



# SERIES 7000



## Analog Electronic Controls Application Guide

## Series 7000 Application Guide

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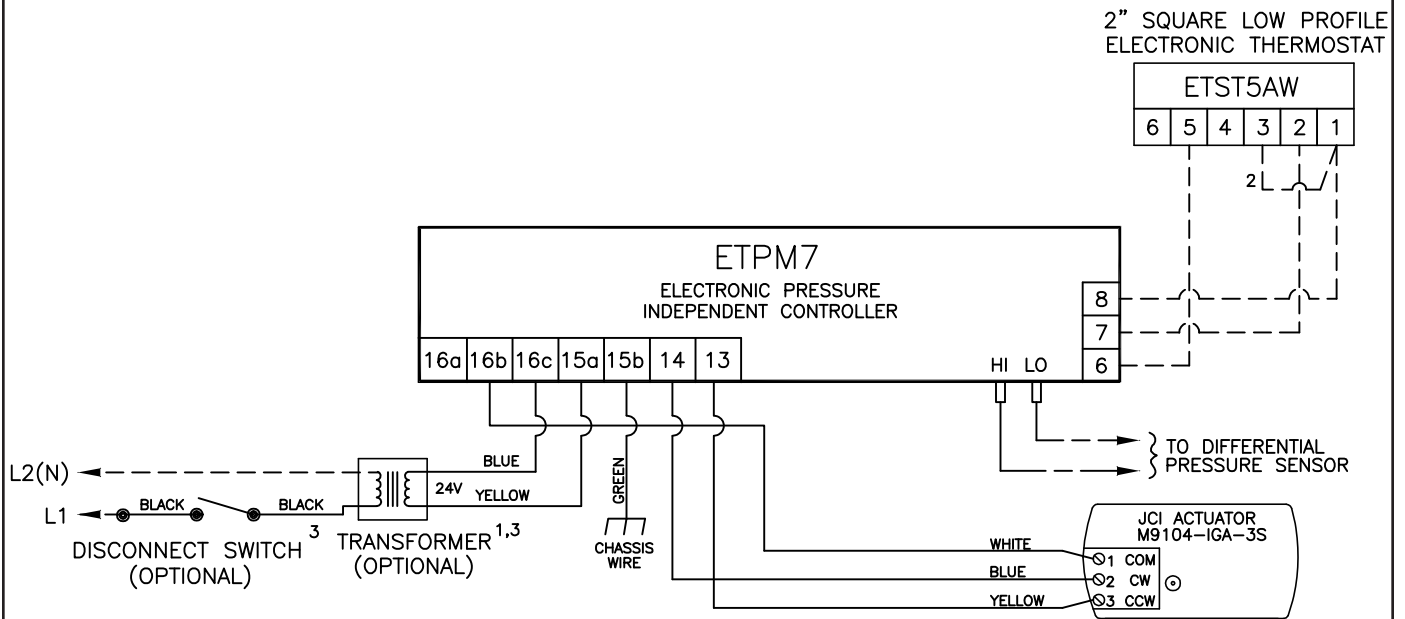
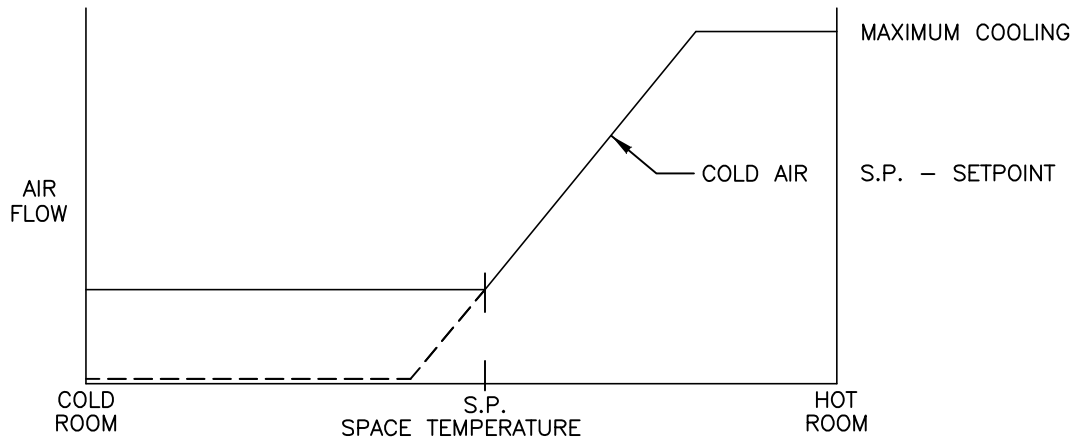
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Drawings in this catalog are subject to change without notice.

Visit the ENVIRO-TEC® website at [www.enviro-tec.com](http://www.enviro-tec.com) for current sequence drawings.

**SD7000**

This application provides single duct variable air volume cooling. As space temperature drops, airflow is reset from maximum to minimum setpoint. Air volume limits are located at the thermostat.



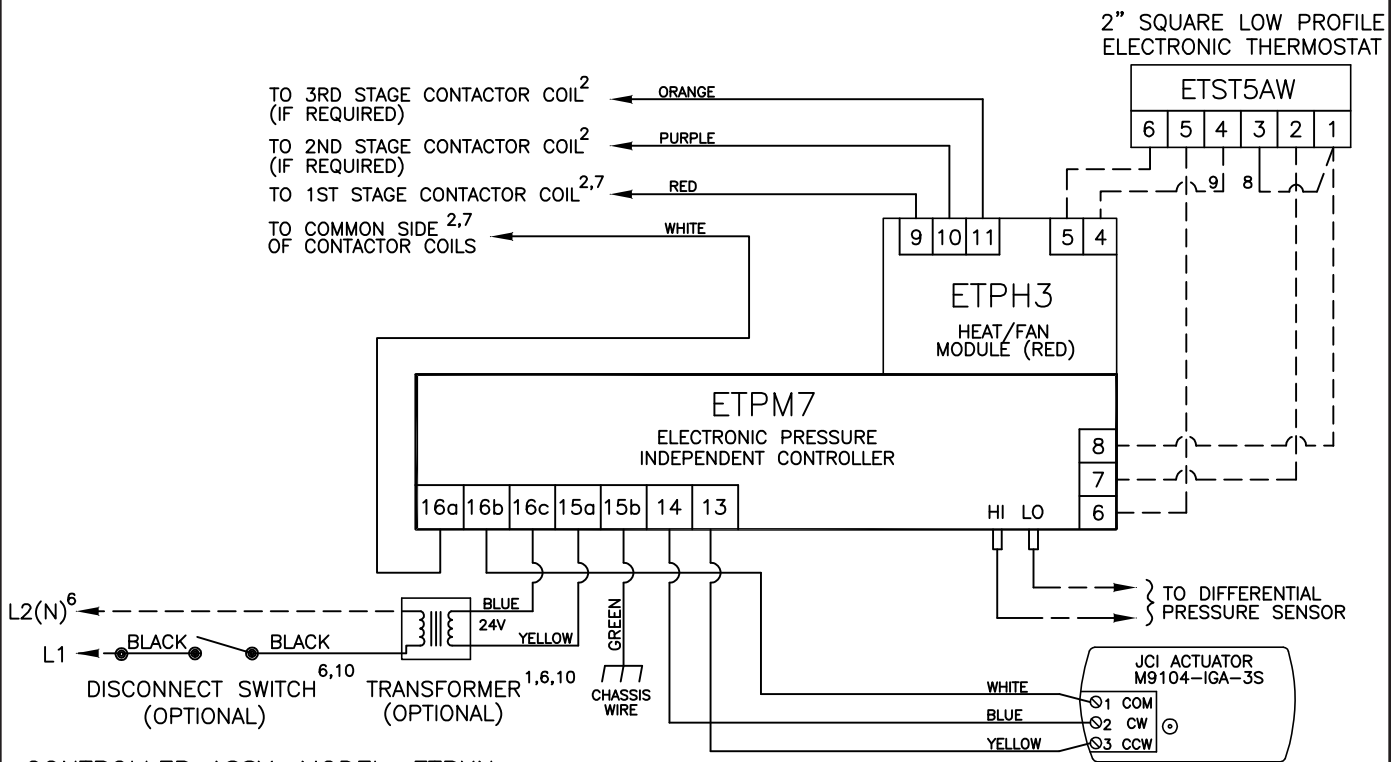
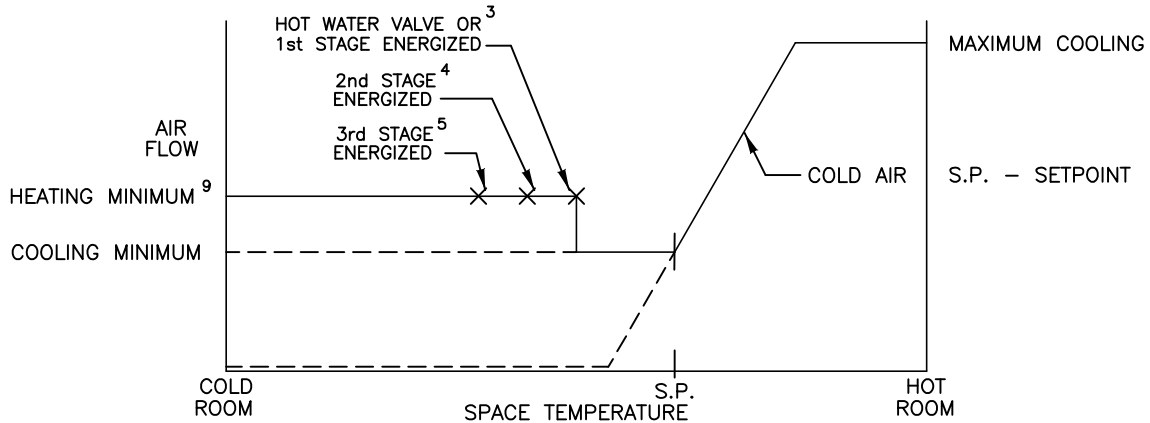
CONTROLLER ASSY. MODEL: ETPX0

- <sup>1</sup> MINIMUM 10 VA
- <sup>2</sup> WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD
- <sup>3</sup> SEE ORDER ACKNOWLEDGEMENT FOR OPTIONAL ITEM REQUIREMENTS

--- FACTORY TUBING  
- - - FIELD WIRING  
\_\_\_\_\_ FACTORY WIRING

**SD7001**

This application provides single duct variable air volume cooling with up to three stages of electric or hot water reheat and dual minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is energized in stages to satisfy the load. Air volume limits are located at the thermostat.



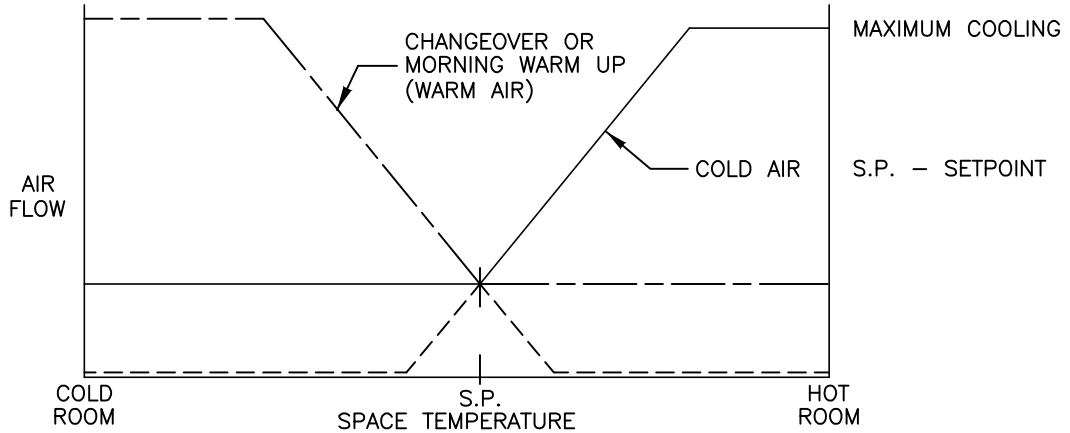
CONTROLLER ASSY. MODEL: ETPXN

- 1 MINIMUM 40 VA
- 2 MAXIMUM 10 VA HOLDING COIL
- 3 ENERGIZED 2° F BELOW SETPOINT
- 4 ENERGIZED 3° F BELOW SETPOINT
- 5 ENERGIZED 4° F BELOW SETPOINT
- 6 IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND DISCONNECT ARE LOCATED IN THE HEATER ENCLOSURE AND TRANSFORMER PRIMARY VOLTAGE IS DEPENDENT ON HEATER LINE VOLTAGE REQUIREMENT.
- 7 IF HOT WATER REHEAT IS USED, FIELD WIRING IS REQUIRED.
- 8 WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD
- 9 IF DUAL MINIMUMS ARE NOT DESIRED, WIRE FROM TERMINAL 4 OF ETST5AW TO TERMINAL 4 OF ETPH3 IS NOT REQUIRED
- 10 IF ELECTRIC HEAT IS NOT PROVIDED, SEE ORDER ACKNOWLEDGEMENT FOR OPTIONAL ITEMS REQUIREMENTS

