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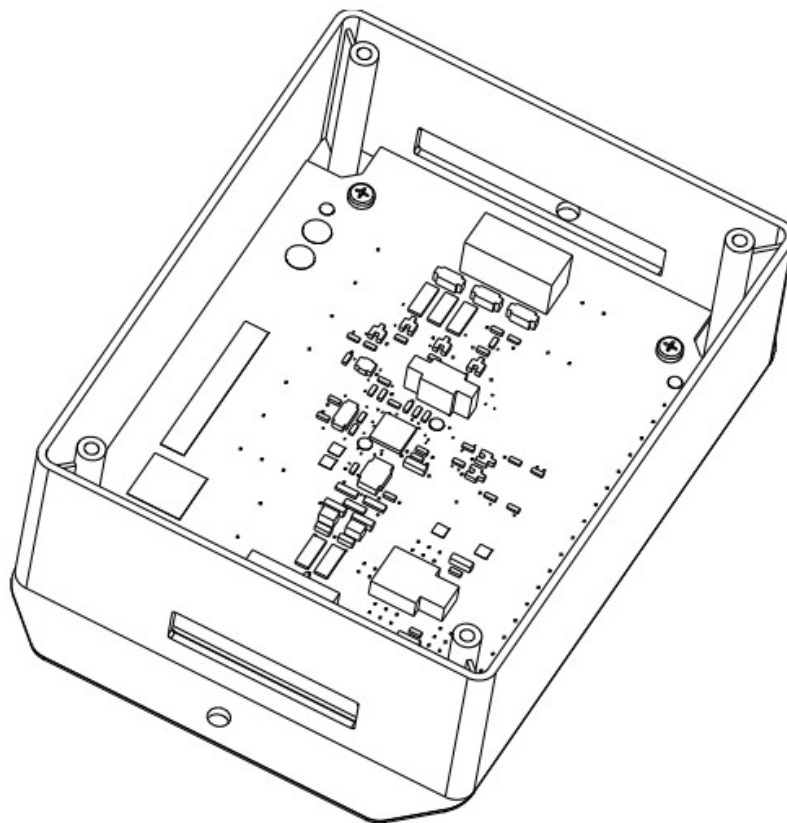

Carrier SYSTXXXTRB01 Network Interface Module Instruction Manual

**SYSTXXXTRB01
Translator Board
Installation and Start-up
Instructions**

Contents

SYSTXXXTRB01 Network Interface Module

Fig. 1 – Module
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NOTE: Read the entire instruction manual before starting the installation.

Safety Considerations

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury or property damage. Consult a qualified installer, service agency or your distributor or branch for information or assistance. The qualified installer or ag ncy must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing. Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings and cautions included in literature and attached to the unit. Consult local building codes and the urrent edition of the National Electrical Code (NEC) NFPA 70. In Canada, refer to the current editions of the Canadian Electrical Code CSA C22.1.

Recognize safety information. When you see this symbol ⚠ on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety–alert symbol.
DANGER identifies the most serious hazards, which will result in severe personal injury or death.
WARNING signifies hazards, which could result in personal injury or death.
CAUTION is used to identify unsafe practices, which may result in minor personal injury or product and property damage.
NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

Introduction

This Translator Board (TRB) acts as a bridge connection between the Network Interface Module or Zone Panel Control and the 12 Volt terminal block to the new ERV & HRV. The TRB is used to interface the following devices to the Network Interface Module (NIM—P/N STSTX[BB,CC]NIM01) or the Zone Panel Control (P/N SYST[BB,CC]4Z01) BGRY terminal connections so they can be controlled by the Communicating Control System.

The TRB will transfer the signal from the BGRY terminals that are on the NIM or Zone Panel Control to the 12 Volt terminal block on the on new ventilator which has the 12V, D-, D+, GND terminals. The following devices do not have communication ability and the NIM is required to control:

- Energy Recovery Ventilator / Heat Recovery Ventilator (ERV/HRV) (when zoning is not applied). See Table 1 for ERV/HRV models that require the TRB and the NIM or Zone Panel Control.
- A non-communicating single-speed heat pump with furnace (dual fuel application only).
- A non-communicating two-speed outdoor unit.

Installation

Check Equipment and Job Site Inspect Equipment

File claim with shipping company, prior to installation, if shipment is damaged or incomplete.

