

# Installation Guide

# **0 to 100% Standard Economizer – Horizontal**

## Foundation™ Packaged Cooling and Gas/ Electric 7.5 to 12.5 Tons

**Model Numbers:** BAYECON311\*  
**Used With:** EBC 090-150, GBC 090-150

### **▲ SAFETY WARNING**

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

# Introduction

Read this manual thoroughly before operating or servicing this unit.

## Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

**NOTICE**

Indicates a situation that could result in equipment or property-damage only accidents.

## Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs and HCFCs such as saturated or unsaturated HFCs and HCFCs.

## Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

### **⚠ WARNING**

#### **Proper Field Wiring and Grounding Required!**

Failure to follow code could result in death or serious injury.

All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in **NEC** and your local/state/national electrical codes.

### **⚠ WARNING**

#### **Personal Protective Equipment (PPE) Required!**

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

**⚠ WARNING**

**Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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# Pre-Installation

## General Information

The barometric relief hood is sized to provide up to 100% relief. It is designed to meet low leak requirements to prevent infiltration of air when closed.

## Unit Inspection

To protect against loss due to damage incurred in transit, perform inspection immediately upon receipt of the unit.

### Exterior Inspection

If the job site inspection reveals damage or material shortages, file a claim with the carrier immediately. Specify the type and extent of the damage on the bill of lading before signing. Notify the appropriate sales representative.

**Important:** Do not proceed with installation of a damaged unit without sales representative's approval.

- Visually inspect the complete exterior for signs of shipping damages to unit or packing material.
- Verify that the nameplate data matches the sales order and bill of lading.
- Verify that the unit is properly equipped and there are no material shortages.
- Verify that the power supply complies with the unit nameplate specifications.

### Inspection for Concealed Damage

Visually inspect the components for concealed damage as soon as possible after delivery and before it is stored.

If concealed damage is discovered:

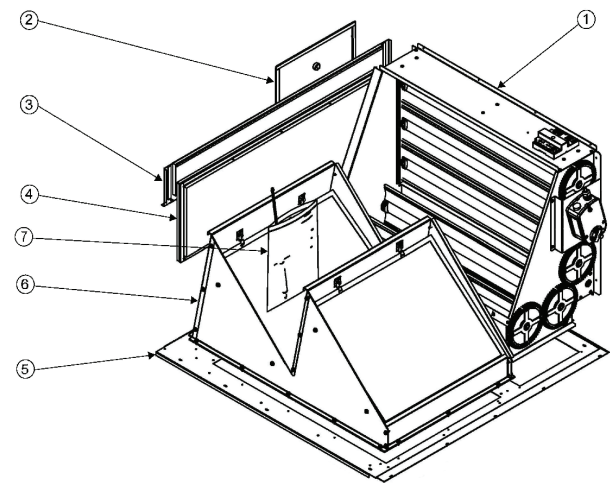
- Notify the carrier's terminal of the damage immediately by phone and by mail.
- Concealed damage must be reported within 15 days.
- Request an immediate, joint inspection of the damage with the carrier and consignee.
- Stop unpacking the unit.
- Do not remove damaged material from receiving location.
- Take photos of the damage, if possible.
- The owner must provide reasonable evidence that the damage did not occur after delivery.

## Parts List

Table 1. Economizer component list

Component	Description
1	Economizer Assembly
2	R/A Blank Off
3	O/A Blank Off
4	Filter Access Door
5	O/A Cover Panel
6	Hood Assembly
7	Parts Bag
7a	Screw Bag
7b	Mixed Air Sensor
7c	Installation Instructions

Figure 1. BAYECON311\* package contents

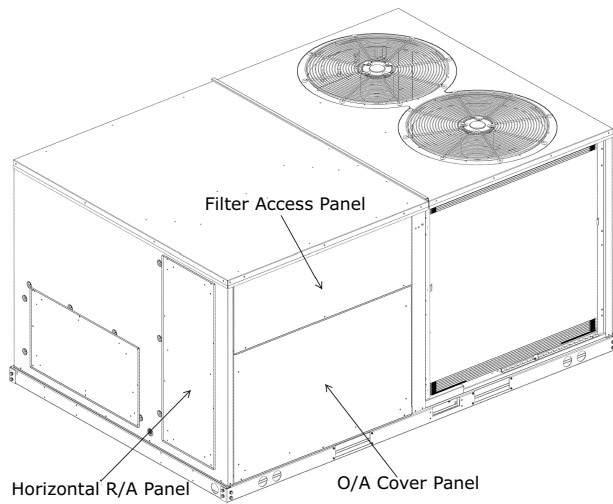


## Installation

1. Remove all items from the carton. See [Figure 1](#), p. 5.
2. Remove Filter access panel, Horizontal R/A opening, and O/A cover panel from the RTU. Retain unit screws for attaching economizer and hood parts. See [Figure 2](#), p. 6.