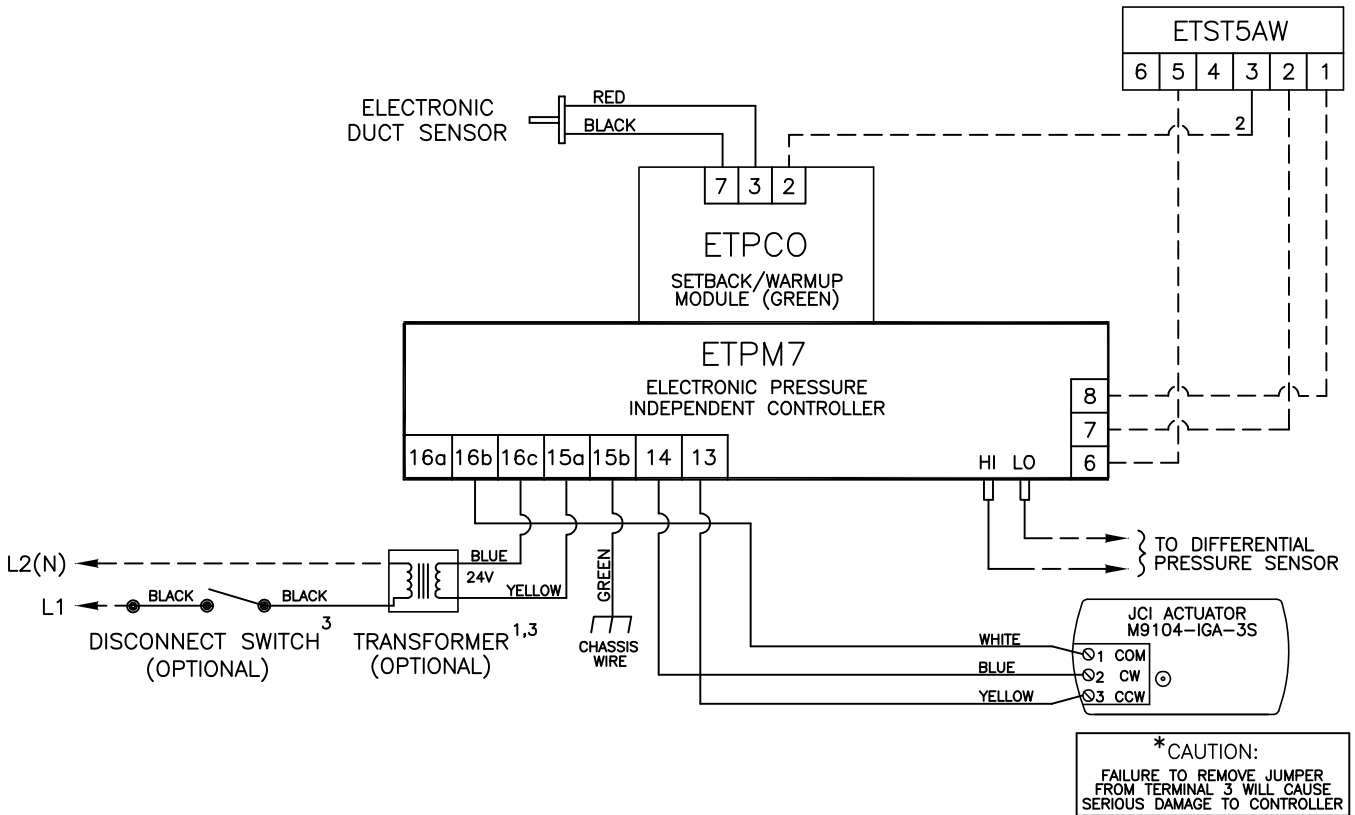
--- FACTORY TUBING  
- - - FIELD WIRING  
\_\_\_\_\_ FACTORY WIRING

**SD7100**

This application provides single duct variable air volume cooling with summer/winter changeover and/or morning warm up. As space temperature drops, airflow is reset from maximum to minimum setpoint. Warm air is sensed by an electronic duct sensor causing the sequence to reverse for changeover or morning warm up. Air volume limits are located at the thermostat.



\*2" SQUARE LOW PROFILE ELECTRONIC THERMOSTAT



CONTROLLER ASSY. MODEL: ETPX0CD

<sup>1</sup> MINIMUM 10 VA

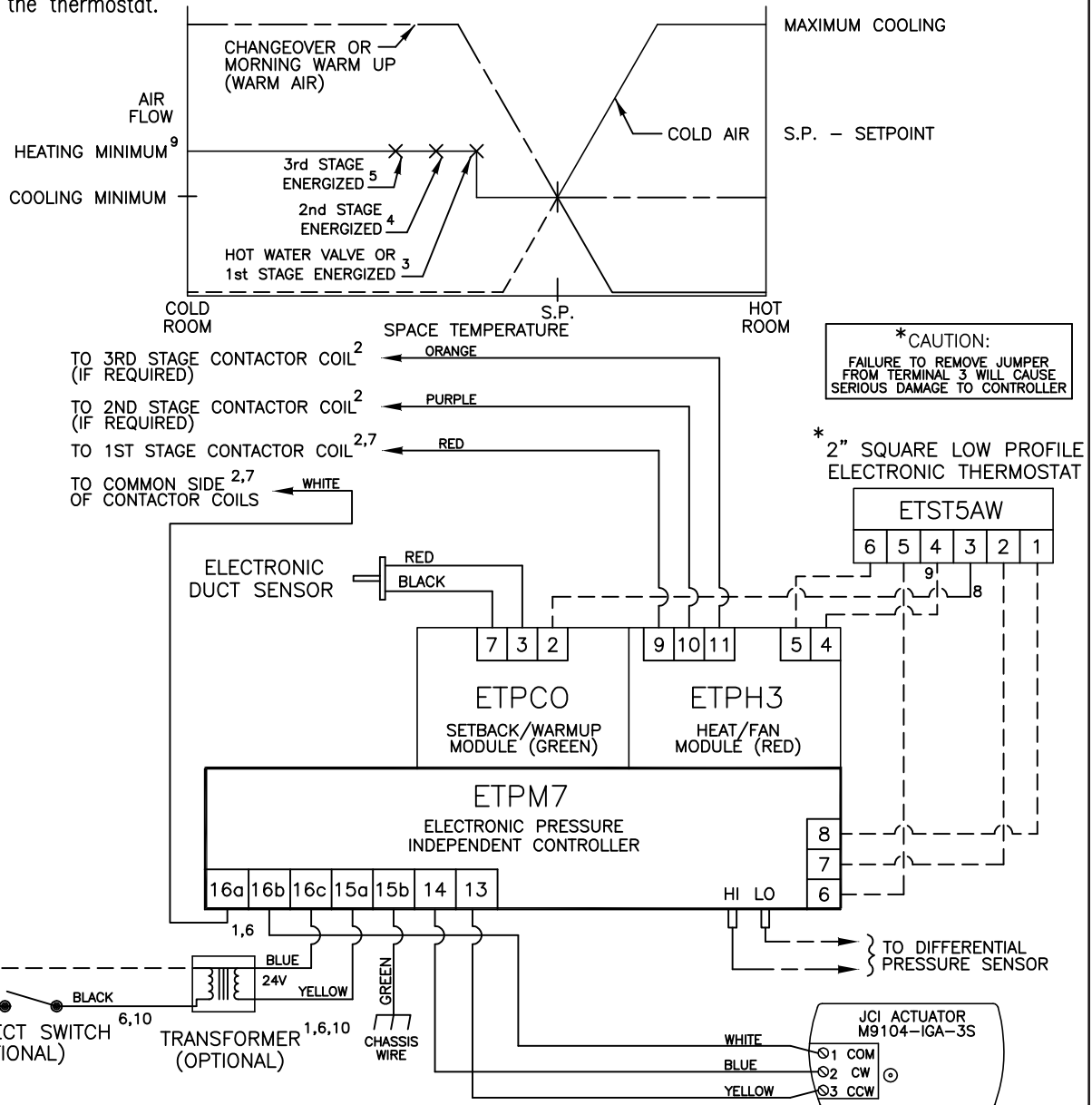
<sup>2</sup> REMOVE JUMPER ON TERMINAL 3 BEFORE INSTALLATION

<sup>3</sup> SEE ORDER ACKNOWLEDGEMENT FOR OPTIONAL ITEM REQUIREMENTS

— — — — — FACTORY TUBING  
- - - - - FIELD WIRING  
————— FACTORY WIRING

## SD7101

This application provides single duct variable air volume cooling with up to three stages of electric or hot water reheat, summer/winter changeover and/or morning warm up, and dual minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is energized in stages to satisfy the load. Warm air is sensed by an electronic duct sensor causing the sequence to reverse for changeover or morning warm up (reheat is disabled). Air volume limits are located at the thermostat.



**CONTROLLER ASSY. MODEL: ETPXNCD**

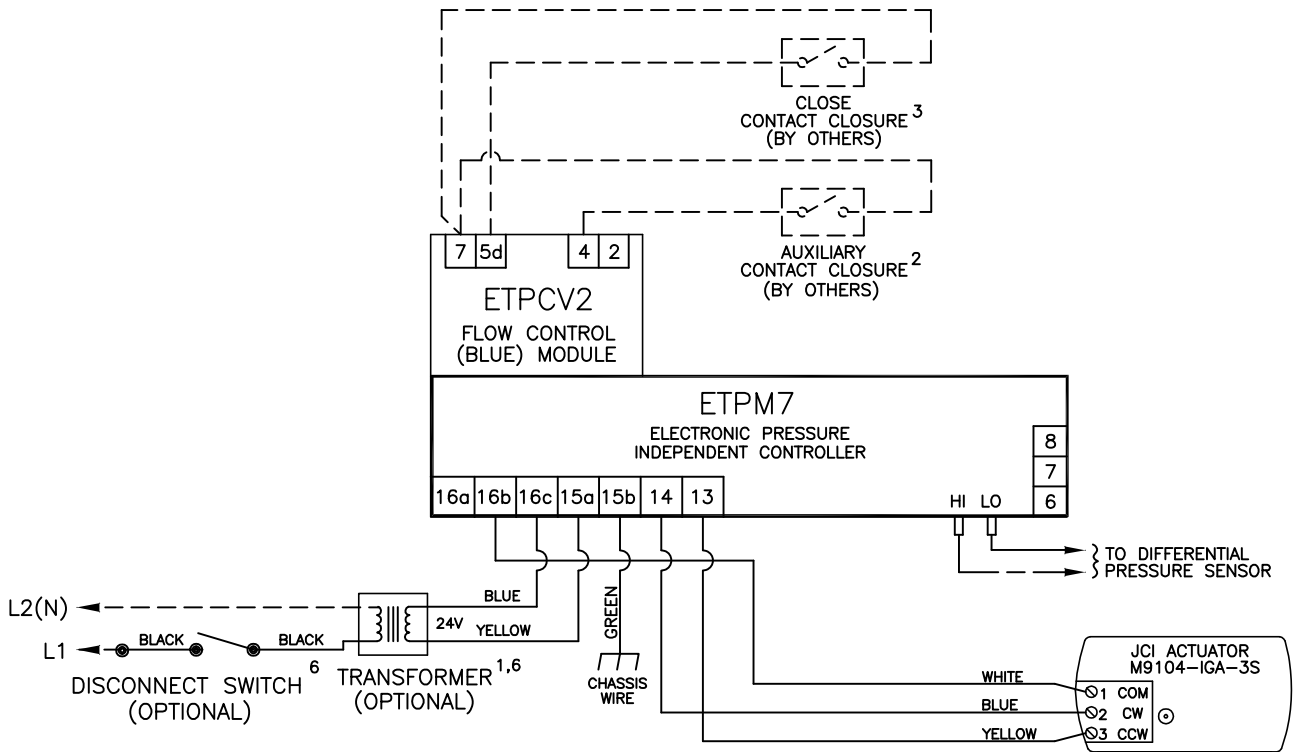
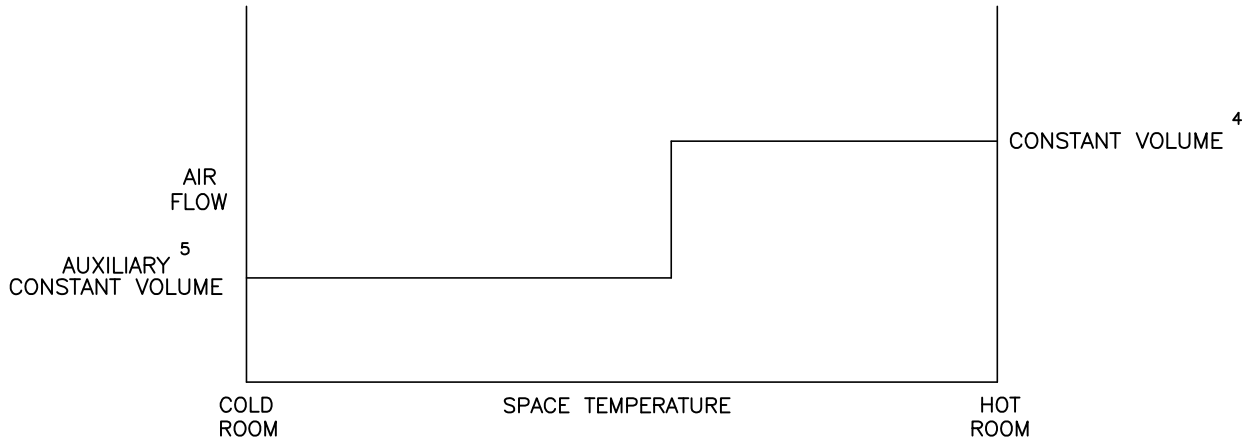
- 1 MINIMUM 40 VA
- 2 MAXIMUM 10 VA HOLDING COIL
- 3 ENERGIZED 2° F BELOW SETPOINT
- 4 ENERGIZED 3° F BELOW SETPOINT
- 5 ENERGIZED 4° F BELOW SETPOINT
- 6 IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND DISCONNECT SWITCH ARE LOCATED IN THE HEATER ENCLOSURE AND TRANSFORMER PRIMARY VOLTAGE IS DEPENDENT ON HEATER LINE VOLTAGE REQUIREMENT

