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LUTRON CNT10176
Push Button Boost
Timer

LUTRON CNT10176 Push Button Boost Timer Installation Guide

Contents

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LUTRON CNT10176 Push Button Boost Timer

Specifications

- Model Numbers: CNT10176 (PBT), CNT10175 (PBL), CNT10174 (PTL)
- Control Types: Push Button Boost Timer (PBT), Push Button
  Point-of-Use Control (PBL), Percent Timer Control (PTL)
- Compatibility: Works with ERV units
- Operating Time Options: 20, 40, or 60 minutes
- Wiring Size: Maximum 18 gauge solid wire
- Cover Plate: Lutron DecoraTM cover plate included

Product Usage Instructions

Push Button Point-of-Use Control (PBL) Operation
The PBL control works in conjunction with Percentage Timer Control (PTL) or Push Button Timer (PBT) to operate the ERV unit.

1. Press the logo button to operate the ERV for 20 minutes.
2. Press the logo button again to extend the operation to 40 minutes.
3. A third press will provide 60 minutes of operation.

The indicator light on the PBL control indicates the ERV operation status.

Percentage Timer Control (PTL) Operation
The PTL control is the primary control for the ERV unit, offering proportional runtime control.

- The PTL can be set to operate the ERV for an adjustable amount of time each hour.
- The Runtime % light indicates when the PTL is signaling the ERV to operate.
- The PTL can also be set to turn off the ERV or keep it running constantly.

Installation Instructions

1. Properly wire and connect the controls following the wiring diagram provided.
2. Attach wires to the back of the control units as instructed.
3. Use Lutron DecoraTM cover plate for a neat finish.

FAQ

- **Q: What should I do if my ventilator is running even when not intended?**
  A: Check that none of the controls are calling for unitoperation. If necessary, consult a professional electrician to ensure correct wiring and control settings.

WARNING: HAZARDOUS VOLTAGE – DISCONNECT POWER BEFORE SERVICING

ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES

IMPORTANT — This Document is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

REPLACEMENT INSTALLER'S GUIDE

ELECTRICAL CONTROLS

WARNING
HAZARDOUS VOLTAGE – DISCONNECT POWER BEFORE SERVICING

Note: Proper Wiring Size Selection and Wiring Installation Is The Responsibility of the Electrical Contractor.

Push Button Boost Timer Point-of-Use Control (PBT) OPERATION

The Push Button Boost Timer (PBT) point-of-use control with indicator light is compatible with the ERV unit. The PBT will operate your ERV for either 20, 40, or 60 minutes based upon how many times the logo button has been pushed. The indicator light on the front of the PBT control is on whenever the ERV is operating, unless operating due to an additional control wired directly to your ERV. 20-40-60 Minute Ventilation Control:
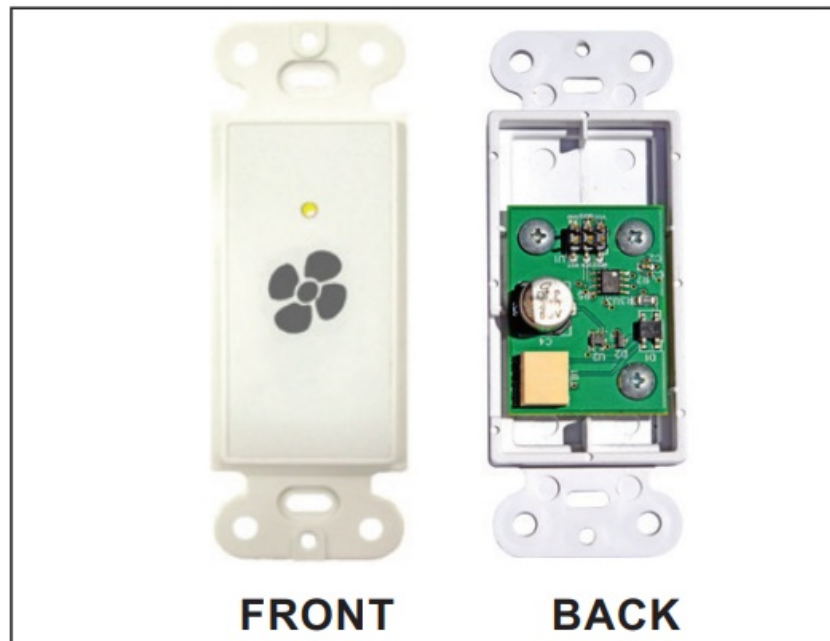
- Press the logo and your ventilator will run for 20 minutes. Press again and the unit will run 40 minutes. A third press provides for 60 minutes of operation.
- You can cancel a cycle at anytime. Just press the logo for a fourth time.
- You can start another cycle by pressing the logo.