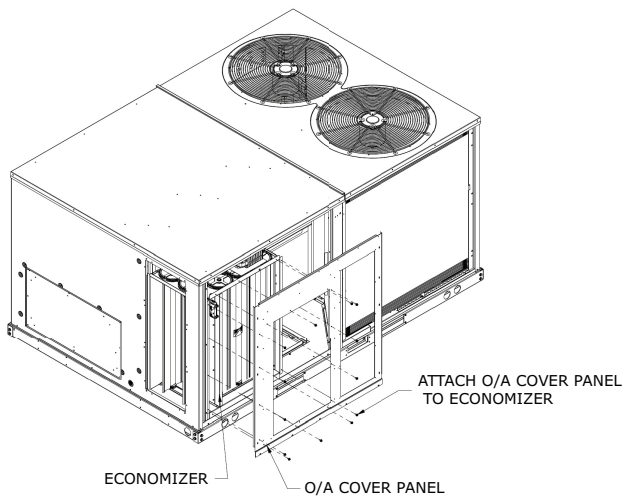
## Pre-Installation

**Figure 2. Unit image**



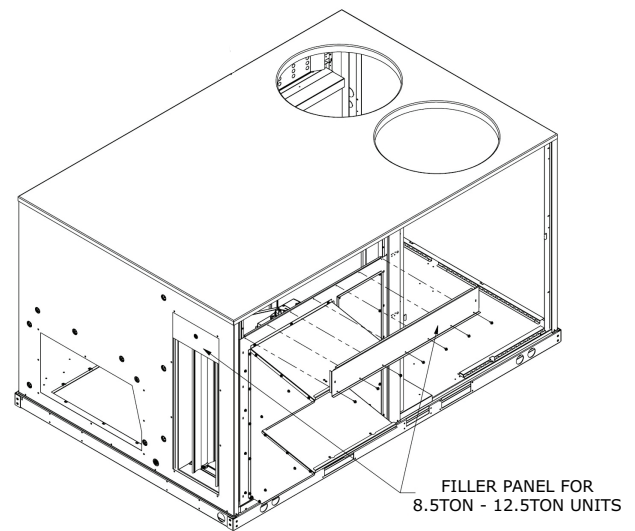
3. Install the horizontal R/A panel over the vertical return opening, then position the economizer assembly upright over the unit's vertical R/A opening and up against the horizontal R/A opening, next attach the O/A cover panel, that shipped with the economizer, over the RTU O/A opening and fasten it to the economizer. See [Figure 3, p. 6](#).

**Figure 3. Economizer assembly installation**



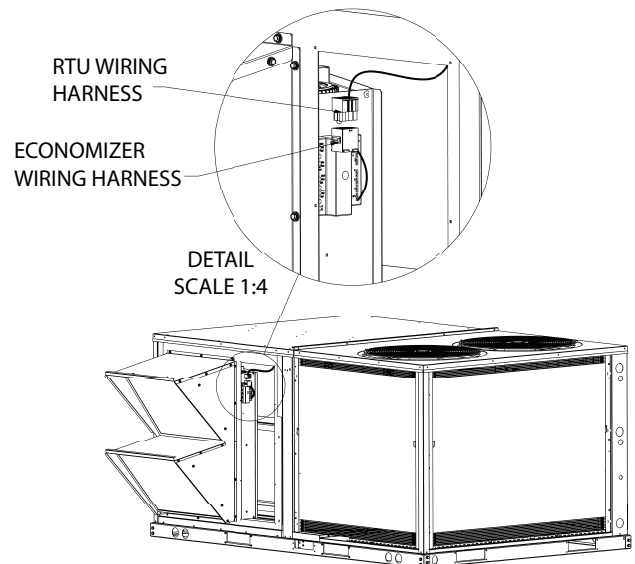
4. Install the provided hood on the O/A Cover panel, for 8.5T-12.5T units install the R/A and O/A blank off panels. See [Figure 4, p. 6](#).