Component Location and Wiring Considerations

⚠ **WARNING**

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing, turn off all power to unit. There may be more than one power disconnect.

NOTE: All wiring must comply with national, local, and state codes.

Locating the Translator Board with the NIM or Zone Panel Control

Select a location near the furnace or fan coil where wiring from equipment can come together easily.

NOTE: Do not mount the Translator Board and NIM in the outdoor unit. The Translator Board and NIM are approved for indoor use only and should never be installed with any of its components exposed to the elements. The Translator Board and NIM may be installed in any area where temperature remains between 32°F and 158°F, and there is no condensation. Remember that wiring access is likely the most important consideration.

SYSTXXXTRB01: Installation and Start-up Instructions

Table 1 – NIM and TRB Requirements for Newest ERV/HRV

Infinity® System Control / Evolution® ConnexTM ' Control	ERV Product	HRV Product	Network Interface Module SYSTXCCNIM01	Translator Board SYSTXXXTRB01
SYSTXCCITC01-B SYSTXCCITC01-C SYSTXCCWIC01-B SYSTXCCICF01-B SYSTXCCWIF01-B SYSTXBBECC01-B SYSTXBBECC01-C SYSTXBBWEC01-B SYSTXBBECF01-B SYSTXBBWEF01-B	ERVXXSVA1130	HRVXXSVA1130	Required	Required
	ERVXXSHA1130	HRVXXSHA1130	Required	Required
	ERVXXSVB1145	HRVXXSVA1160	Required	Required
	ERVXXSHB1145	HRVXXSHA1160	Required	Required
	ERVXXSVA1150	HRVXXSVB1160	Required	Required
	ERVXXSHA1150	HRVXXSHB1160	Required	Required
	ERVCRLHB1200	HRVCRLHB1250	Required	Not Required

Infinity® Zone Panel / Evolution® Zone Panel	ERV Product	HRV Product	Network Interface Module SYSTXCCNIM01	Translator Board SYSTXXXTRB01
SYSTXCC4ZCO1 SYSTXBB4ZCO1	ERVXXSVA1130	HRVXXSVA1130	Not Required	Required
	ERVXXSHA1130	HRVXXSHA1130	Not Required	Required
	ERVXXSVB1145	HRVXXSVA1160	Not Required	Required
	ERVXXSHB1145	HRVXXSHA1160	Not Required	Required
	ERVXXSVA1150	HRVXXSVB1160	Not Required	Required
	ERVXXSHA1150	HRVXXSHB1160	Not Required	Required
	ERVCRLHB1200	HRVCRLHB1250	Not Required	Not Required

⚠ **CAUTION**

ELECTRICAL OPERATION HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

To prevent possible damage to the CRM do not mount on plenum ductwork, or flush against surface.

Wiring Considerations

Ordinary thermostat wire is ideal when wiring the Control System (shielded cable is not necessary). Use 18 – 22 AWG or larger for typical installations. Lengths over 100 ft. should use 18 AWG or larger wire.

Cut off or fold back and tape any unneeded conductors. Plan the routing of wiring early to avoid possible problems later.

NOTE: BGRY terminal connections require a four-wire connection; however, it is good practice to run thermostat cable having more than four wires in the event of a damaged or broken wire during installation. The following color-code is recommended for each BGRY terminal connection:

- B—Blue
- G—Green
- R—Red
- Y—Yellow

Use any color wiring for the following ERV/HRV terminal connection below:

12V, D–, D+, GND

It is not mandatory that the above color code be used, but each connector in the system MUST be wired consistently.

NOTE: Improper wiring of the BGRY and 12V, D–, D+, GND connectors will cause the system to operate improperly. Check to make sure all wiring is correct before proceeding with installation or turning on power.

Install Components

Install the Translator Board

Plan wire routing before mounting. The translator board is designed so that wires can enter it from both sides.