NOTE: For ERV systems with more than one control: Another control other than the push button may be causing your ventilator to run. If you wish to keep your ventilator from running, check that none of your controls are calling for unit operation.

INSTALLATION

1. To hook the PBT up to the unit, expose the ends of two wires, and push one into the 'R' terminal and one into the 'C' terminal. Wire Size: 18–22 gauge, no more than 500 feet. Wiring is non-polar.
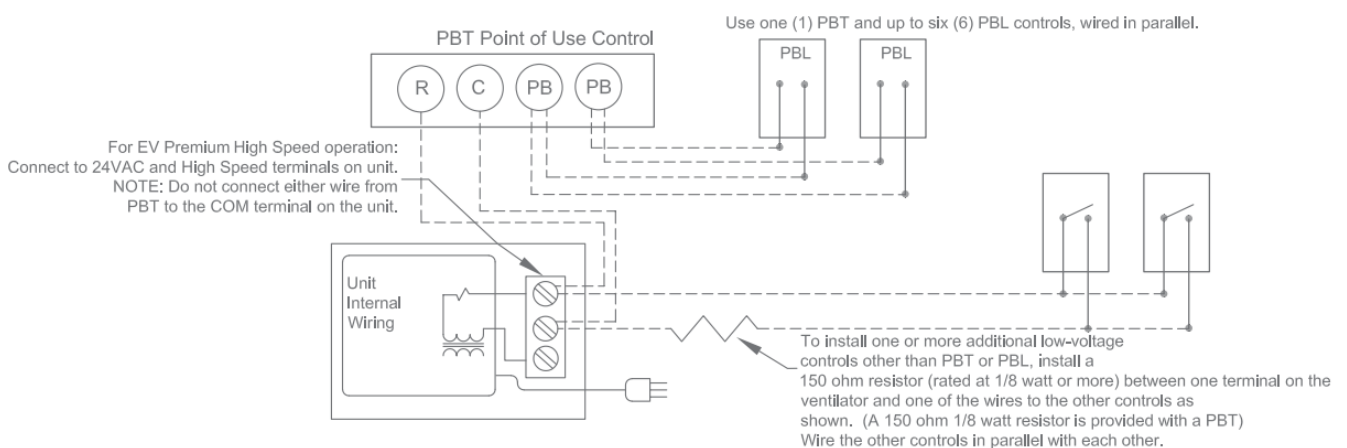
2. Install control in a standard 2″ x 4″ electrical box, with a minimum depth of 1.5″, with the two screws provided.

3. To add a PBL Control, two wires should be attached to the 'PB' positions on the terminal block on the back of the PBT. Connect 'PB' wires in a similar fashion as 'R' and 'C' terminal wires.

4.

FRONT   BACK

For two PBL controls, one wire from each can be twisted together and inserted into a single position on the terminal block on the PBT. The wires must be a maximum 18 gauge solid wire. If more than two PBL controls are attached or 18 gauge stranded wire is used, then pigtails must be inserted into the 'PB' positions on the PBT and the leads attached to the pigtails with wire nuts.