**Figure 4. Hood installation**



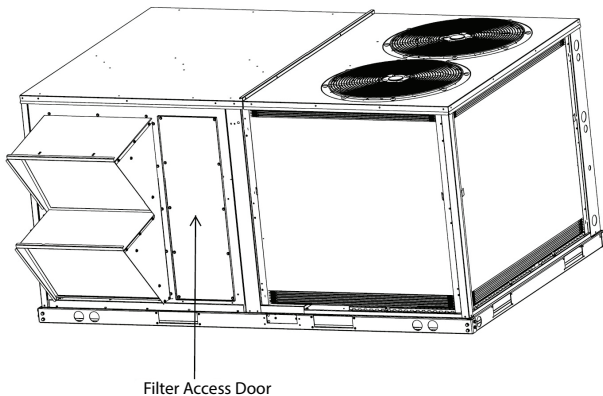
5. Connect the unit harness to the economizer harness. See [Figure 5, p. 6](#). Additionally, connect the green and purple loose wires with male 1/4-inch quick connects, next to the unit harness, to the green and purple female 1/4-inch quick connects from the economizer controller harness. See [Figure 5, p. 6](#).

**Figure 5. Economizer harness connections**



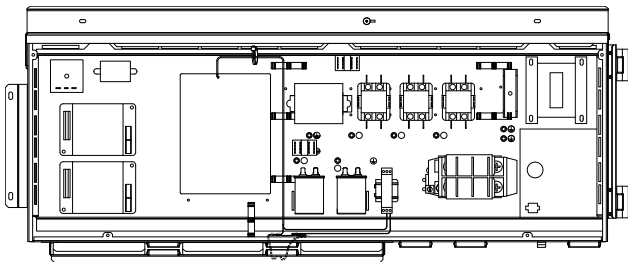
6. Install the filter access door, provided with the economizer assembly. See [Figure 6, p. 7](#).

Figure 6. Filter access door installation



- Remove the mixed air sensor and 2-wire purple and green wire harness from the parts bag. Remove the RTU control box panel and supply air blower panel. Connect the 2-wire harness to the purple and green wires located in the low voltage control box. See the [Figure 7, p. 7](#).

Figure 7. Low voltage control box



- Route the 2-wire purple and green wire harness into the supply air blower section, attach the mixed air sensor to the supply blower (ensure the screw doesn't interfere with the blower operation), then connect the wires to the mixed air sensor. See [Figure 8, p. 7](#).

Figure 8. Supply fan blower section



- Reinstall the supply air blower panel and the control box cover panel.
- Read the economizer controller section to determine the setup for your application.

## Economizer Controller

### Operation

The purpose of the economizer is to use outdoor air for cooling, whenever possible, to reduce compressor operation.

Power at the N terminal determines the Occupied/Unoccupied setting:

— W7212:

- 24 Vac (Occupied)
- No power (Unoccupied)

**Note:** When module is operating in Occupied mode, the minimum position is defined by the potentiometers.

When the module is operating in Unoccupied mode, and there is no call for cooling, the damper drives fully closed. The system uses a C7660 Dry Bulb Temperature Sensor. The C7660 responds to dry bulb temperature. Do Not use the C7660 in differential dry bulb applications.

The logic module functions as a true first stage of cooling providing maximum energy economy during the cooling cycle. It automatically locks out free cooling during heating; holding the outdoor air damper at the minimum position setting (or if using Demand Control Ventilation and the space CO<sub>2</sub> level is above the set



## Pre-Installation

point, the damper will be between the MIN POS and DCV MAX position).

**Table 2. W7212 DCV I/O Logic**

Occupied Terminal N has 24 VAC power	Input on AQ-AQ1 terminals <sup>(a)</sup>	Action with 24 VAC power applied to W7212 (TR-TR1)
Yes	1 Vdc	Drives to MIN POS
No	1 Vdc	No movement of motor
Yes	<1 Vdc	Drives to MIN POS or DCV MAX (highest)
No <sup>(b)</sup>	<1 Vdc	Drives to DCV MAX
Yes	DCV set point	Drives to up to MIN POS or DCV MAX (highest)
No	DCV set point	Drives to DCV MAX

<sup>(a)</sup> <1 Vdc = no CO<sub>2</sub> sensor or failed sensor; 1 Vdc = CO<sub>2</sub> sensor working but below CO<sub>2</sub> set point and CO<sub>2</sub> sensor working and above set point.

<sup>(b)</sup> Economizer should be powered by fan, if fan is off economizer will spring return damper closed, if fan is on and no occupancy damper will drive to DCV MAX position.

The logic module can operate as either a basic free cooling controller, or it can incorporate additional

functions. [Table 3, p. 8](#) details the input/output (I/O) logic of the module.