- Remove the top cover and mount the TRB to the wall, using screws and wall anchors provided.
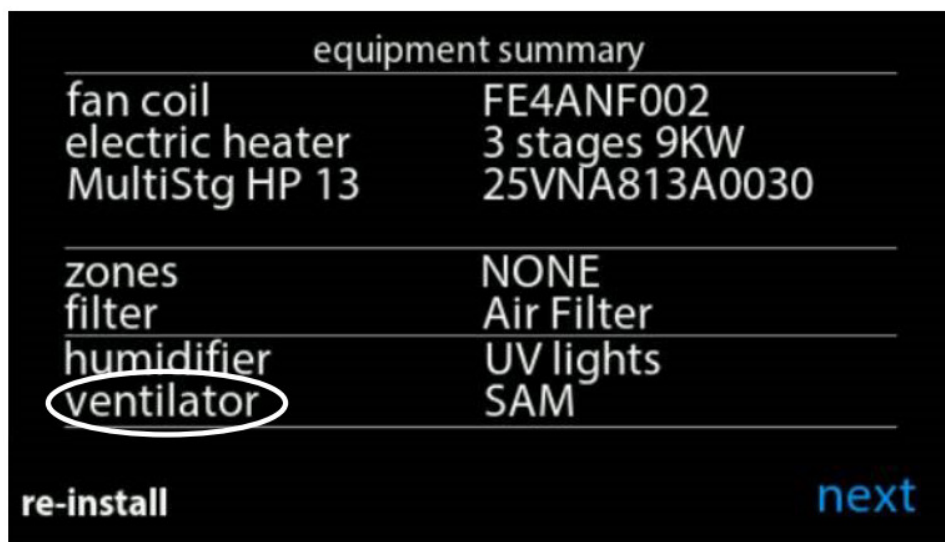
Ventilator (ERV/HRV) Wiring

The TRB can control a new Energy Recovery Ventilator / Heat Recovery Ventilator (ERV / HRV). Connect four wires from the TRB (see ventilator installation instructions for details) to the connector labeled (12V, D-, D+, GND). This label identifies the terminal connection of the wire to match the ventilator wire terminal connection (12V, D-, D+, GND) on the 12 Volt terminal block. See Fig. 4.

System Start-up

Do the start-up process from the Control installation instructions.

Commissioning of the Wall Control

This section addresses initial power up (or commissioning) of a new Infinity® or Evolution® Connex™ Control. The control will communicate and identify all components in the control. The following is a typical example for a communicating variable-speed furnace / fan coil with a 2-stage air-conditioner / heat pump (including HYBRID HEAT® dual fuel system). The process may vary for other types of systems. See the HVAC equipment Installation Instructions for more details, as provided. Upon commissioning the system with translator board installed, you will see the following menus (Fig. 2 and Fig. 3) under equipment summary.

Fig. 2 – Ventilator Properly Discovered

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Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.

SYSTXXXTRB01: Installation and Start-up Instructions

Fig. 3 – Ventilator Improperly Discovered

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Once the ventilator is properly discovered, proceed to the Control Set-up section of this manual.

Control Set-up

Home Comfort Profile Fresh Air Control

- If a ventilator is installed in your home, select the amount of fresh air to circulate during heating mode by touching Heating Fresh Air.

  NOTE: This option may not be available with the ERVXXNVA ventilator due to its simplified control design.

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- You will have the option of choosing among AUTO, MANUAL, or OFF.

NOTE: This option may not be available with the ERVXXNVA ventilator due to its simplified Control design.
– The AUTO setting will allow the user to choose the maximum fresh air that the ventilator will provide. Selections are Low, Medium or High. In Auto, the ventilator will run continuously, unless the outdoor temperature is near or below 0°F or is near or above 100°F. Beyond those temperatures, it will turn off.
– The MANUAL setting allows you to select the percentage of fresh air to supply your home. In the MANUAL mode, there are several selections available: Off, Low 25%, Low 50%, Low 75%, Low 100%, Medium, and High. The percent values are percent of an hour.
– Use the Up (▲) and Down (▼) buttons to set the desired ventilation level.
– Press SAVE when finished, or CANCEL to discard any changes.

- If applicable, next select the amount of fresh air to circulate during cooling mode by touching COOLING FRESH AIR. Again, you will have the option of choosing among AUTO, MANUAL and OFF.
  – Use the Up (▲) and Down (▼) buttons to set the desired ventilator speed level.
  – Press SAVE when finished, or CANCEL to discard any changes.