- 7 IF HOT WATER REHEAT IS USED, FIELD WIRING IS REQUIRED.
- 8 REMOVE JUMPER ON TERMINAL 3 BEFORE INSTALLATION.
- 9 IF DUAL MINIMUMS ARE NOT DESIRED, WIRE FROM TERMINAL 4 OF ETST5AW TO TERMINAL 4 OF ETPH3 IS NOT REQUIRED
- 10 IF ELECTRIC HEAT IS NOT PROVIDED, SEE ORDER ACKNOWLEDGEMENT FOR OPTIONAL ITEMS REQUIREMENTS

--- FACTORY TUBING  
 - - - FIELD WIRING  
 \_\_\_\_\_ FACTORY WIRING

**SD7600**

This application provides single duct dual flow constant volume cooling. A contact closure input is provided to close the damper. Air volume limit is located at the controller.

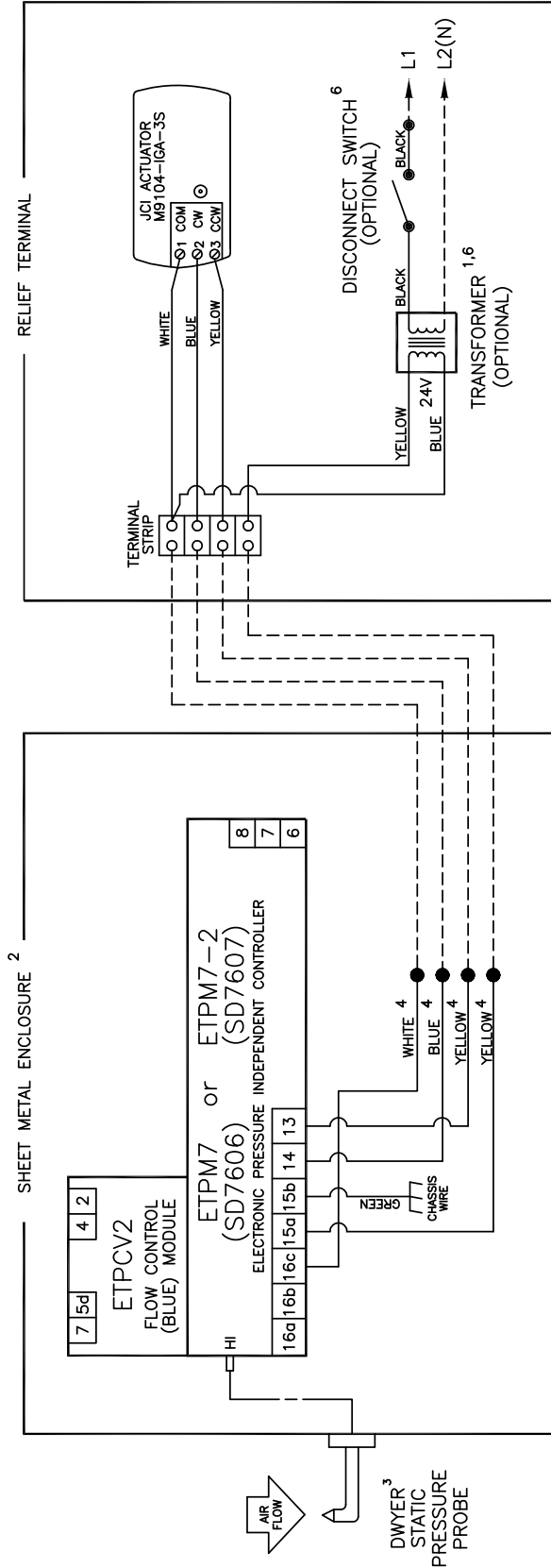


CONTROLLER ASSY. MODEL: ETPXVC

- 1 MINIMUM 10 VA
  - 2 CLOSE CONTACT FOR AUXILIARY CONSTANT VOLUME
  - 3 CLOSE CONTACT TO CLOSE DAMPER
  - 4 ADJUST POTENTIOMETER LABELED "AUX" TO SET CONSTANT VOLUME
  - 5 ADJUST POTENTIOMETER LABELED "MIN" TO SET AUXILIARY CONSTANT VOLUME
  - 6 SEE ORDER ACKNOWLEDGEMENT FOR OPTIONAL ITEM REQUIREMENTS
- - - - - FACTORY TUBING  
 - - - - - FIELD WIRING  
 \_\_\_\_\_ FACTORY WIRING

**SD7606, SD7607**

These applications provide static pressure control. The static pressure limit (field adjustable) is located on the controller. As static pressure in the main duct increases, the relief damper opens to bypass airflow to the return plenum, thus maintaining static pressure.



SD7606 CONTROLLER ASSY. MODEL: ETPXVC  
SD7607 CONTROLLER ASSY. MODEL: ETPXV1

APPLICATION NUMBER	CONTROLLER MODEL	PRESSURE CONTROL RANGE
SD7606	ETPM7	0.1-1.0 INWG
SD7607	ETPM7-2	0.5-2.0 INWG

--- FACTORY TUBING  
- - - FIELD WIRING  
\_\_\_ FACTORY WIRING

- 1 MINIMUM 10 VA
- 2 MOUNTED (BY OTHERS) AT LOCATION WHERE STATIC PRESSURE IS TO BE SENSED
- 3 PROPER LOCATION IS IMPORTANT AND OFTEN REQUIRES TRIAL AND ERROR. PROBE CANNOT BE REMOTELY MOUNTED FROM CONTROLLER
- 4 WIRE NUT
- 5 ADJUST POTENTIOMETER LABELED "AUX" TO SET STATIC PRESSURE
- 6 SEE ORDER FOR OPTIONAL ITEM REQUIREMENTS



## OTHER SINGLE DUCT CONTROL SEQUENCES

(See ENVIRO-TEC<sup>®</sup> submittal data for additional information on the sequences below).

**SD7003:** This application provides single duct variable air volume cooling with proportional modulating hot water reheat and dual minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPHM1 (Heat/Fan Module [Red]).

**SD7004:** This application provides single duct variable air volume cooling with floating modulating hot water reheat and dual minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPHM2 (Heat/Fan Module [Red]).

**SD7005:** This application provides single duct variable air volume cooling with proportional modulating electric (SSR) reheat and dual minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPHM3 (Heat/Fan Module [Red]).

**SD7103:** This application provides single duct variable air volume cooling with proportional modulating hot water reheat, summer/winter changeover and/or morning warm up and dual heating minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the sequence to reverse for changeover or morning warm up (reheat is disabled). Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPHM1 (Heat/Fan Module [Red]).

**SD7104:** This application provides single duct variable air volume cooling with floating modulating hot water reheat, summer/winter changeover and/or morning warm up and dual heating minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the sequence to reverse for changeover or morning warm up (reheat is disabled). Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPHM2 (Heat/Fan Module [Red]).

**SD7105:** This application provides single duct variable air volume cooling with proportional modulating electric (SSR) reheat, summer/winter changeover and/or morning warm up and dual heating minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the sequence to reverse for changeover or morning warm up (reheat is disabled). Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPHM3 (Heat/Fan Module [Red]).

**SD7300:** This application provides single duct variable air volume cooling with morning warm up. As space temperature drops, airflow is reset from maximum to minimum setpoint. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and ETPW (Setback/Warm up Module [Green]).

**SD7301:** This application provides single duct variable air volume cooling with up to three stages of electric reheat (On/Off) or hot water reheat (two-position), morning warm up and dual heating minimum setpoints. As space temperature drops, airflow is reset

from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is energized in stages to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (reheat is disabled). Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPH3 (Heat/Fan Module [Red]).

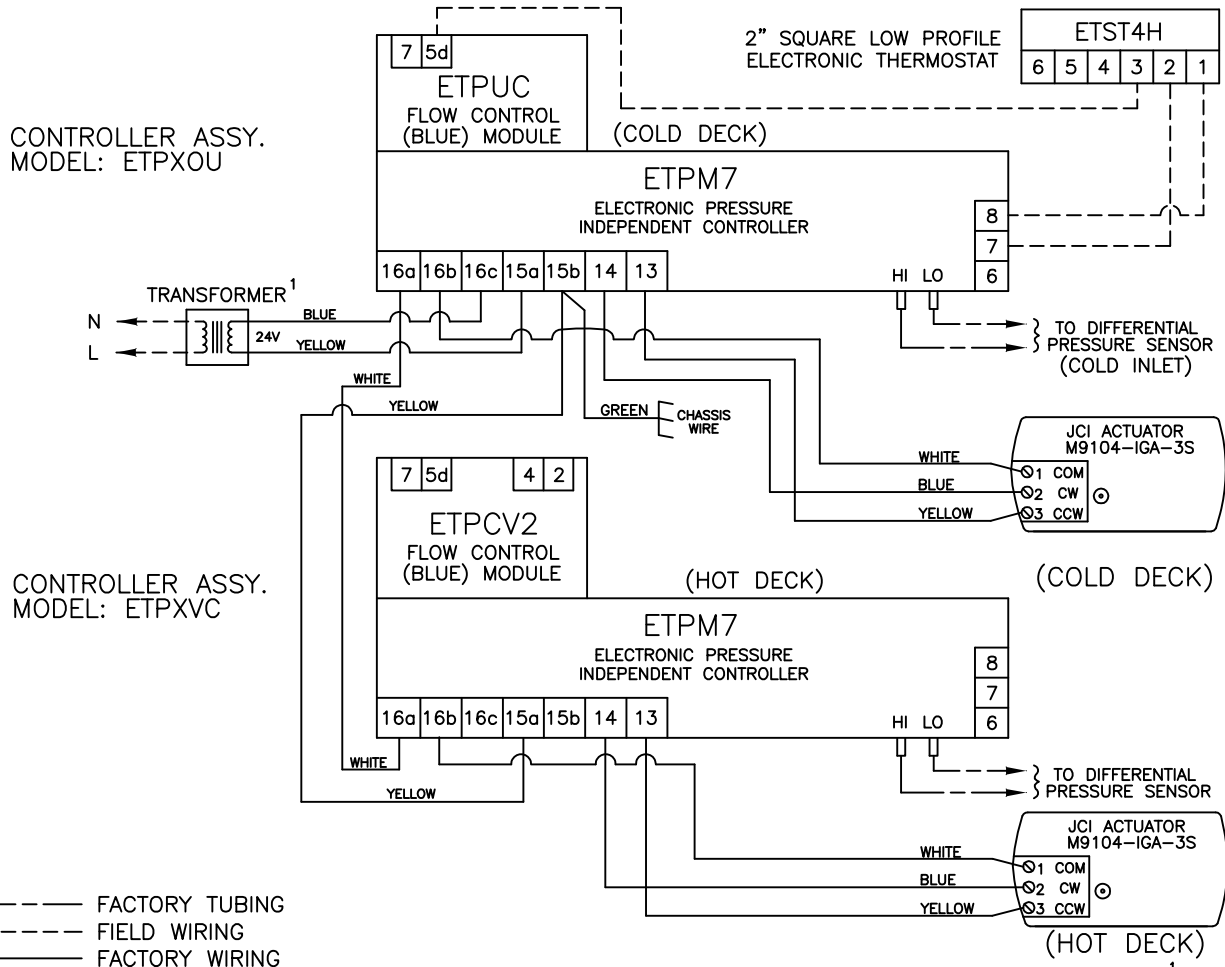
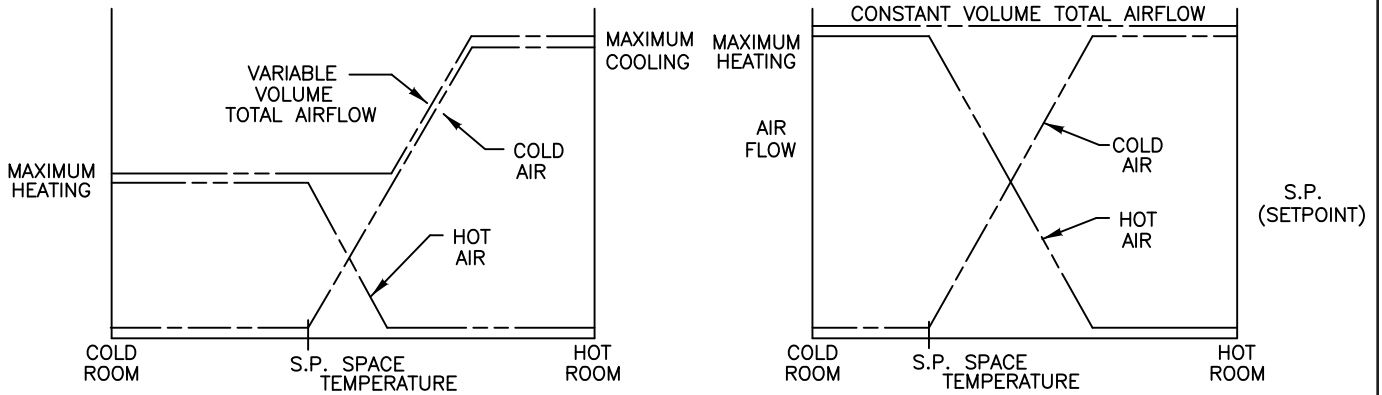
**SD7303:** This application provides single duct variable air volume cooling with modulating hot water reheat, morning warm up and dual heating minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (reheat is disabled). Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPHM1 (Heat/Fan Module [Red]).