**Table 3. W7212 Economizer I/O Logic**

INPUTS				OUTPUTS			
Demand Control Ventilation (DCV)	Dry Bulb Setpoint <sup>(a)</sup>	Y1	Y2	Compressor		N Terminal <sup>(b)</sup>	
	Outdoor			Stage 1	Stage 2	Occupied <sup>(b)</sup>	Unoccupied <sup>(b)</sup>
					Damper		
Below set (DCV LED Off) See <a href="#">Table 2, p. 8</a> for outdoor damper action if input on AQ-AQ1 terminals is 1Vdc or < 1Vdc. This is the fault for CO <sub>2</sub> sensor failure. If no sensor or Vdc input is added to AQ-AQ1 terminals then use the DCV MAX potentiometer to adjust the minimum position.	High (Free Cooling LED Off)	On	On	On	On	Minimum position	Closed
		On	Off	On	Off		
		Off	Off	Off	Off		
	Low (Free Cooling LED On)	On	On	On	Off	Modulating <sup>(c)</sup> (between min. position and full-open)	Modulating <sup>(c)</sup> (between closed and full-open)
		On	Off	Off	Off	Minimum position	
		Off	Off	Off	Off		
Above set (DCV LED On)	High (Free Cooling LED Off)	On	On	On	On	Modulating <sup>(d)</sup> (between min. position and DCV maximum)	Modulating <sup>(d), (e)</sup> (between closed and DCV maximum)
		On	Off	On	Off		
		Off	Off	Off	Off		
	Low (Free Cooling LED On)	On	On	On	Off	Modulating <sup>(f)</sup>	Modulating <sup>(g)</sup>
		On	Off	Off	Off		
		Off	Off	Off	Off		

<sup>(a)</sup> For single enthalpy control, the module compares outdoor enthalpy to the A,B,C,D,E setpoint.

<sup>(b)</sup> Power at N terminal determines Occupied/Unoccupied setting:

- W7212: 24 Vac (Occupied), no power (Unoccupied).
- W7213, W7214: No power (Occupied), 24 Vac (Unoccupied).

<sup>(c)</sup> Modulation is based on the mixed air sensor signal.

<sup>(d)</sup> Modulation is based on the DCV signal. If the CO<sub>2</sub> sensor input (AQ-AQ1) terminals is < 1Vdc or the sensor has failed, the motor will drive to MIN POS or DCV MAX whichever is highest.

<sup>(e)</sup> Modulation is based on the DCV signal, if the CO<sub>2</sub> sensor input (AQ-AQ1) terminals is < 1Vdc or the sensor has failed, the motor will drive DCV MAX in the occupied mode. When power is cut to the economizer (fan is off) then the damper will spring return closed.

<sup>(f)</sup> Modulation is based on the greater of DCV and mixed air sensor signals, between minimum position and either maximum position (DCV) or fully open (mixed air signal).

<sup>(g)</sup> Modulation is based on the greater of DCV and mixed air sensor signals, between closed and either maximum position (DCV) or fully open (mixed air signal).



## Settings and Adjustments

### NOTICE

#### Equipment Damage!

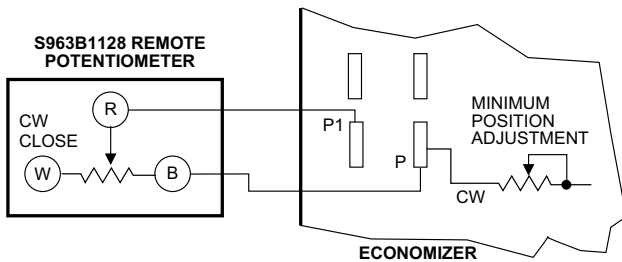
Excessive force can damage potentiometer controls.

Use a small screwdriver or the plastic tool provided with the economizer when adjusting all potentiometers located on the unit.

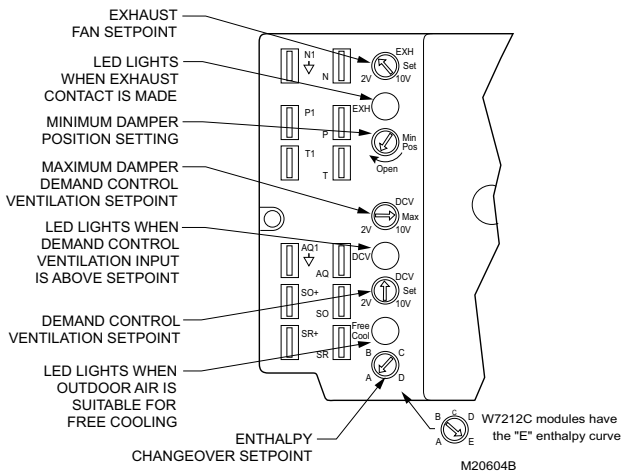
Potentiometers with screwdriver adjustment slots, located on device face, provide adjustments for several parameters (see Fig. 9 for locations on device):

- DCV setpoint
- Minimum damper position
- DCV maximum damper position
- Enthalpy changeover
- Exhaust setpoint

**Figure 9. S963B1128 Remote Potentiometer used with logic module for remote damper control**



**Figure 10. Potentiometer and LED locations**



### Demand Control Ventilation Setpoint

The logic module modulates the outdoor damper to provide ventilation based on the 2-10 Vdc DCV input (AQ-AQ1 terminals). With no cooling signal, the DCV overrides the outdoor air damper when ventilation requires additional outdoor air.