Away Comfort Profile Humidity Control
You may wish to have different humidity settings when you're away.
Press the Menu area on the Main Screen to access the additional menu selections. Select Comfort Profiles, then select Humidity and Fresh Air Profiles option.

away comfort profiles

heating humidity

cooling humidity

heating fresh air

cooling fresh air

back   (i)   done

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- Touch AWAY to set your humidity settings while you are away from home to save the most amount of energy.
- If you have a humidifier installed for your system, touch HEATING HUMIDITY to set the desired humidity level when you are away from home.
  – Use the Up (▲) and Down (▼) buttons to set the minimum humidity level between 5%-45%.
  – Press SAVE when finished, or CANCEL to discard any changes.
- To set the desired humidity level during cooling, touch COOLING HUMIDITY.
  – Use the Up (▲) and Down (▼) buttons to set the maximum dehumidification level at NONE or between 55-65%.
  – Touch YES or NO for the system to over-cool the conditioned space by up to 3°F to remove as much humidity out of the air as possible.
  – Press SAVE when finished, or CANCEL to discard any changes.

Away Comfort Profile Fresh Air Control

You may wish to have different Fresh Air profiles for when you're away.
Press the menu area on the Main Screen to access the additional menu selections. Select Comfort Profiles, then select Humidity and Fresh Air Profiles option.
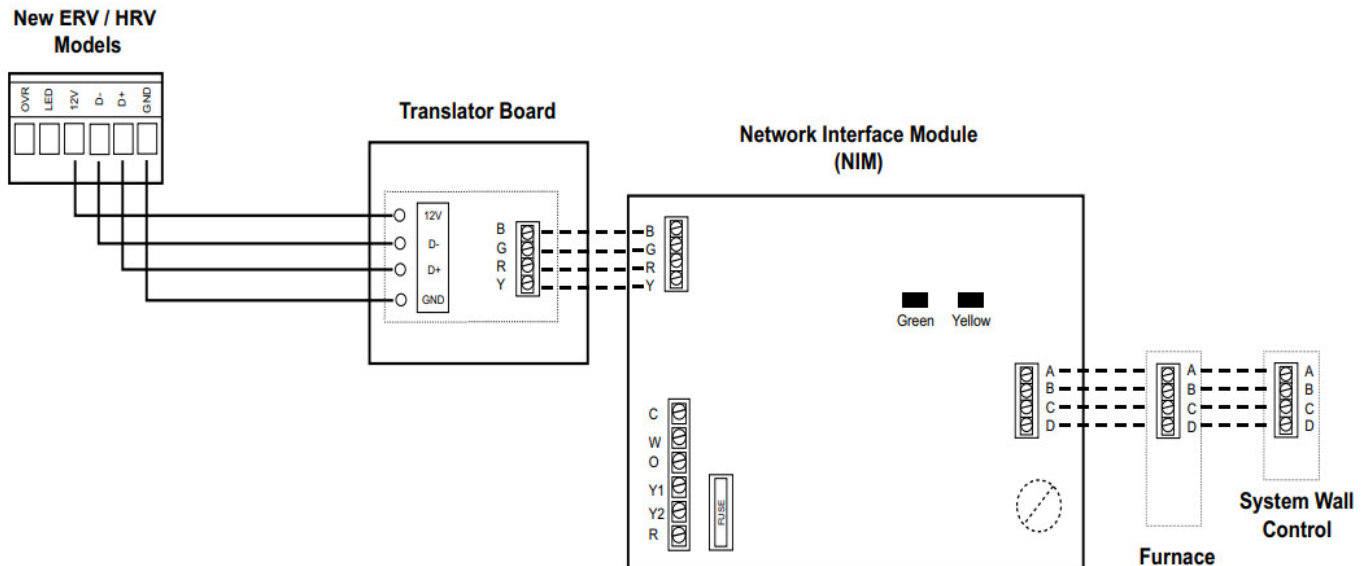
- Touch AWAY to set your fresh air settings while you are away from home.
  – You will have the option of choosing between AUTO, MANUAL, or OFF.
  – The AUTO setting will allow the system to choose the fresh air setting in a range of Low, Medium or High, as selected by you.

– The MANUAL setting allows you to select the percentage of fresh air to supply to your home. In the MANUAL mode, there are several selections available: Off, Low 25%, Low 50%, Low 75%, Low 100%, Medium, and High. The percent values are percent of an hour.

– Use the Up (▲) and Down (▼) buttons to set the desired ventilation level.

