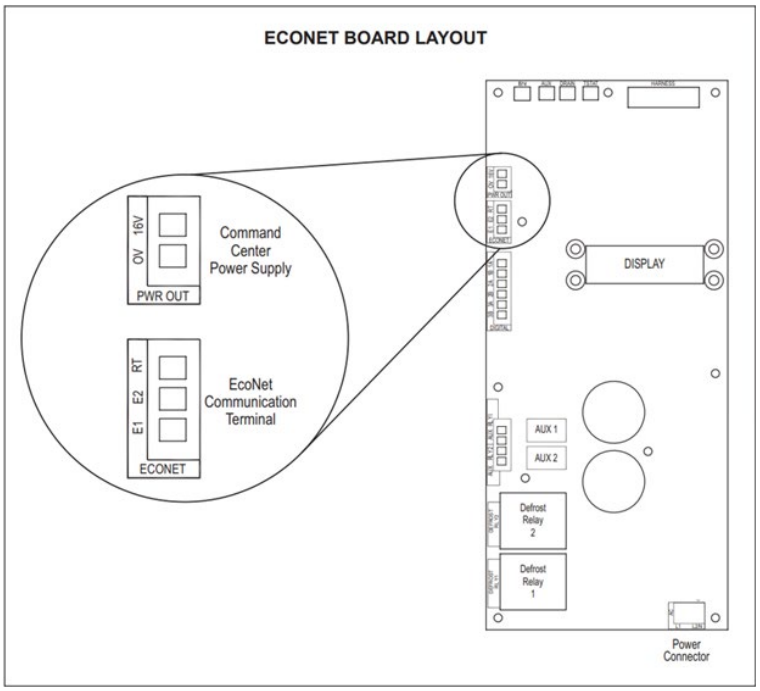
   **B.** OR, to purge lines on system with EXV open, power up the controller and wait a couple of minutes for the controller to command the valve to open. Leave controller powered on while system evacuation is being done. **CAUTION: if using this method, absolutely and without fail, you MUST make sure your condensing unit power is OFF. Serious compressor damage may result if the condensing unit has power during this process.**

3. While charging the system with refrigerant, ensure that the EXV is open by powering up the controller and waiting 5 minutes for the controller to command the EXV to open.
4. Please refer to factory label on evaporator and condensing unit for MCA/MOPD ratings. If powering up evaporator on same circuit as condensing unit, please refer to evaporator wiring diagram on cover panel for compressor lockout terminal wiring (if available).




## SUCTION TEMPERATURE THERMISTOR INSTALLATION

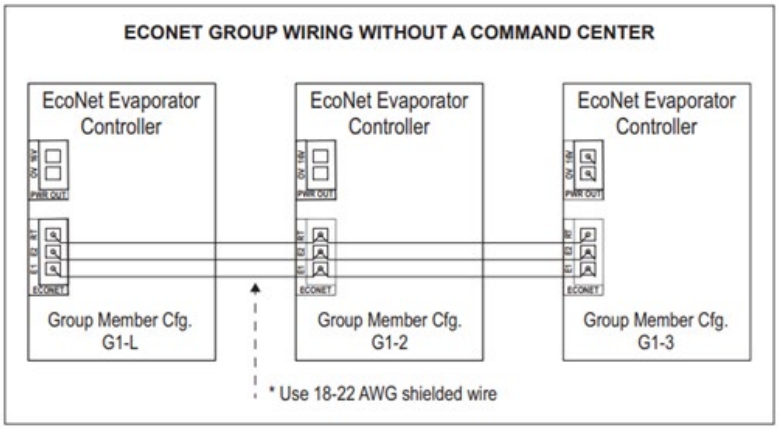
Suction Temp Sensor must be removed from the suction line prior to brazing. The sensor must be reinstalled on the suction line (10 or 2 o'clock position) after brazing is completed and the tubing has been allowed to cool down. Use nylon tie straps to secure the Suction Temp thermistor as shown above. After suction temp sensor is installed, suction line should be insulated and the sensor should be covered with the insulation.




## WIRING AND CONFIGURING A GROUP

1. At each controller display, press SEL button until the word Settings appears on the screen. Use the UP/DOWN/SEL/BACK buttons on the display to navigate to Settings→Group Member Cfg. and set the address for each controller (G1-L for Group 1 Leader, G1-2 for Group 1 Follower #2, G1-3 for Group 1 Follower #3, etc.). Each controller must have a unique address configured. Maximum of 6 controllers in one group.
2. Use 18-22 AWG shielded wire to connect the ECONET communication terminal (E1, E2, RT) at each controller in a daisy-chain pattern. The addressed controllers can be wired in any order.

3. At the Leader controller, navigate to Settings on the display to configure Setpoint, and then navigate to Settings→Equipment→Basic to select Refrigerant Type, and Cooler/Freezer settings. The Leader will then broadcast these settings to any follower that is addressed and connected to the group. Please refer to Installation Manual for additional settings that can be configured.