EXAMPLE: CO<sub>2</sub> sensor with 2 to 10 Vdc output range 0 to 2000 ppm. Two (2) Vdc is equal to 0 ppm, 10 Vdc is equal to 2000 ppm, threshold is determined to be 1000 ppm. DCV potentiometer to be set at 6 Vdc.

Adjust the potentiometer with a small screwdriver by turning the pot to the fully CCW then fully CW positions to determine the end stops. Set the pot for 6 Vdc in the mid position.

### Adjusting Minimum and Maximum Positions

The minimum position is defined by the minimum outdoor airflow required in the building during the occupied period. The MIN POS and DCV MAX position potentiometers allow the installer to set the proper ventilation based on occupancy established by ASHRAE standard 62.1. When used with a CO<sub>2</sub> occupancy sensor the minimum position will modulate between the MIN POS pot setting and the DCV MAX pot setting based on the CO<sub>2</sub> input to the AQ-AQ1 terminals from the CO<sub>2</sub> sensor located in the space.

When a CO<sub>2</sub> sensor is NOT USED with the unit, the OA dampers will modulate based on the actions in Table 1. Setting the DCV maximum position of the damper prevents the introduction of large amounts of hot or cold air into the space by preventing the dampers from opening 100% during a call for additional ventilation. On a call for cooling AND the OA is good for economizing, the unit will override the DCV MAX setting and allow the dampers to drive full open.

**Important:** With the DCV maximum position set below the minimum position, the minimum position overrides the maximum position.

#### Notes:

- When the mixed air sensor takes control based on an increased requirement for cooling, it overrides the DCV maximum position potentiometer and can drive the damper full-open.
- If the mixed air temperature drops to 45°F, the mixed air sensor overrides the DCV and closes the damper to protect from freezing the hot or chilled water coils. Control returns to normal once the mixed air temperature rises to 48°F. Some models of the W7212 close the damper fully and others close the damper to minimum position. Check the label on the box for position of damper on freeze protection. If the CO<sub>2</sub> sensor should fail, the W7212 defaults to DCV maximum, providing minimum ventilation for the maximum design occupancy.

### Minimum Position Adjustment

The following provides basic guidelines for minimum position selection and adjustment.

### Important:

- Adjust the minimum position potentiometer to allow the minimum amount of outdoor air for building effluents, as required by local codes, to enter the building.
- This procedure requires use of a quality thermometer capable of reading to 0.5° F [0.25°C].

**Note:** Make ventilation adjustments with at least a 10°F [6°C] temperature difference between outdoor and return air.

1. Calculate the appropriate mixed air temperature, see Equation 1. Equation 1 will be used to set the damper positions for MIN POS and DCV MAX. Without a DCV sensor connected to AQ-AQ1, use the MIN POS pot and this procedure to adjust the damper positions for minimum OA when the space is occupied. When using a DCV sensor you will need to set the MIN POS and DCV MAX positions using this procedure. DCV MAX will be the same as the MIN POS above (without a DCV sensor) and the MIN POS will lower than the DCV MAX %.
2. Disconnect mixed air sensor from terminals T and T1.
3. Place a jumper across terminals T and T1.
4. Ensure that either the factory-installed jumper is in place across terminals P and P1 or, if remote damper position is required, that it is wired according to [Figure 9, p. 9](#) and the MIN POS potentiometer is turned fully clockwise.
5. Connect 24 Vac across terminals TR and TR1.
6. Carefully adjust the potentiometer on the face of the device with a small screwdriver until the mixed air temperature reaches the calculated value.

**Note:** Ensure that the sensed air is well mixed.

7. If all minimum (MIN POS) and maximum position (DCV MAX) adjustments are complete, remove the T-T1 jumper and reconnect the mixed air sensor.

