

HOW it WORKS



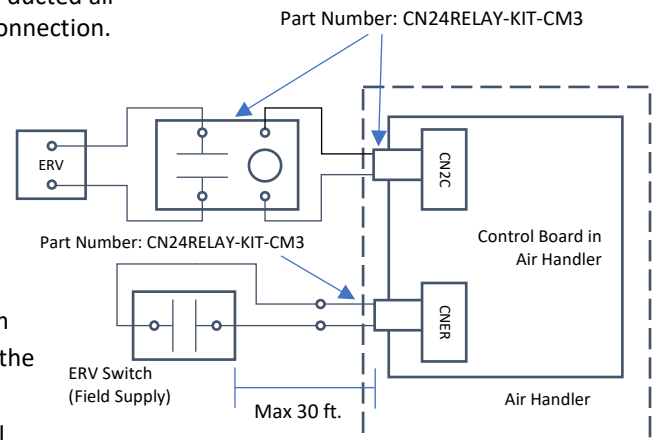
Installing Mitsubishi Electric Air Handling Units with ERV and Humidifiers

Energy Recovery Ventilation systems and humidifiers are becoming more prevalent in today's HVAC installations. With the movement towards Net Zero and emissions free housing, Mitsubishi Electric expects the trend to continue well into the future. How to incorporate both ERV's and Humidifiers together or separately is explained below.

The information below applies to the following units: PVA, SVZ and PEAD ducted air handling units. Please note SEZ units do not support ERV or humidifier connection.

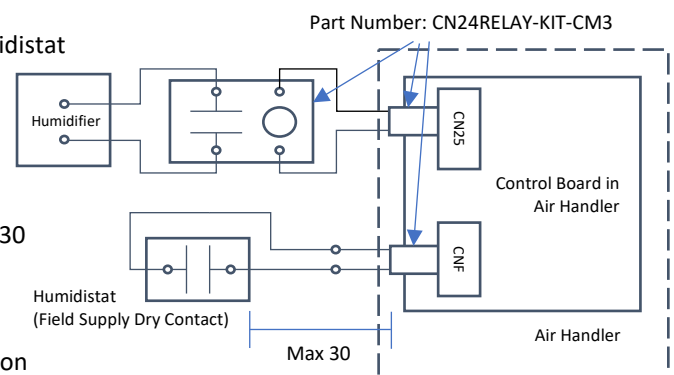
(A) ERV Connectors on PVA, SVZ and PEAD and sequence of operation are all the same:

- Once the FAN is running, the control board CN2C Connector outputs a 12VDC signal to activate 12VDC relay which closes dry contacts to turn ON ERV.
- If ERV closes field supplied normally open dry-contacts on connector CNER on control board during thermo off then system turns fan on and outputs a 12VDC signal on CN2C connector on the control board to turn ON ERV.
- During defrost cycle, ERV is turned off by turning off CN2C signal. Mode 26 is set to **1** (default) is for older homes and may change mode 26 to **2** for well insulated homes.



(B) Humidifier Control connectors are also the same on PVA, SVZ and PEAD units. Sequence of operations for the units as follows:

- When in HEAT mode and Air handler receives input from humidistat through CNF connector, Fan starts on HIGH
- Air handler CN25 Connector outputs a 12VDC signal to activate 12VDC relay which closes dry contacts to turn ON Humidify. The humidistat controls percentage of humidity.
- When humidistat opens (CNF) the fan will continue to run for 30 seconds to clear ductwork from moisture



Ensure mode 13 is set to 2 (default). Mode 16 controls humidifier operation. MESCA recommends mode 16 be set to 2 to enable operation when the indoor unit is heat / fan or STOP condition.

At a Glance – Quick set-up

ERV Control	Connect as shown above (A) and ERV operation available in cool/heat/fan and STOP conditions
	Mode 26 = 1 (default value) – Mode 26 = 2 for well insulated house
Humidifier Control	Connect as shown above (B). Humidifier works in HEAT mode only.
	Mode 13 – Set to 2 (Default)
	Mode 16 – Application based. Well insulated homes set to 2. Otherwise leave as default (1)

NOTE: 12VDC relays are polarity sensitive. Make sure pin 1 (red wire) of CN25 and CN2C goes to + terminal of relay