**SD7304:** This application provides single duct variable air volume cooling with floating modulating hot water reheat, morning warm up and dual heating minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (reheat is disabled). Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPHM2 (Heat/Fan Module [Red]).

**SD7305:** This application provides single duct variable air volume cooling with proportional modulating electric (SSR) reheat, morning warm up and dual heating minimum setpoints. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, airflow is reset to a higher setpoint and reheat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (reheat is disabled). Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPHM3 (Heat/Fan Module [Red]).

**DT7100**

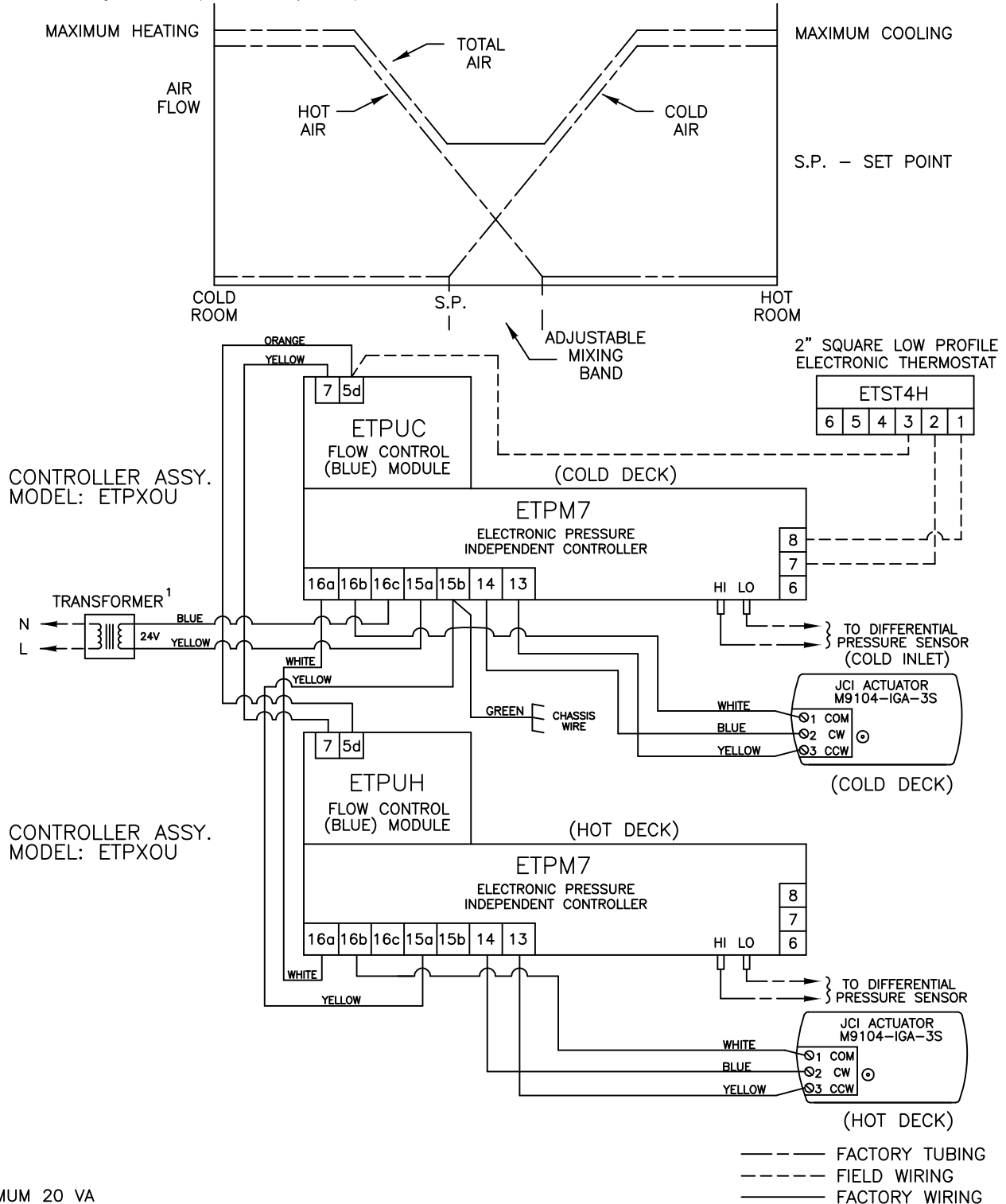
This application provides dual duct constant or variable volume discharge control. When the space temperature is warm, the cold damper maintains maximum cooling setpoint while the hot damper maintains minimum heating airflow setpoint. As the space temperature drops, the cold damper modulates closed while the hot damper opens. As the space temperature continues to fall, the cold damper maintains minimum cooling airflow setpoint and the hot damper maintains maximum heating airflow setpoint. Airflow limits for the cold deck are located on the ETPUC module. Total airflow limit is located on the ETPCV2 module. Heating minimum airflow limit is set by the difference in cold deck maximum and total airflow limits.



<sup>1</sup>MINIMUM 20 VA

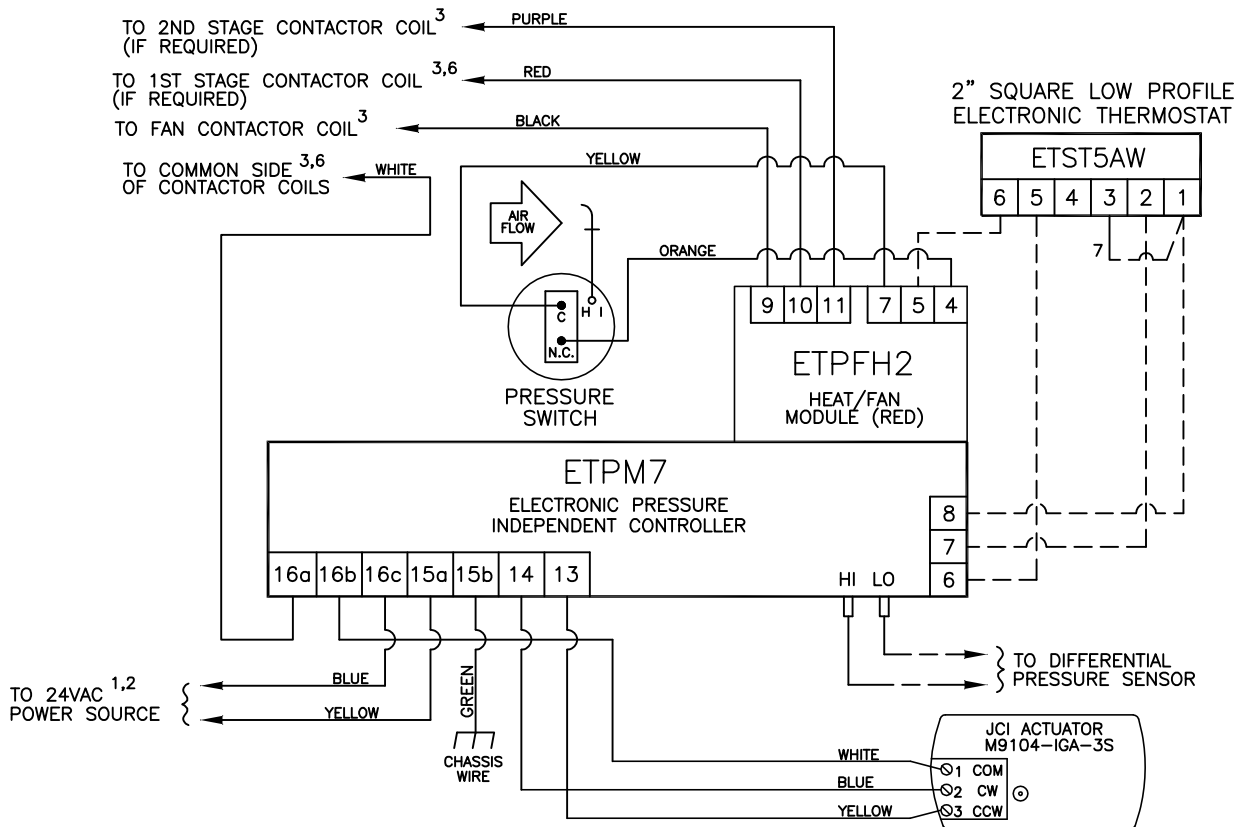
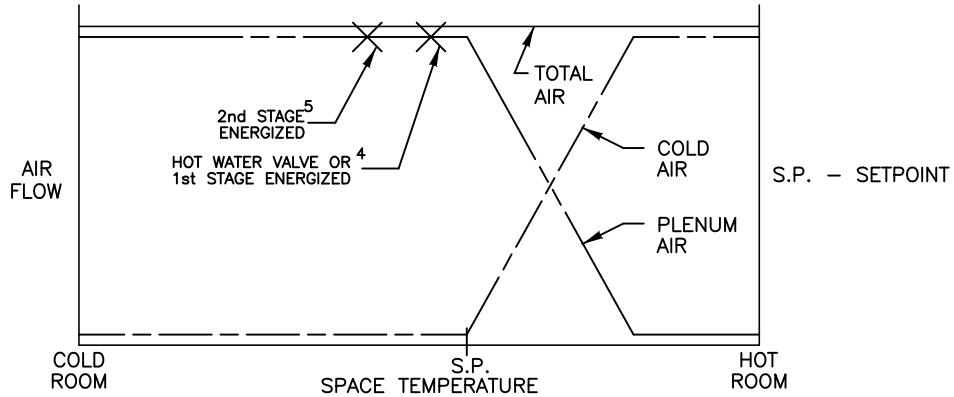
**DD7200 (Other Dual Duct Control Sequences)**

This application provides dual duct variable volume discharge controls. When space temperature is warm, the cold air valve maintains maximum cooling airflow setpoint while the hot air valve remains closed. As space temperature drops, the cold air valve modulates to its minimum airflow setpoint while the hot air valve opens to maintain the minimum total airflow setpoint. As space temperature continues to drop, the cold air valve maintains minimum cooling airflow setpoint while the hot air valve maintains maximum heating airflow setpoint. Maximum and minimum cooling airflow limits are located on the ETPUC cold deck module. Maximum heating airflow setpoint adjustment, minimum total airflow setpoint adjustment and mixing band adjustment are located on the ETPUH hot deck module (minimum heating airflow setpoint is always zero).



**FC7001**

This application applies to Series Flow fan powered terminals providing up to two stages of electric or hot water heat. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. When system air is failed, the primary air valve closes and the unit fan and heat are deenergized for night operation. Air volume limits are located at the thermostat.