**Equation 1. Formula to aid minimum position adjustment.**

$$(T_O \times OA) + (T_R \times RA) = T_M$$

Where:

T<sub>O</sub> = Outdoor air temperature

OA = Percent of outdoor air

T<sub>R</sub> = Return air temperature

RA = Percent of return air

T<sub>M</sub> = Resulting mixed air temperature

**Note:** The following sample calculation uses only Fahrenheit temperature.

EXAMPLE: Assume local codes require 10% outdoor air during occupied conditions, outdoor air is 60°F and return air is 75°F. Under these conditions, what is the temperature of the mixed air?

$$(0.1 \times 60^\circ\text{F}) + (0.9 \times 75^\circ\text{F}) = 6.0^\circ\text{F} + 67.5^\circ\text{F} = 73.5^\circ\text{F}$$

Mixed air will be 73.5°F when OA is 60°F and RA is 75°F with 10 percent outdoor air entering the building.

**Note:** If setting MIN POS and DCV MAX position, you will need to adjust the MIN POS for the building effluent (low occupancy) airflow and adjust the DCV MAX using the minimum airflow for maximum occupancy.

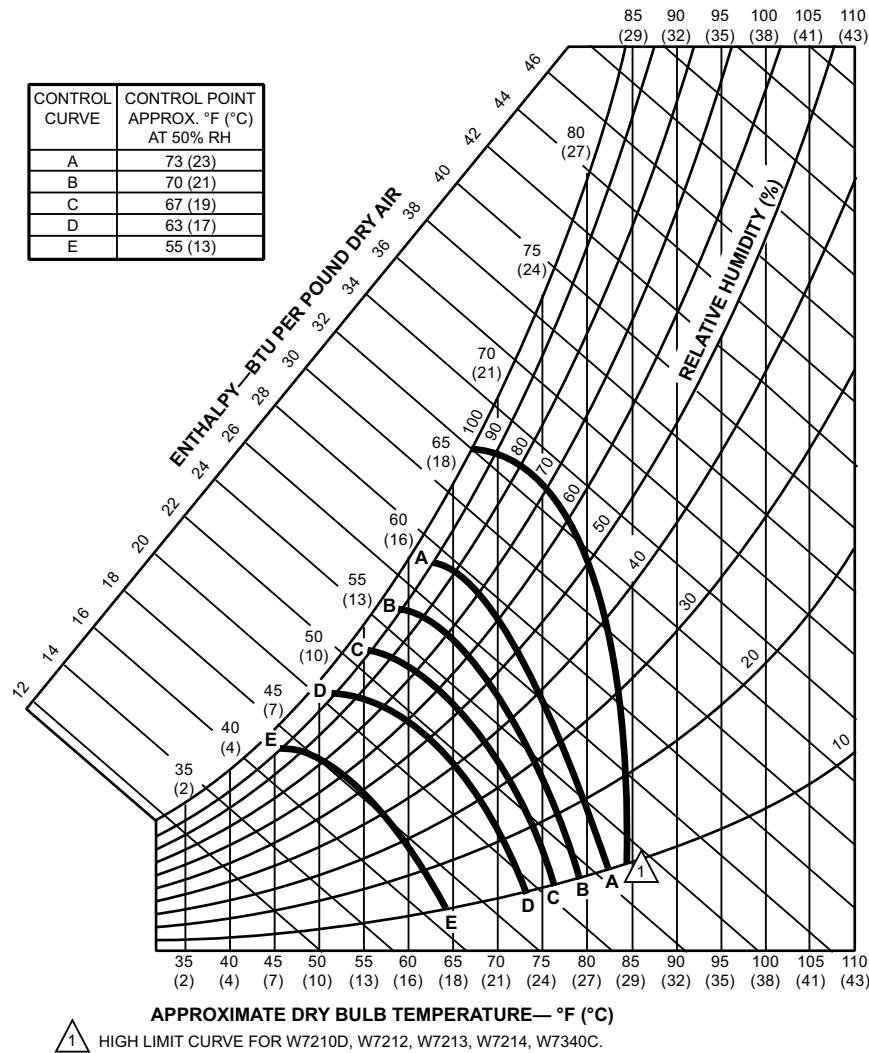
## Enthalpy Changeover Setpoint

### Outdoor Enthalpy Changeover Setpoint (Single Enthalpy)

Single enthalpy compares the outdoor air conditions to a set A,B,C, or D (E) curve for humidity and temperature conditions. The installer must set the onboard potentiometer to the desired curve. The outdoor enthalpy changeover setpoint returns the outdoor air damper to minimum position. Enthalpy setpoint scale markings located in the device are A, B, C, D and E. See [Figure 10, p. 9](#) for the corresponding control points. The factory-installed 620-ohm jumper must be in place across terminals SR and SR+.