5. Use Lutron Decora™ cover plate to complete installation (single cover plate included).

WIRING DIAGRAM

* EXCEPT WHEN ERV IS OPERATING DUE TO AN ADDITIONAL CONTROL WIRED DIRECTLY TO THE UNIT.
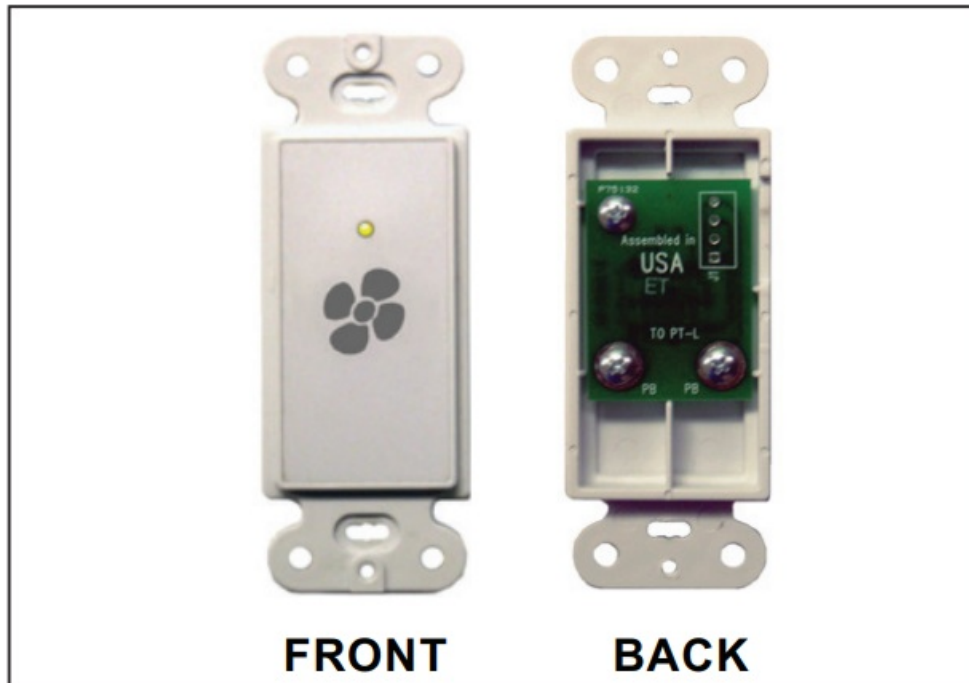
Push Button Point-of-Use Control (PBL) OPERATION:
The Push Button point-of-use control with indicator Light (PBL) works in conjunction with one Percentage Timer Control (PTL) or with one Push Button Timer (PBT) and is compatible with the ERV unit. The PBL will operate your ERV for either 20, 40, or 60 minutes based upon how many times the logo button has been pushed. The indicator light on the front of the PBL control is on whenever the ERV is operating, unless operating due to an additional

control wired directly to your ERV. The PBL control must be properly wired to a PTL or PBT control to operate the ERV.

20-40-60 Minute Ventilation Control:

- Press the logo and your ventilator will run for 20 minutes. Press again and the unit will run 40 minutes. A third press provides for 60 minutes of operation. The PTL or PBT control does not need to be on for the PBL Control to operate the ERV unit.
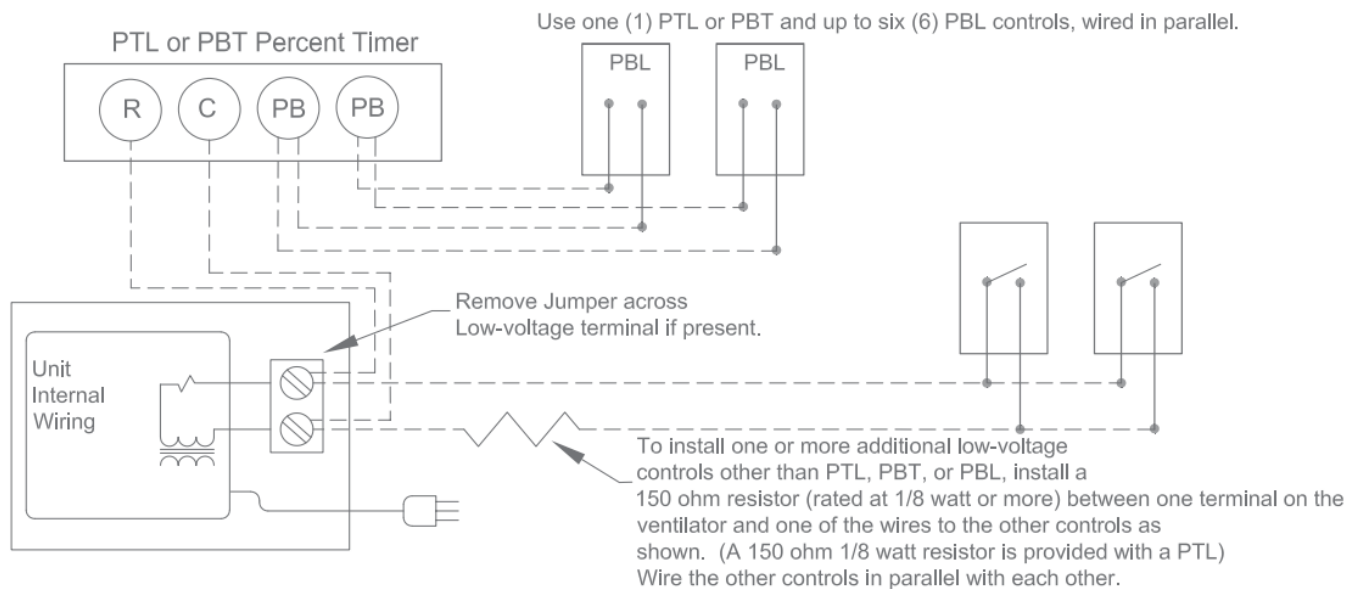

FRONT   **BACK**

- You can cancel a cycle at anytime. Just press the logo and hold for about five seconds.
- You can start another cycle by pressing the logo.

NOTE: For ERV systems with more than one control: Another control other than the push button may be causing your ventilator to run. If you wish to keep your ventilator from running, check that none of your controls are calling for unit operation.

INSTALLATION:

1. Attach two wires to the back of the PBL Control under the screws at the bottom. Tighten down the screws being careful not to over-tighten.
   Wire Size: 18–22 gauge, no more than 500 feet. Wiring is non-polar.
2. Install control in a standard 2″ x 4″ electrical box, with a minimum depth of 1.5″, with the two screws provided.
3. Two wires from the PBL Control should be attached to the 'PB' positions on the terminal block on the back of the Percent Timer Control (PTL) or Push Button Timer (PBT).
4. For two PBL controls, one wire from each can be twisted together and inserted into a single position on the terminal block on the PTL or PBT. The wires must be a maximum 18 gauge solid wire. If more than two PBL controls are attached or 18 gauge stranded wire is used then pigtails must be inserted into the 'PB' positions on the Percent Timer Control and the leads attached to the pigtails with wire nuts.
5. Use Lutron Decora™ cover plate to complete installation (single cover plate included).

WIRING DIAGRAM:

PTL or PBT Percent Timer

R C PB PB

Use one (1) PTL or PBT and up to six (6) PBL controls, wired in parallel.

PBL   PBL

Remove Jumper across
Low-voltage terminal if present.

Unit
Internal
Wiring

To install one or more additional low-voltage
controls other than PTL, PBT, or PBL, install a
150 ohm resistor (rated at 1/8 watt or more) between one terminal on the
ventilator and one of the wires to the other controls as
shown. (A 150 ohm 1/8 watt resistor is provided with a PTL)
Wire the other controls in parallel with each other.