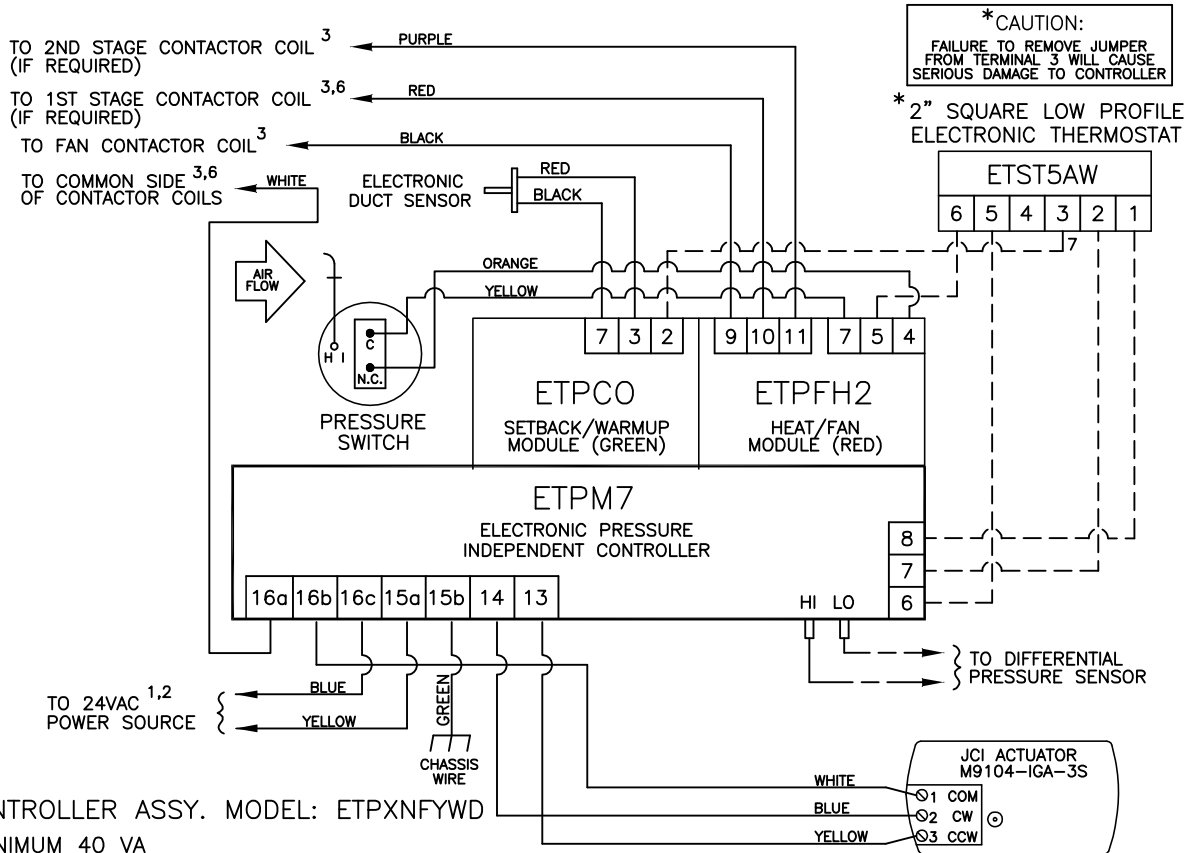
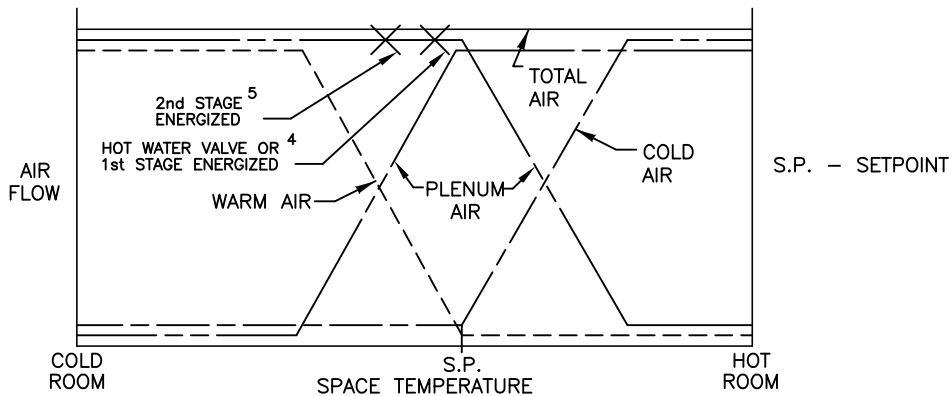
CONTROLLER ASSY. MODEL: ETPXNFY

- <sup>1</sup> MINIMUM 40 VA
- <sup>2</sup> IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.
- <sup>3</sup> MAXIMUM 10 VA HOLDING COIL
- <sup>4</sup> ENERGIZED 2° F BELOW SETPOINT
- <sup>5</sup> ENERGIZED 3° F BELOW SETPOINT
- <sup>6</sup> IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.
- <sup>7</sup> WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD

----- FACTORY TUBING  
 - - - - - FIELD WIRING  
 \_\_\_\_\_ FACTORY WIRING

**FC7101**

This application applies to Series Flow fan powered terminals providing summer/winter changeover and/or morning warm up and up to two stages of electric or hot water heat. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. Warm air is sensed by an electronic duct sensor, causing the primary air valve to reverse operation for changeover or morning warm up (heat is deenergized). When system air is failed, the primary air valve closes and the unit fan and heat are deenergized for night operation. Air volume limits are located at the thermostat.



CONTROLLER ASSY. MODEL: ETPXNFYWD

<sup>1</sup> MINIMUM 40 VA

<sup>2</sup> IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.

<sup>3</sup> MAXIMUM 10 VA HOLDING COIL

<sup>4</sup> ENERGIZED 2' F BELOW SETPOINT

<sup>5</sup> ENERGIZED 3' F BELOW SETPOINT

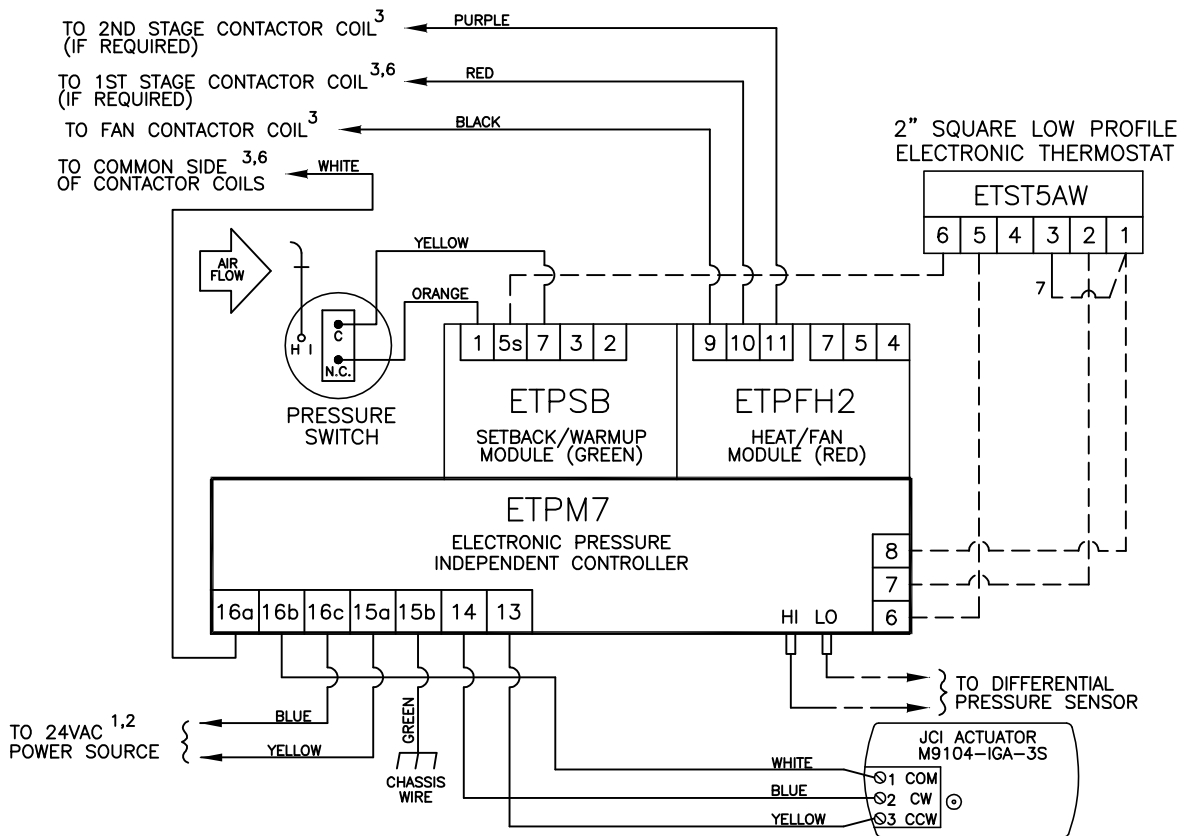
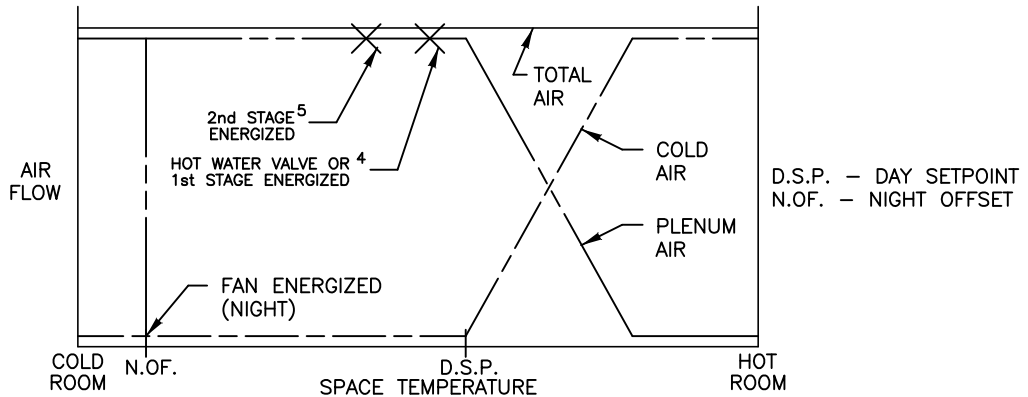
<sup>6</sup> IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.

<sup>7</sup> REMOVE JUMPER ON TERMINAL 3 BEFORE INSTALLATION.

--- FACTORY TUBING  
- - - FIELD WIRING  
\_\_\_ FACTORY WIRING

**FC7201**

This application applies to Series Flow fan powered terminals providing up to two stages of electric or hot water heat and night setback. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat.



CONTROLLER ASSY. MODEL: ETPXNFB

<sup>1</sup> MINIMUM 40 VA

<sup>2</sup> IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.

<sup>3</sup> MAXIMUM 10 VA HOLDING COIL

<sup>4</sup> ENERGIZED 2' F BELOW SETPOINT

<sup>5</sup> ENERGIZED 3' F BELOW SETPOINT

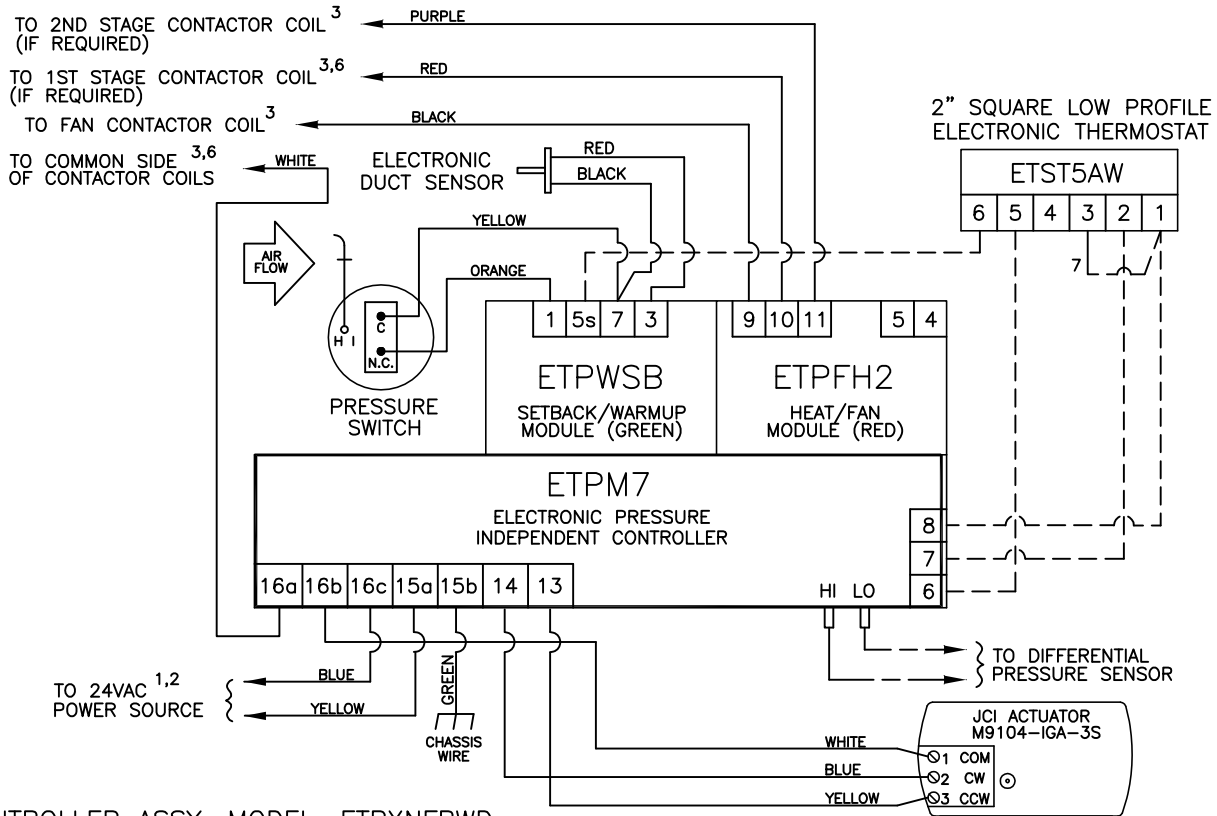
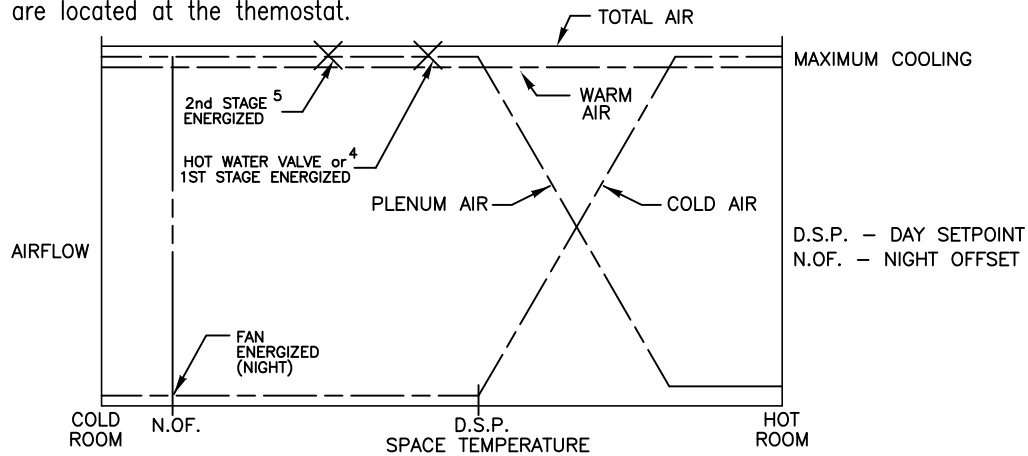
<sup>6</sup> IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.