Temperature and humidity conditions to the left of the selected curve will allow the dampers to open for free cooling, temperature, and humidity conditions to the right of the curve will return the OA damper to minimum position (this is either MIN POS if using a CO<sub>2</sub> sensor or DCV MAX if a CO<sub>2</sub> sensor is NOT used).

Figure 11. Potentiometer and LED locations (W7212 shown)



### Differential Enthalpy Changeover Setting

Differential enthalpy control uses two C7400 Enthalpy Sensors connected to one logic module. The logic module compares outdoor air to return air.

**Note:** Turn the enthalpy setpoint potentiometer fully clockwise to the D (or E setting for W7212C) setting.

The logic module selects the lower enthalpy air (return or outdoor) for cooling. For example, when outdoor air has lower enthalpy than return air, the module calls to open the outdoor air damper to bring in outdoor air for free cooling.

### Exhaust Setpoint

The exhaust setpoint determines when the exhaust fan runs based on damper position. When the exhaust fan call is made, the module provides a 60 ±30 second delay before exhaust fan activation. This delay allows

the damper to reach the appropriate position to avoid unnecessary fan overload.

#### Notes:

- EF and EF1 are 24V dry contacts only. An external line voltage contactor is required to operate the exhaust fan.
- When the exhaust fan is deactivated the EF and EF1 contacts open immediately.

### Adjustable Exhaust Setpoint

These logic modules have an adjustable exhaust setpoint. This potentiometer allows the installer to adjust the damper position at which the EF and EF1 exhaust fan contacts are made.

**Note:** The 60 ±30 second delay allows the outdoor damper to reach the exhaust setpoint prior to the EF and EF1 contacts being made.

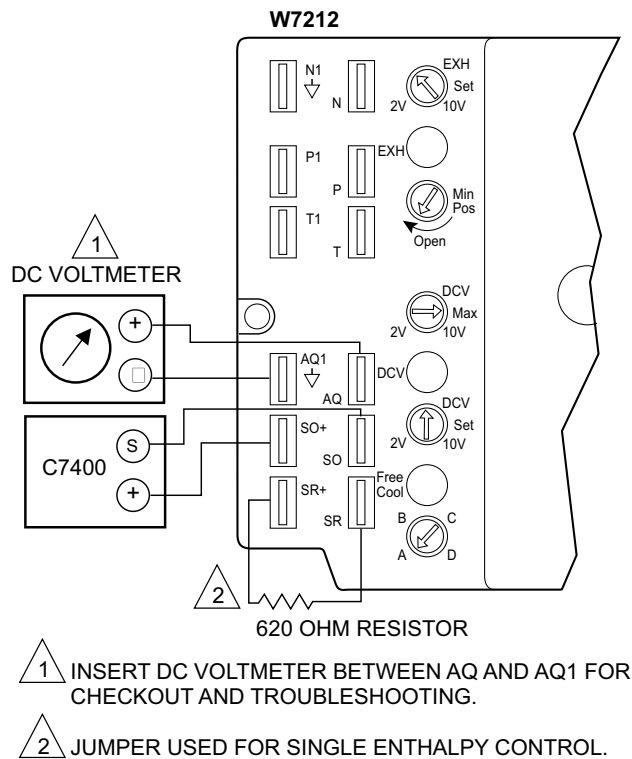
# Checkout and Troubleshooting

Checkout requires a 9V battery, 620 ohm, 1.2K ohm, 5.6K ohm, and 6.8K ohm resistors. Use [Table 4, p. 13](#) and [Figure 12, p. 12](#) for checkout.

**NOTICE**

**Equipment Damage!**  
 Excessive force can damage potentiometer controls.  
 Use a small screwdriver or the plastic tool provided with the economizer when adjusting all potentiometers located on the unit.