* EXCEPT WHEN ERV IS OPERATING DUE TO AN ADDITIONAL CONTROL WIRED DIRECTLY TO THE UNIT.
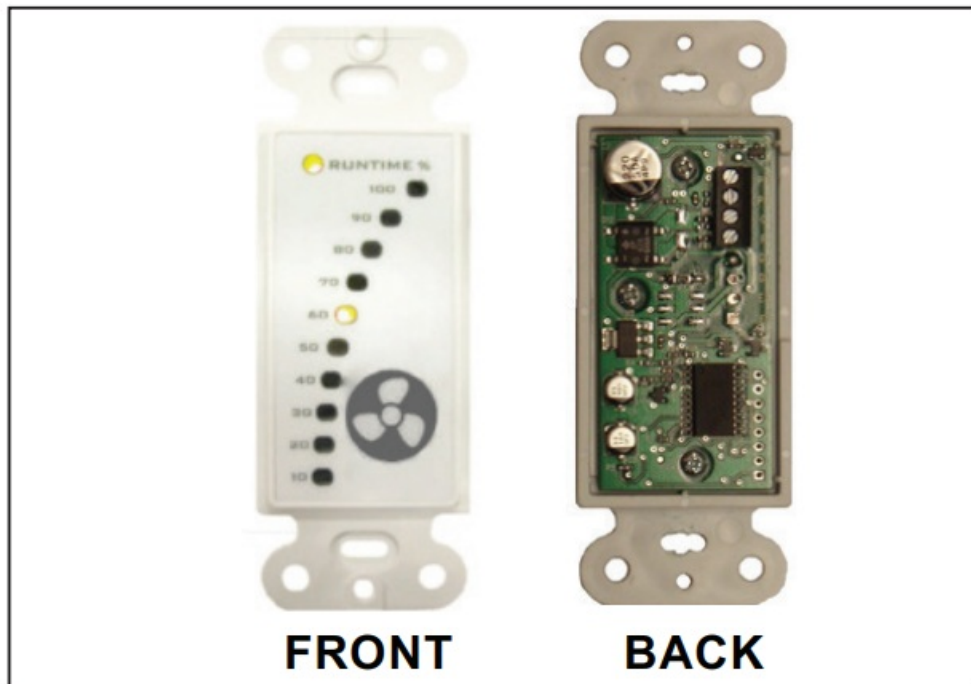
Percentage Timer Control (PTL) OPERATION:
The Percentage Timer Control with indicator lights (PTL) is the primary control for ERV unit. This proportional runtime control will operate your ERV an adjustable amount of time each hour. When the "Runtime %" light is on, the PTL control is telling your ERV to operate. Additionally, the PTL can be set to turn your ERV off or to operate constantly. ERV operation time will vary from application to application as well as time of year, lifestyle, indoor air quality concerns and other factors. Discuss any questions with your HVAC professional or contact supplier directly.

- **Constant Operation**: Press the button until the light next to "100" is lit.
- **Operation Each Hour**: Run time of your ERV can be adjusted from 10%, or 6 minutes each hour, up to 100% operation in 10% increments. Simply press the button until the light next to the desired percentage amount is lit. You can increase or decrease the run time based upon daily, weekly or monthly variations in occupancy levels, indoor odors, cold weather winter humidity, or other indoor air quality concerns as needed.

  FOR NO REGULAR OPERATION: Press the logo until all lights are off. The control is off.

INSTALLATION:

1. Install control in a standard 2″ x 4″ electrical box, with a minimum depth of 1.5″, with the two screws provided.
2. Wire Size: 18–22 gauge, no more than 500 feet. Wiring is non-polar.
3. The two wires from the ERV should be attached to the 'C' and 'R' positions on the terminal block on the back of the PTL Control.
4. Use Lutron Decora™ cover plate to complete installation (single cover plate included).
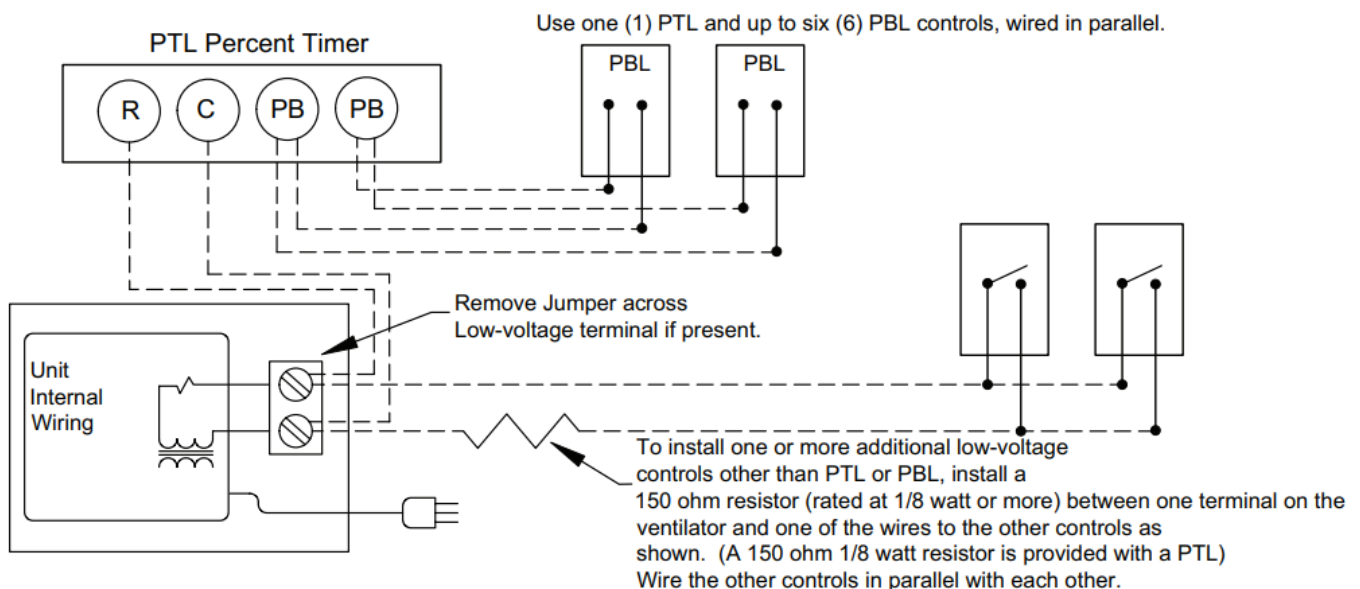
FRONT   BACK

PERCENTAGE RUN TIME TABLES

RUNTIME % SETTING	MINUTES OF OPERATION (PER HOUR)	EQUIVALENT CONTINUOUS OPERATION CFM				
		EV90/P	EV130	EV200	EV240	EV300
10	6	9	13	18	24	30
20	12	18	26	36	48	59
30	18	27	39	54	72	89
40	24	36	52	72	96	119
50	30	45	65	91	120	149
60	36	54	78	109	144	178
70	42	63	91	127	168	208
80	48	72	104	145	192	238
90	54	81	117	163	216	267
100	60	90	130	181	240	297

ASHRAE 62.2 2013/16 RESIDENTIAL VENTILATION AIR REQUIREMENTS CONTINUOUS CFM					
	BEDROOMS				
FLOOR AREA (FT2)	1	2	3	4	5
<500	30	38	45	53	60
501 – 1000	45	53	60	68	75
1001 – 1500	60	68	75	83	90
1501 – 2000	75	83	90	98	105
2001 – 2500	90	98	105	113	120
2501 – 3000	105	113	120	128	135
3001 – 3500	120	128	135	143	150
3501 – 4000	135	143	150	158	165
4001 – 4500	150	158	165	173	180
4501 – 5000	165	173	180	188	195

WIRING DIAGRAM:

About Trane and American Standard Heating and Air Conditioning Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit **www.trane.com** or **www.americanstandardair.com**

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18-HE143D1-1A-EN 19 Oct 2024 Supersedes (New)

Documents / Resources

LUTRON CNT10176 Push Button Boost Timer [pdf] Installation Guide
CNT10176, CNT10176 Push Button Boost Timer, Push Button Boost Timer, Button Boost Timer, Boost Timer, Timer

References

- 🔴 **Trane Heating & Air Conditioning**
- **User Manual**