<sup>7</sup> WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD

--- FACTORY TUBING  
- - - FIELD WIRING  
\_\_\_\_\_ FACTORY WIRING

**FC7401**

This application applies to Series Flow fan powered terminals providing up to two stages of electric or hot water heat, night setback and morning warm up. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. When system air is failed the unit automatically switches into the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by the electronic duct sensor causing the primary air valve to open to the maximum airflow setpoint for morning warm up (heat is deenergized). Air volume limits are located at the thermostat.



CONTROLLER ASSY. MODEL: ETPXNFBWD

- 1 MINIMUM 40 VA
- 2 IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.
- 3 MAXIMUM 10 VA HOLDING COIL
- 4 ENERGIZED 2° F BELOW SETPOINT
- 5 ENERGIZED 3° F BELOW SETPOINT
- 6 IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.
- 7 WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD

--- FACTORY TUBING  
 - - - FIELD WIRING  
 ——— FACTORY WIRING



## OTHER SERIES FLOW FAN POWERED CONTROL SEQUENCES

(See ENVIRO-TEC<sup>®</sup> submittal data for additional information on the sequences below).

**FC7002:** This application applies to Series Flow Fan Powered Terminals providing fan and three stages of electric heat (On/Off). The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPFH3 (Heat/Fan Module [Red]).

**FC7003:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating hot water heat. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPFHM1 (Heat/Fan Module [Red]).

**FC7004:** This application applies to Series Flow Fan Powered Terminals providing floating modulating hot water heat. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPFHM2 (Heat/Fan Module [Red]).

**FC7005:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating electric (SSR) heat. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPFHM3 (Heat/Fan Module [Red]).

**FC7102:** This application applies to Series Flow Fan Powered Terminals providing fan and three stages of

electric heat (On/Off), summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPFH3 (Heat/Fan Module [Red]).

**FC7103:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating hot water heat, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPFHM1 (Heat/Fan Module [Red]).

**FC7104:** This application applies to Series Flow Fan Powered Terminals providing floating modulating hot water heat, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPFHM2 (Heat/Fan Module [Red]).

**FC7105:** This application applies to Series Flow Fan Powered Terminals providing proportional modulat-

ing electric (SSR) heat, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPFHM3 (Heat/Fan Module [Red]).

**FC7202:** This application applies to Series Flow Fan Powered Terminals providing fan and three stages of electric heat (On/Off). The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPSB (Setback/Warm up Module [Green]) and the ETPFH3 (Heat/Fan Module [Red]).

**FC7203:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating hot water heat and night setback. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPSB (Setback/Warm up Module [Green]) and the ETPFHM1 (Heat/Fan Module [Red]).

**FC7204:** This application applies to Series Flow Fan Powered Terminals providing floating modulating hot water heat and night setback. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller),

ETPSB (Setback/Warm up Module [Green]) and the ETPFHM2 (Heat/Fan Module [Red]).

**FC7205:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating electric (SSR) heat and night setback. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPSB (Setback/Warm up Module [Green]) and the ETPFHM3 (Heat/Fan Module [Red]).

**FC7301:** This application applies to Series Flow Fan Powered Terminals providing fan and up to two stages of electric heat (On/Off) or hot water heat (two-position) and morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFH2 (Heat/Fan Module [Red]).

**FC7302:** This application applies to Series Flow Fan Powered Terminals providing fan and three stages of electric heat (On/Off). The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFH3 (Heat/Fan Module [Red]).

**FC7303:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating hot water heat and morning warm up. The unit fan draws either cold primary air or warm plenum

air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFHM1 (Heat/Fan Module [Red]).

**FC7304:** This application applies to Series Flow Fan Powered Terminals providing floating modulating hot water heat and morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFHM2 (Heat/Fan Module [Red]).

**FC7305:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating electric (SSR) heat and morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. Warm air is sensed by an electronic duct sensor causing the air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized). When system air is failed, the primary air valve closes and the unit fan and heat are de-energized for night operation. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFHM3 (Heat/Fan Module [Red]).

**FC7402:** This application applies to Series Flow Fan Powered Terminals providing fan and three stages of electric heat (On/Off), morning warm up and night setback. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm

air is sensed by an electronic duct sensor causing the primary air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized) Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPWSB (Setback/Warm up Module [Green]) and the ETPFH3 (Heat/Fan Module [Red]).

**FC7403:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating hot water heat, morning warm up and night setback. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the primary air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized) Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPWSB (Setback/Warm up Module [Green]) and the ETPFHM1 (Heat/Fan Module [Red]).

**FC7404:** This application applies to Series Flow Fan Powered Terminals providing floating modulating hot water heat, morning warm up and night setback. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the primary air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized) Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPWSB (Setback/Warm up Module [Green]) and the ETPFHM2 (Heat/Fan Module [Red]).

**FC7405:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating electric (SSR) heat, morning warm up and night setback. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the

primary air valve to open to maximum airflow setpoint for morning warm up (heat is de-energized) Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPWSB (Setback/Warm up Module [Green]) and the ETPFHM3 (Heat/Fan Module [Red]).

**FC7501:** This application applies to Series Flow Fan Powered Terminals providing fan and up to two stages of electric heat (On/Off) or hot water heat (two-position), night setback, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). Air volume limits are located on the ETPECO module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPFH2 (Heat/Fan Module [Red]).

**FC7502:** This application applies to Series Flow Fan Powered Terminals providing fan and three stages of electric heat (On/Off), night setback, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). Air volume limits are located on the ETPECO module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPFH3 (Heat/Fan Module [Red]).

**FC7503:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating hot water heat, night setback, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switch-

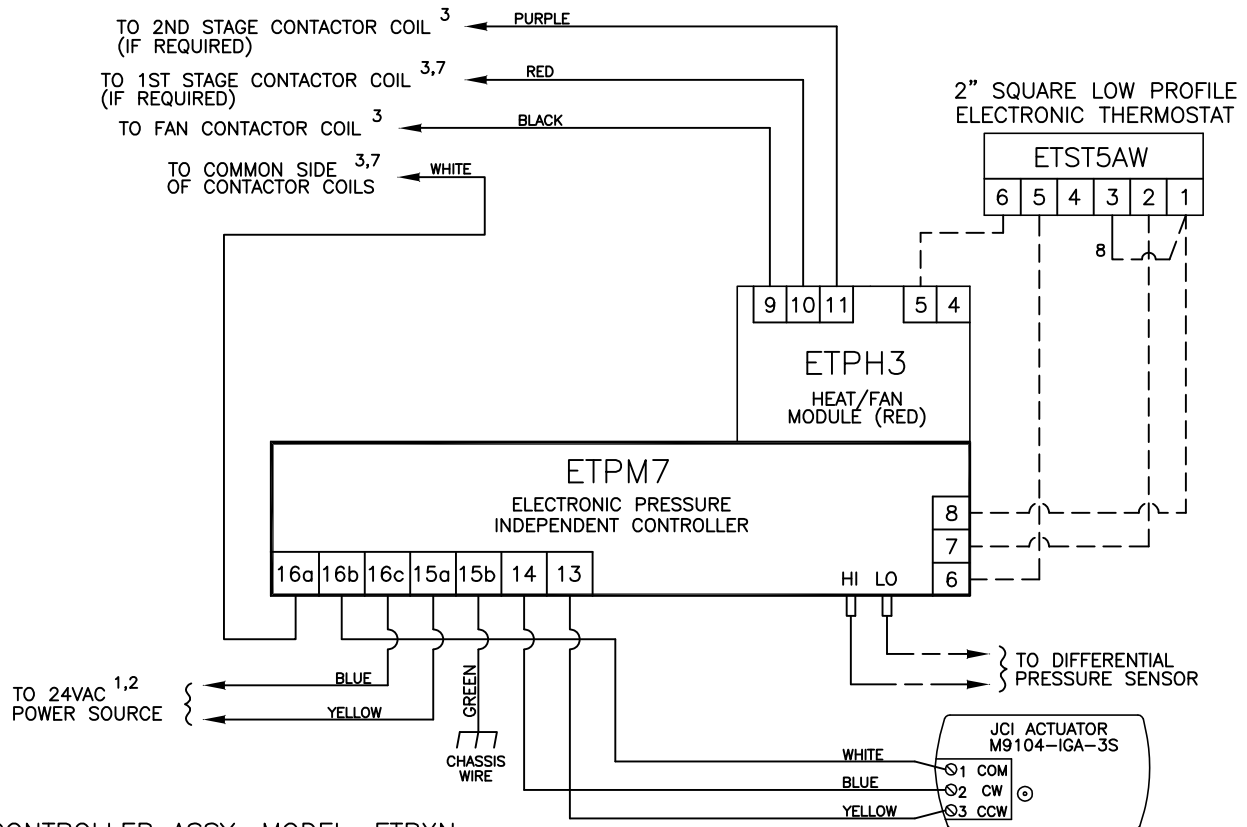
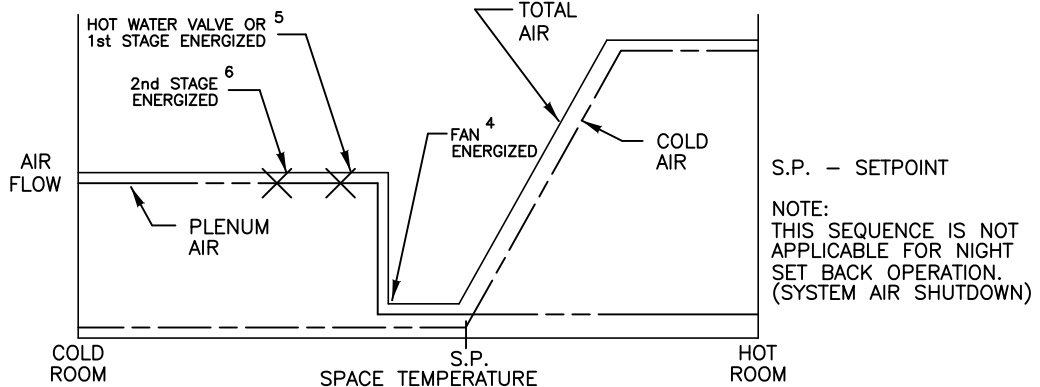
es to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPFHM1 (Heat/Fan Module [Red]).

**FC7504:** This application applies to Series Flow Fan Powered Terminals providing floating modulating hot water heat, night setback, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPFHM2 (Heat/Fan Module [Red]).

**FC7505:** This application applies to Series Flow Fan Powered Terminals providing proportional modulating electric (SSR) heat, night setback, summer/winter changeover and/or morning warm up. The unit fan draws either cold primary air or warm plenum air valve to satisfy the load. If plenum air fails to maintain setpoint, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closes and the unit fan and heat are cycled to maintain the night offset. Warm air is sensed by an electronic duct sensor causing the primary air valve to reverse operation for changeover or morning warm up (heat is de-energized). Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPFHM3 (Heat/Fan Module [Red]).

**FV7001**

This application provides intermittent fan powered terminals providing up to two stages of electric or hot water heat. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized, thus supplying plenum air to the space. On a further drop in space temperature heat is energized in stages to satisfy the load. Air volume limits are located at the thermostat.