## CONFIGURING CONTROLLERS FOR LEAD/LAG OPERATION

To configure two controllers to work under Lead/Lag operation:

1. At the designated Partner controller, set the Instance number address.
2. Connect 18-22 AWG shielded wire between the two controllers at the EcoNet communication port.
3. At the designated Manager controller:

   a. Set the Instance number address; it must be different number from the Partner's.

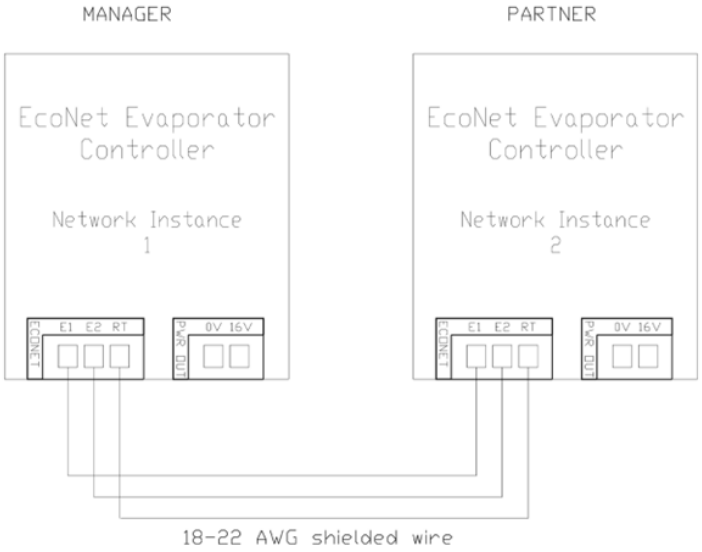
   b. Set Lead/Lag Select to "Manager".

   c. Select Partner Instance number (same number configured on step #1; this is the address that the Manager will communicate with).

   d. Set the Compressor Run Limit Hours to the desired switching time interval.

   e. Set the desired temperature Setpoint (Manager will sync Partner to the same Setpoint)

   f. Set the desired Compressor Run Time Alert (Manager will sync Partner to the same run time alert setting)



**TO SET UP LEAD/LAG OPERATION BETWEEN TWO GROUPS:**

1. Set up "Group-Member Cfg." address for each group (i.e. Group 1 Leader and all its Followers, and Group 2 Leader and all its followers).
2. Connect communication wire in a daisy-chain pattern between all controllers from both groups. They can be wired in any order.
3. On the Group Leader controller that will be the Manager:

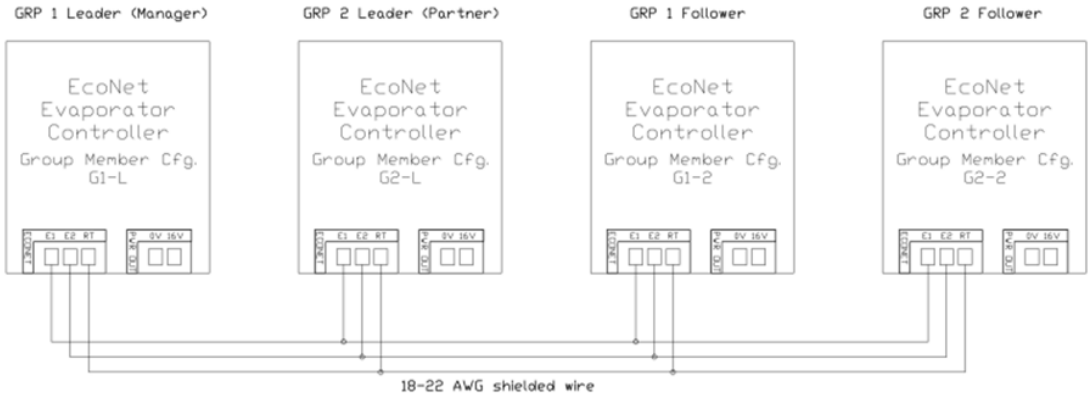
   a. Configure Lead/Lag Select to "Manager".

   b. Configure Partner Instance to G1, G2, G3, or G4 (the group whose leader is going to be the Partner; must be different than the Manager Group).

   c. Configure the Compressor Run Limit Hours.

   d. Set the desired Setpoint (Manager Group Leader will sync this setting to the Partner Group Leader).

   e. Set the desired Compressor Run Time Alert (Manager Group Leader will sync this setting to the Partner Group Leader).