**Figure 12. Meter location for checkout**



**Table 4. Checkout for W7212 economizer**

Step	Checkout Procedure	Proper Response
1.	<b>CHECKOUT PREPARATION FOR ECONOMIZING ONLY</b>	
	Disconnect power at TR and TR1.	All LED are off; Exhaust Fan contacts are open.
	Disconnect devices at P and P1.	
	Jumper P to P1 (defaults to on board MIN POS potentiometer).	
	Place 5.6K ohm resistor across T and T1 (Blue sleeve- provides input to economizer that the MAT is between 50-55° F).	
	Jumper TR to 1 (call for cooling from the thermostat).	
	W7212 <i>only</i> : Jumper TR to N (places economizer in occupied mode).	
	If connected, remove C7400 Enthalpy Sensor from terminals S <sub>O</sub> and +.	
	Connect 1.2K ohm, from 4074EJM Checkout Resistor kit, (purple sleeve) across terminals S <sub>O</sub> and + (makes OA enthalpy high).	
	Place 620 ohm resistor (white sleeve) across S <sub>R</sub> and + (makes return enthalpy lower than OA).	
	Set MIN POS and DCV MAX potentiometers fully CCW.	
	Turn DCV setpoint potentiometer mid position (this sets the DCV ventilation at approximately 1000 ppm).	
	Turn exhaust potentiometer to mid position (motor will be approximately 50% open when the exhaust fan contacts make).	
	Set enthalpy potentiometer to D.	
W7214 <i>only</i> : Jumper TR to O.		
Apply power (24 Vac) to terminals TR and TR1.		
2.	<b>DIFFERENTIAL ENTHALPY</b>	
	Execute step one, Checkout Preparation.	—
	Turn DCV MAX to mid position.	
	Place 620 ohm resistor across S <sub>O</sub> and + (white sleeve resistor makes OA enthalpy low).	—
	Place 1.2K ohm resistor across S <sub>R</sub> and + (purple sleeve resistor makes RA enthalpy high).	Free cool LED turns on; motor drives to approximately 45 degrees (half) open.
	Remove 620 ohm resistor from S <sub>O</sub> and +.	Free cool LED turns off; motor drives closed
3.	<b>SINGLE ENTHALPY</b>	
	Execute step one, Checkout Preparation.	—
	Turn DCV MAX to mid position.	
	Set enthalpy potentiometer to A (fully CCW).	Free cool LED turns on; motor drives to approximately 45 degrees (half) open.
	Set enthalpy potentiometer to D or E for W7212C (fully CW).	Free cool LED turns off; motor drives closed

## Checkout and Troubleshooting

**Table 4. Checkout for W7212 economizer (continued)**

Step	Checkout Procedure	Proper Response
4.	<b>DCV AND EXHAUST</b>	
	Execute step one, Checkout Preparation.	—
	LED for both DCV and Exhaust should be off.	
	Turn DCV MAX to mid position.	Motor drives to mid position, 45 degrees open.
	Turn MIN POS fully CW.	Motor drives fully open.
	Turn MIN POS and DCV MAX to fully CCW.	Motor drives closed.
	Turn DCV MAX to mid position. Connect 9V battery positive to AQ and negative to AQ1.	LED for both DCV and Exhaust turn on. Actuator drives to 45 degrees open.
	Remove jumper from N terminal (economizer goes into not occupied mode).	Motor remains at 45 degrees open.
	Adjust DCV MAX towards CW.	Motor will move to position set by DCV MAX pot.
	Adjust DCV MAX to fully CCW.	Motor will drive closed.
	Reconnect jumper to N terminal.	
	Adjust DCV MAX and MIN POS pots.	Motor will drive to the most open position of the pots.
	Adjust DCV MAX and MIN POS pots to fully CCW.	
	Remove power from N terminal adjust MIN POS towards CW	Motor should not move.
	Adjust DCV MAX towards CW.	Motor will move to position set by DCV MAX pot.
5.	<b>MINIMUM AND MAXIMUM POSITION</b>	
	Execute step one, Checkout Preparation.	—
	Connect 9V battery positive to AQ and negative to AQ1. Adjust DCV MAX potentiometer to mid position.	DCV LED turns on. Actuator drives to 45 degrees open.
	Turn DCV maximum position potentiometer to fully CCW.	Actuator drives fully closed.
	Turn minimum position potentiometer to midpoint.	Actuator drives to 45 degrees open.
	Turn minimum position potentiometer fully CW.	Actuator drives fully open.
	Turn MIN POS to fully CCW.	Actuator drives fully closed.
	W7212: Remove jumper from TR and N. W7214: Jumper TR to O.	Actuator drives fully closed.
6.	<b>MIXED AIR INPUT</b>	
	Execute step one, Checkout Preparation.	—
	Turn DCV MAX to mid position; set enthalpy potentiometer to A.	Free cool LED turns on. Actuator drives to 45 degrees open.
	Remove 5.6K ohm resistor (green sleeve) and place jumper from T and T1.	Actuator drives to 45 degrees open.
Remove jumper from T and T1 and leave open.	Actuator drives fully closed.	
7.	<b>HEAT PUMP INPUT - W7213, W7214 ONLY</b>	
	Execute step one, Checkout Preparation.	—
	Turn DCV MAX to mid position; set enthalpy potentiometer to A.	Free cool LED turns on. Actuator drives to 45 degrees open.
W7213: Jumper TR to B. W7214: Remove jumper from TR and O.	Free cool LED turns off. Actuator drives fully closed.	





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