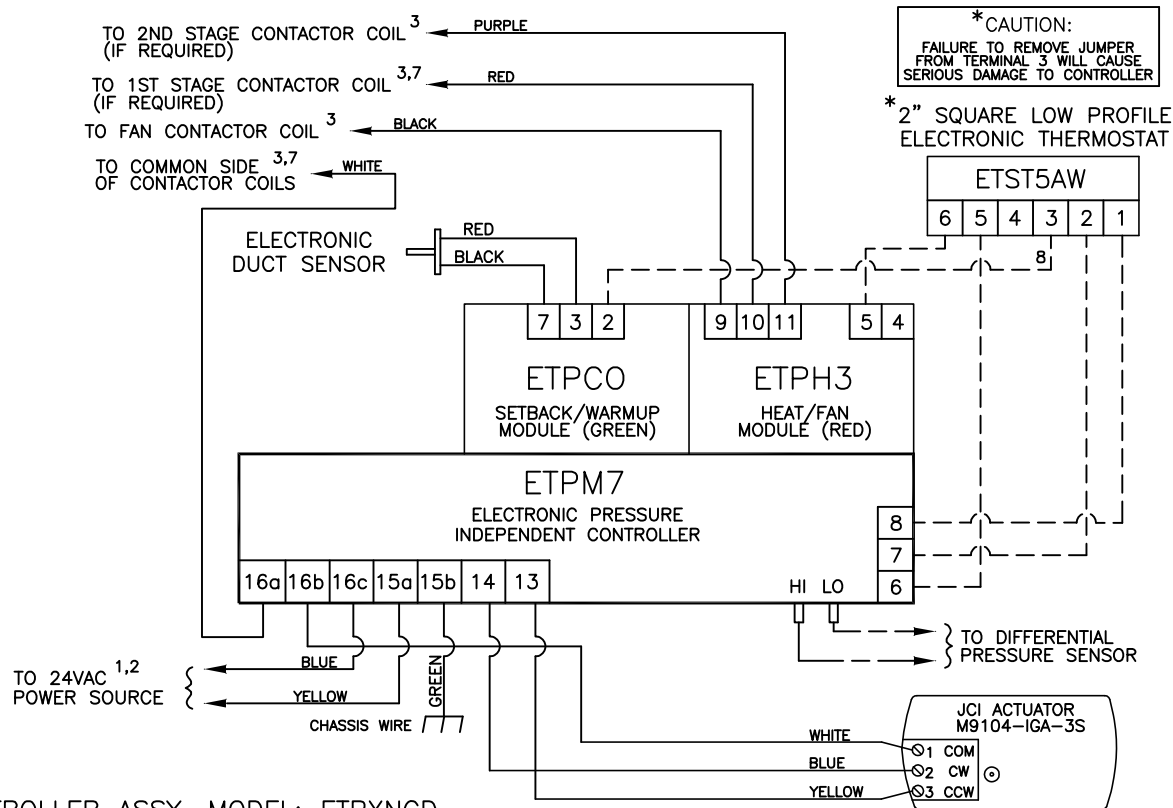
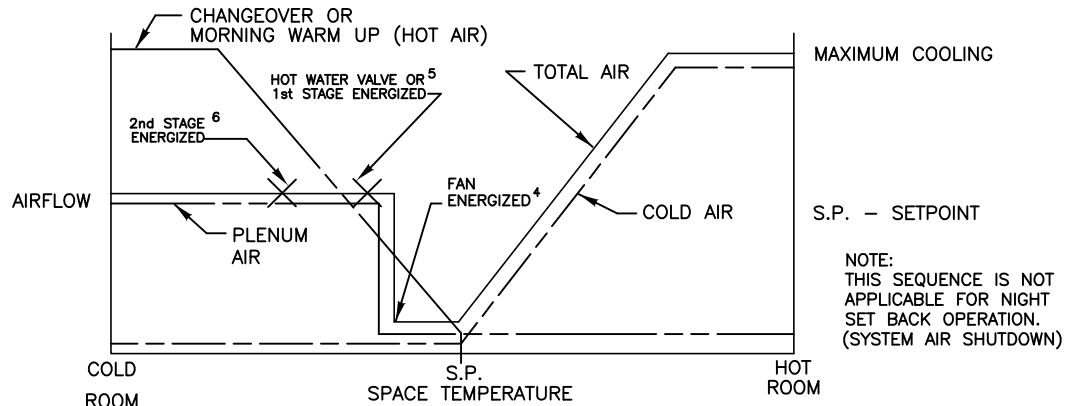
CONTROLLER ASSY. MODEL: ETPXN

- 1 MINIMUM 40 VA
- 2 IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.
- 3 MAXIMUM 10 VA HOLDING COIL
- 4 ENERGIZED 1° F BELOW SETPOINT
- 5 ENERGIZED 2° F BELOW SETPOINT
- 6 ENERGIZED 3° F BELOW SETPOINT
- 7 IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.
- 8 WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD

--- FACTORY TUBING  
- - - - - FIELD WIRING  
\_\_\_\_\_ FACTORY WIRING

**FV7101**

This application provides intermittent fan powered variable air volume control with up to two stages of electric or hot water heat and summer/winter changeover and/or morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are deenergized and the primary air valve reverses operation for changeover or morning warm up. Air volume limits are located at the thermostat.



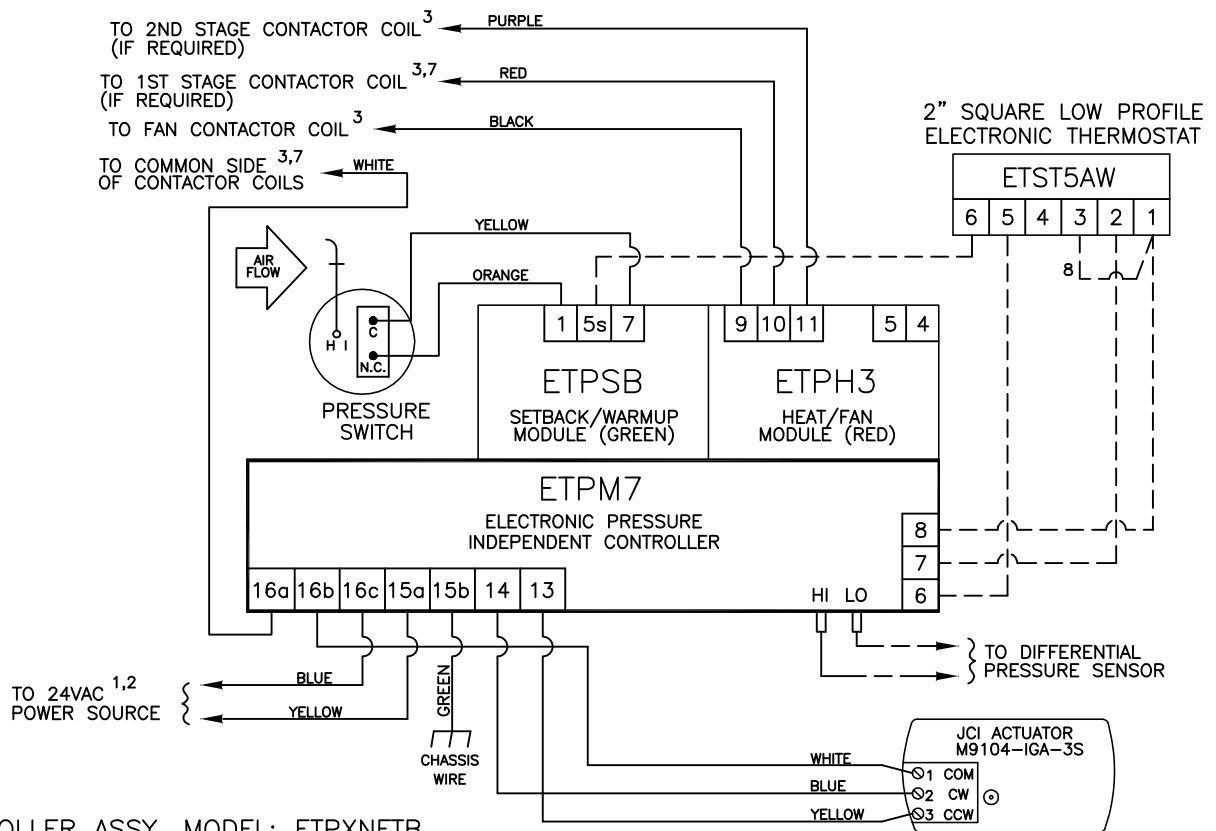
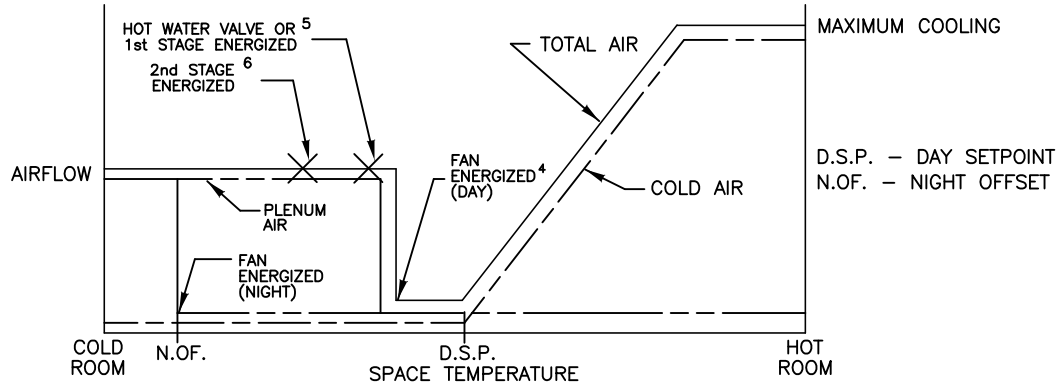
CONTROLLER ASSY. MODEL: ETPXNCD

- 1 MINIMUM 40 VA
- 2 IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.
- 3 MAXIMUM 10 VA HOLDING COIL
- 4 ENERGIZED 1° F BELOW SETPOINT
- 5 ENERGIZED 2° F BELOW SETPOINT
- 6 ENERGIZED 3° F BELOW SETPOINT
- 7 IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.
- 8 REMOVE JUMPER FROM TERMINAL 3 BEFORE INSTALLATION.

--- FACTORY TUBING  
 - - - FIELD WIRING  
 \_\_\_\_\_ FACTORY WIRING

**FV7201**

This application provides intermittent fan powered variable air volume control with up to two stages of electric or hot water heat and night setback. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches into the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat.



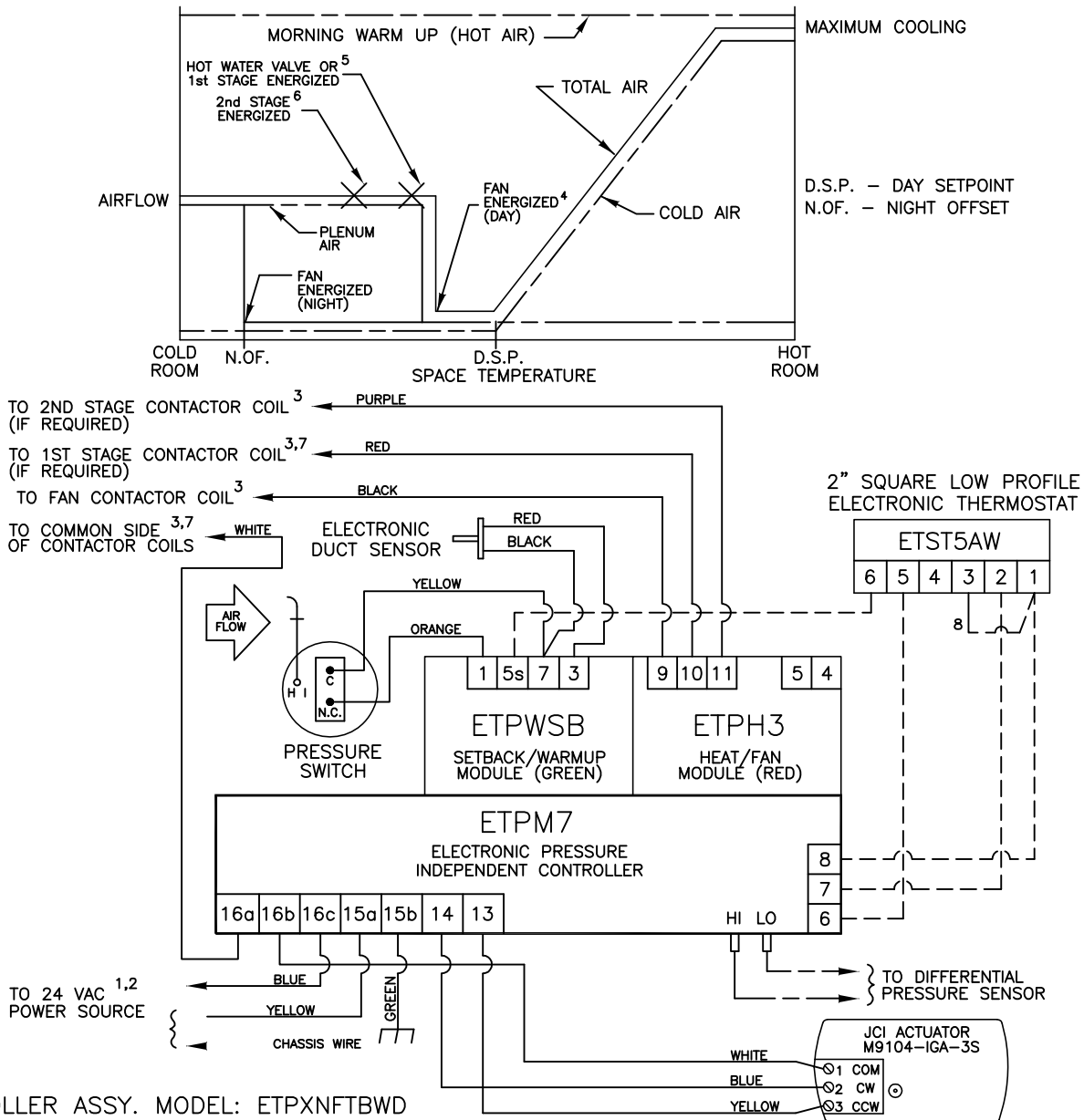
CONTROLLER ASSY. MODEL: ETPXNFTB

- 1 MINIMUM 40 VA
- 2 IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.
- 3 MAXIMUM 10 VA HOLDING COIL
- 4 ENERGIZED 1° F BELOW SETPOINT
- 5 ENERGIZED 2° F BELOW SETPOINT
- 6 ENERGIZED 3° F BELOW SETPOINT
- 7 IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.
- 8 WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD

--- FACTORY TUBING  
 - - - FIELD WIRING  
 ——— FACTORY WIRING

**FV7401**

This application provides intermittent fan powered variable air volume control with up to two stages of electric or hot water heat, night setback and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches into the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are deenergized and the primary air valve opens to the maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat.



CONTROLLER ASSY. MODEL: ETPXNFTBWD

- 1 MINIMUM 40 VA
- 2 IF ELECTRIC HEAT IS PROVIDED, TRANSFORMER AND FAN RELAY ARE LOCATED IN HEATER ENCLOSURE—REFER TO HEATER WIRING DIAGRAM. OTHERWISE, REFER TO FAN WIRING DIAGRAM FOR TRANSFORMER AND RELAY WIRING, AND OTHER HIGH VOLTAGE WIRING.
- 3 MAXIMUM 10 VA HOLDING COIL
- 4 ENERGIZED 1° F BELOW SETPOINT
- 5 ENERGIZED 2° F BELOW SETPOINT
- 6 ENERGIZED 3° F BELOW SETPOINT
- 7 IF HOT WATER HEAT IS USED, FIELD WIRING IS REQUIRED.
- 8 WIRE TERMINAL 3 TO TERMINAL 1 IN THE FIELD

- - - - - FACTORY TUBING  
 - - - - - FIELD WIRING  
 \_\_\_\_\_ FACTORY WIRING



## OTHER PARALLEL FLOW FAN POWERED CONTROL SEQUENCES

(See ENVIRO-TEC<sup>®</sup> submittal data for additional information on the sequences below).

**FV7002:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with three stages of electric heat (On/Off). As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. Air volume limits are located at the thermostat. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPH4 (Heat/Fan Module [Red]).

**FV7003:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating hot water heat. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. Air volume limits are located at the thermostat. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPFVHM1 (Heat/Fan Module [Red]).

**FV7004:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with floating modulating hot water heat. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. Air volume limits are located at the thermostat. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPFVHM2 (Heat/Fan Module [Red]).

**FV7005:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating electric (SSR) heat. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is mod-

ulated to satisfy the load. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller) and the ETPFVHM3 (Heat/Fan Module [Red]).

**FV7102:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with three stages of electric heat (On/Off), summer/winter changeover and/or morning warm up. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for changeover or morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPH4 (Heat/Fan Module [Red]).

**FV7103:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating hot water heat, summer/winter changeover and/or morning warm up. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for changeover or morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPFVHM1 (Heat/Fan Module [Red]).

**FV7104:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with floating modulating hot water heat, summer/winter changeover and/or morning warm up. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is ener-

gized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for changeover or morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPFVHM2 (Heat/Fan Module [Red]).

**FV7105:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating electric (SSR) heat, summer/winter changeover and/or morning warm up. As space temperature drops, airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for changeover or morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPCO (Setback/Warm up Module [Green]) and the ETPFVHM3 (Heat/Fan Module [Red]).

**FV7202:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with three stages of electric heat (On/Off) and night setback. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches into the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPSB (Setback/Warm up Module [Green]) and the ETPH4 (Heat/Fan Module [Red]).

**FV7203:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating

hot water heat and night setback. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches into the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPSB (Setback/Warm up Module [Green]) and the ETPFVHM1 (Heat/Fan Module [Red]).

**FV7204:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with floating modulating hot water heat and night setback. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches into the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPSB (Setback/Warm up Module [Green]) and the ETPFVHM2 (Heat/Fan Module [Red]).

**FV7205:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating electric (SSR) heat and night setback. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches into the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPSB (Setback/Warm up Module [Green]) and the ETPFVHM3 (Heat/Fan Module [Red]).

**FV7301:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with up to two stages of electric

heat (On/Off) or hot water heat (two-position) and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPH3 (Heat/Fan Module [Red]).

**FV7302:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with three stages of electric heat (On/Off) and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPH4 (Heat/Fan Module [Red]).

**FV7303:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating hot water heat and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFVHM1 (Heat/Fan Module [Red]).

**FV7304:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan pow-

ered variable air volume with floating modulating hot water heat and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFVHM2 (Heat/Fan Module [Red]).

**FV7305:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating electric (SSR) heat and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPW (Setback/Warm up Module [Green]) and the ETPFVHM3 (Heat/Fan Module [Red]).

**FV7402:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with three stages of electric heat (On/Off), night setback and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Con-

troller), ETPWSB (Setback/Warm up Module [Green]) and the ETPH4 (Heat/Fan Module [Red]).

**FV7403:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating hot water heat, night setback and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPWSB (Setback/Warm up Module [Green]) and the ETPFVHM1 (Heat/Fan Module [Red]).

**FV7404:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with floating modulating hot water heat, night setback and morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPWSB (Setback/Warm up Module [Green]) and the ETPFVHM2 (Heat/Fan Module [Red]).

**FV7405:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating electric (SSR) heat, night setback and morning warm up. As space temperature drops, primary airflow is

reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve opens to maximum airflow setpoint for morning warm up. Air volume limits are located at the thermostat. Uses ETPM7 (Master Controller), ETPWSB (Setback/Warm up Module [Green]) and the ETPFVHM3 (Heat/Fan Module [Red]).

**FV7501:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with up to two stages of electric heat (On/Off) or hot water heat (two-position), night setback, summer/winter changeover and/or morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for morning warm up. Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPH3 (Heat/Fan Module [Red]).

**FV7502:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with three stages of electric heat (On/Off), night setback, summer/winter changeover and/or morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is energized in stages to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve

remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for morning warm up. Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPH4 (Heat/Fan Module [Red]).

**FV7503:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating hot water heat, night setback, summer/winter changeover and/or morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for morning warm up. Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPFVHM1 (Heat/Fan Module [Red]).

**FV7504:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with floating modulating hot water heat, night setback, summer/winter changeover and/or morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for morning warm up. Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]),

ETPCOSB (Setback/Warm up Module [Green]) and the ETPFVHM2 (Heat/Fan Module [Red]).

**FV7505:** This application applies to Parallel Flow Fan Powered Terminals providing intermittent fan powered variable air volume with proportional modulating electric (SSR) heat, night setback, summer/winter changeover and/or morning warm up. As space temperature drops, primary airflow is reset from maximum to minimum setpoint. As space temperature continues to drop, the unit fan is energized thus supplying plenum air to the space. On a further drop in space temperature, heat is modulated to satisfy the load. When system air is failed, the unit automatically switches to the night setback mode. The primary air valve remains closed and the unit fan and heat are cycled to maintain the night offset. When warm air is sensed by an electronic duct sensor, the unit fan and heat are de-energized and the primary air valve reverses operation for morning warm up. Air volume limits are located on the ETPECO Module. Uses ETPM7 (Master Controller), ETPECO (Flow Control Module [Blue]), ETPCOSB (Setback/Warm up Module [Green]) and the ETPFVHM3 (Heat/Fan Module [Red]).

# 700 TO 7000 CROSS REFERENCE GUIDE



SINGLE DUCT		DUAL DUCT		SERIES FLOW		PARALLEL FLOW					
7000 SEQUENCE	OLD 700 SEQUENCE	7000 SEQUENCE	OLD 700 SEQUENCE	7000 SEQUENCE	OLD 700 SEQUENCE	7000 SEQUENCE	OLD 700 SEQUENCE				
SD7000	SD701S	DT7100	DD701S DT701S	FC7001	FC701S FC702S	FV7001	FV701S FV702S				
SD7001	SD702S	DD7200	DD702A	FC7003	FC7020SM	FV7003	FV702SM				
	SD703S										
	SD704S										
	SD713S										
	SD714S										
	SD715S										
	SD724S										
	SD725S										
SD726S											
SD7003	SD702SM			FC7004	N/A	FV7004	N/A				
	SD713SM										
	SD724SM										
SD7004	N/A			FC7005	N/A	FV7005	N/A				
SD7005	N/A			FC7002	FC704S	FV7002	FV704S				
SD7100	SD705S			FC7101	FC713S	FV7101	FV717S				
					FC714S		FV718S				
					FC715S		FV719S				
SD7101	SD706S			FC7103	FC714SM	FV7103	FV718SM				
	SD707S										
	SD708S										
	SD716S										
	SD717S										
	SD718S										
SD7103	SD706SM			FC7104	N/A	FV7104	N/A				
	SD716SM										
SD7104	N/A			FC7105	N/A	FV7105	N/A				
SD7105	N/A			FC7102	FC716S	FV7102	FV720S				
SD7300	N/A			FC7201	FC705S	FV7201	FV705S				
					FC706S		FV706S				
					FC707S		FV707S				
SD7301	N/A			FC7203	FC706SM	FV7203	FV706SM				
SD7303	N/A			FC7204	N/A	FV7204	N/A				
SD7304	N/A			FC7205	N/A	FV7205	N/A				
SD7305	N/A			FC7202	FC708S	FV7202	FV708S				
SD7600	SD723R			FC7301	N/A	FV7301	N/A				
SD7606	SD727R			FC7303	N/A	FV7303	N/A				
SD7607	SD728R			FC7304	N/A	FV7304	N/A				
				FC7305	N/A	FV7305	N/A				
				FC7302	N/A	FV7302	N/A				
				FC7501	N/A	FV7501	N/A				
				FC7503	N/A	FV7503	N/A				
				FC7504	N/A	FV7504	N/A				
				FC7505	N/A	FV7505	N/A				
				FC7502	N/A	FV7502	N/A				
				FC7401	FC717S					FV7401	FV721S
					FC718S						FV722S
					FC719S						FV723S
				FC7403				FC718SM		FV7403	FV722SM
				FC7404				N/A		FV7404	N/A
				FC7405				N/A		FV7405	N/A
				FC7402				FC720S		FV7402	FV724S

### GENERAL NOTES

Since the actions below involve control signals, they must be done with a dry contact closure (contact closure cannot be paralleled from terminal to terminal):

#### CLOSE DAMPER

To close the air valve, open ETPM7 terminal 6 to thermostat terminal 5.

**Sample Application:** Could be used during smoke sequences to isolate different areas.

#### OPEN DAMPER

To open the air valve fully, short ETPM7 terminal 6 to ETPM7 terminal 7.

**Sample Application:** Could be used by airside test and balance to set CFM of the air handler.

#### OPEN AIR VALVE TO MAXIMUM CFM SETPOINT

To open the air valve to maximum CFM setpoint, disable heat and disable VFR fan (if applicable), short ETPH terminal 5 to ETPH terminal 7 (if present) or ETPM7 terminal 7.

**Sample Application:** Could be used during airside test and balance.

### DISABLE HEAT

To disable heat and heating minimum (SD only), short ETPM7 terminal 4 to ETPM7 terminal 7.

**Sample Application:** Could be used if boiler is off and you don't want the VAV terminals to go into heating mode.

### CONNECTING MORE THAN ONE BOX TO A THERMOSTAT

To operate up to four air terminals from one thermostat, wire first terminal to thermostat per sequence diagram. Parallel connector terminals 5 (if present), 6 and 7 to other air terminals. Do not connect connector terminal 8's together as serious damage will result. Since balancing is performed at the thermostat, all air terminals should be balanced with same voltages. In addition, for best results, all air terminals connected for this application should be the same size.

**Sample Application:** Could be used in open area where one thermostat could sense general temperature and control several air terminals in unison.

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