**REPLACING LEGACY ECONET CONTROLLER WITH NEW ECONET CONTROLLER**

If retrofitting new EcoNet controller on existing Unit Cooler, configure the following settings to match the existing system:

**1. Under Basic Settings**

a. Cooler/Freezer

b. Refrigerant

c. Set Evap Coil Type to "Dual" if using Center Mount/Low Velocity evaporator

d. Set Fan Control to "Relays"

e. Set EXV Stepper Type to "2500 Bi-Polar" for Sporlan SER valve

**2. Under Defrost Settings**

a. Set Defrost Type

b. Set Defrost Max Time

c. Set Runtime for Timed or Adaptive defrost

d. Set desired Defrost Termination Temp

e. Set desired Fan Delay Temp

f. Set Def. Relay 1 Control to "No Pulse Relay 1"

g. Set desired Defrost Pump Down Delay

h. Set Defrost Drain Time (if Freezer)

**3. Under Aux Relay Control**

a. Set Aux Relay Config to "Fan Control" for Unit Coolers or "Comp-Fan Control" for Packaged Refrigeration Units

b. Set Cut-Out Setpoint, Cut-In Offset for Packaged Refrigeration Units

**4. Under Digital Ins Cfg.**

a. Set Door Sw. Config and Door Sw. Time if using a door switch

b. Set Leak Sw. Config to "N.O." if using a leak detector (A2L evaporators only)

**5. Under Settings**

a. Setpoint

b. Group-Member Cfg.

c. Network Instance

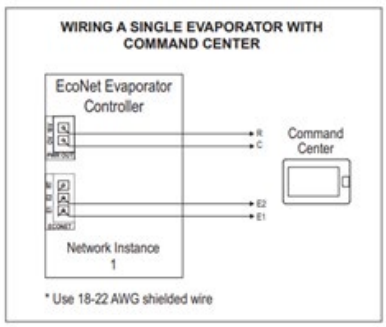
## WIRING A COMMAND CENTER DISPLAY (IF SO EQUIPPED)

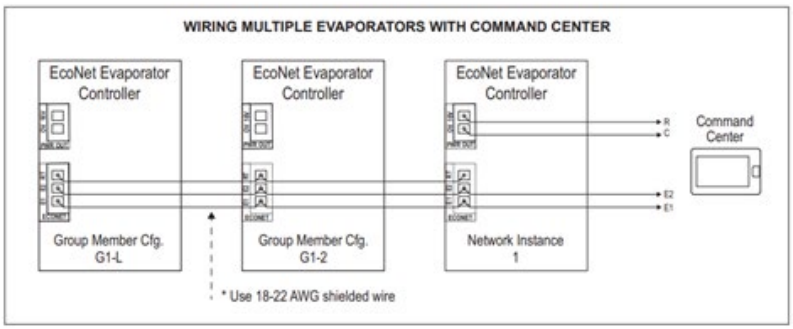
1. Connecting standalone controllers to the Command Center. At each controller display, press SEL button until the word Settings appears on the screen. Use the UP/DOWN/SEL/BACK buttons on the display to navigate to Settings→Network Instance and set the address for each controller (1 to 32). Each controller must have a unique address configured.

2. Connecting groups to the Command Center. At each controller display, press SEL button until the word Settings appears on the screen. Use the UP/DOWN/SEL/BACK buttons on the display to navigate to Settings→Group Member Cfg. and set the address for each controller that will be part of a group (G1-L for Group 1 Leader, G1-2 for Group 1 Follower #2, G2-L for Group 2 Leader, G2-2 for Group 2 Follower #2, etc.). Each controller must have a unique address configured.

3. Use 18-22 AWG shielded wire to connect the EcoNet communication terminal (E1, E2, RT) at each controller in a daisy-chain pattern. The addressed controllers can be wired in any order.

4. Maximum of 6 controllers in one group: maximum 4 groups per Command Center. A Maximum of 30 controllers can be connected to one Command Center. Groups and standalone controllers can be combined in the same daisy chain communication bus, and can be wired in any order. Command Center must be wired to either end of the daisy chain. Maximum wire run from Command Center to last controller cannot exceed 1,000 feet. If powering the Command Center from the controller's 16V power supply, make sure wiring from 16V power supply to Command Center does not exceed 150 feet. Please refer to the Installation Manual for additional details.



## After System Installation

Controller Navigation

In order to navigate through the controller display, use the UP/DOWN/SEL/BACK buttons on the controller board. To change a parameter, navigate to it using the UP/DOWN buttons, press SEL until the value is flashing intermittently, use the UP/DOWN buttons to cycle through the selections, then press SEL again to confirm the new selection.

Controller Configuration

1. Set the controller as Cooler/Freezer
2. Select Refrigerant type
3. Set Coil Type to Single or Dual (Center Mount models only)
4. Select space temp Setpoint

**After following the above directions the EcoNet Enabled Unit Cooler is ready for operation. If you have further questions or require a full Installation & Operations guide, please visit www.htpg.com or use the QR code below.**

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Open your smartphone camera app and point it at the QR Code to open the EcoNet IOM