– Press SAVE when finished, or CANCEL to discard any changes.

- If applicable, select the amount of fresh air to circulate during cooling mode by touching COOLING FRESH AIR. Again, you will have the option of choosing among AUTO, MANUAL and OFF.

  – Use the Up (▲) and Down (▼) buttons to set the desired ventilation speed level.

  Press SAVE when finished, or CANCEL to discard any changes.

LED Indicators

There are green and red LED indicators on the Translator Board. The green LED indicates the board is ON and communication with the ERV/HRV is active. A blinking red LED indicates there is a communication error. Check the wire connections to make sure they are correct to clear the blinking red LED. If all wiring connections are correct and the red LED continues to blink, contact your dealer.

SYSTXXXTRB01: Installation and Start-up Instructions

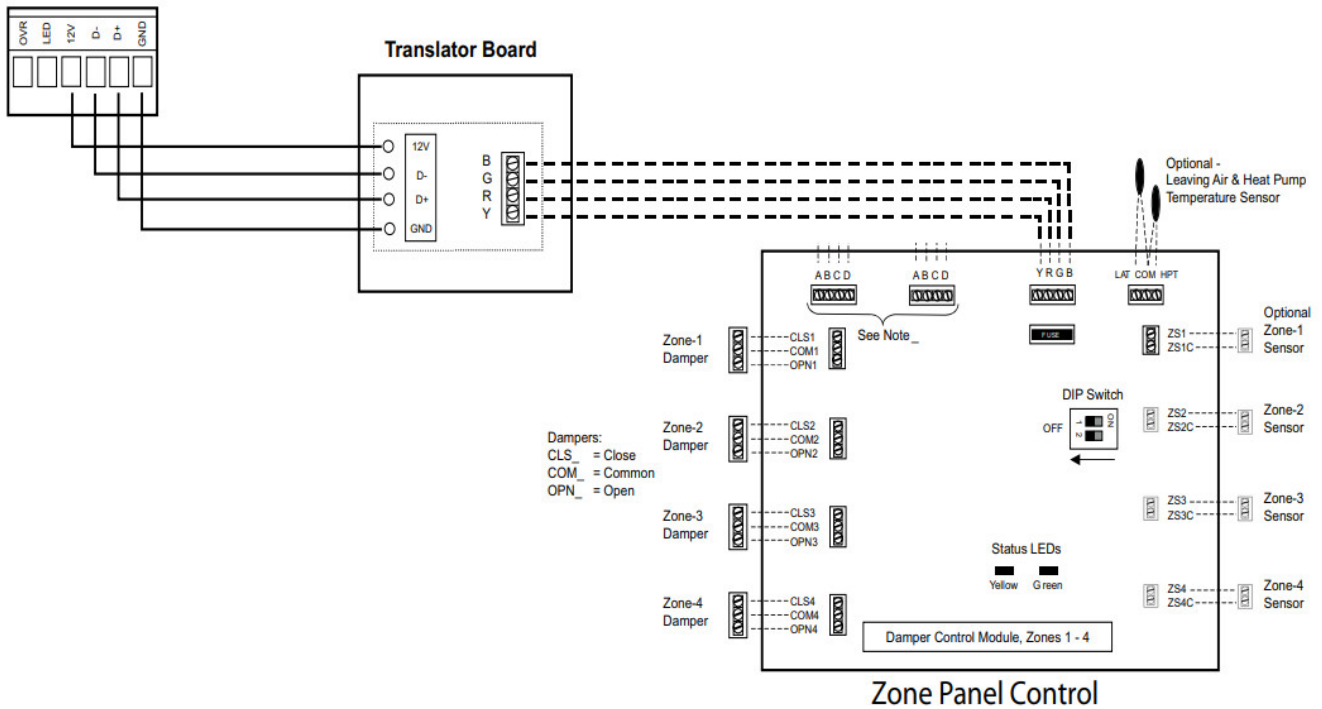**Fig. 4 – New Ventilator (HRV/ERV) & NIM Connections**

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Documents / Resources

Carrier SYSTXXXTRB01 Network Interface Module [pdf] Instruction Manual
SYSTXXXTRB01, STSTX BB, CC NIM01, SYST BB, CC 4Z01, SYSTXXXTRB01 Network Interface Module, Network Interface Module, Interface Module, Module

Manuals+,