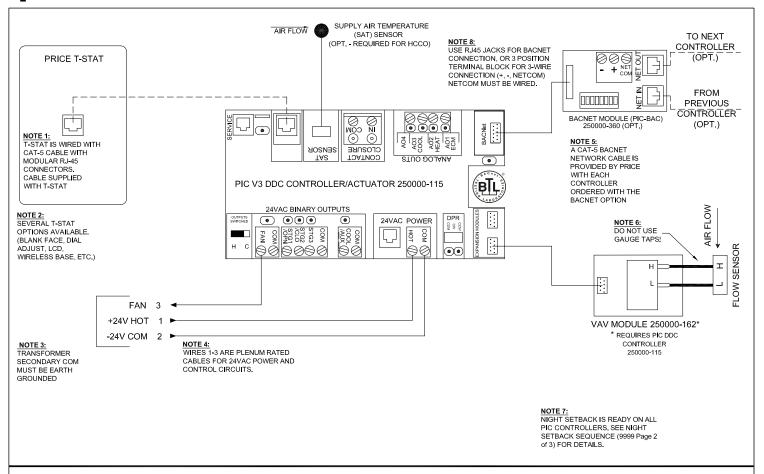


# Control Sequence Number 6800



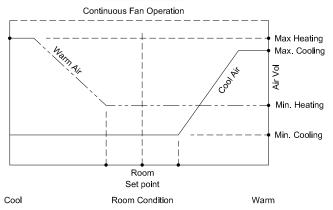
#### LEGEND

FACTORY FLOW SENSOR TUBING

FACTORY ELECTRICAL WIRING

---- FIELD ELECTRICAL WIRING

## **CONTROL GRAPH**



# Sequence of Operation -- Constant Volume Heat/cool changeover OR cooling only - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.

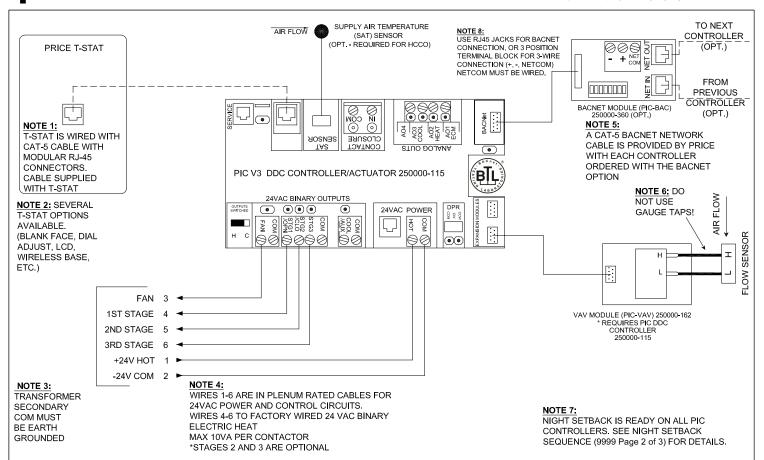
On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

PROJECT:			irce*
ENGINEER:		BC No	FAN POWERED CONSTANT  VOLUME SERIES FLOW  PIC - PRESSURE INDEPENDENT
CUSTOMER:		249505	HEAT/COOL CHANGEOVER
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/06/30	OR COOLING ONLY NO LOCAL REHEAT CONTROL

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# Control Sequence Number 6801



**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

#### LEGEND **FACTORY FLOW SENSOR TUBING** FACTORY ELECTRICAL WIRING FIELD ELECTRICAL WIRING **CONTROL GRAPH** Continuous Fan Operation Max Heating Heat On Max Cooling Narm Air COOKI ¥ Std Stg 2nd Min. Heating 3rd Min. Cooling Room Set point Cool Room Condition Warm

# Sequence of Operation -- Constant Volume Heat/cool changeover OR cooling With up to 3 stage binary reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

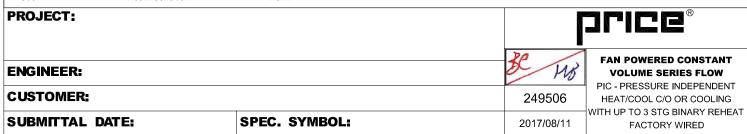
**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.

On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

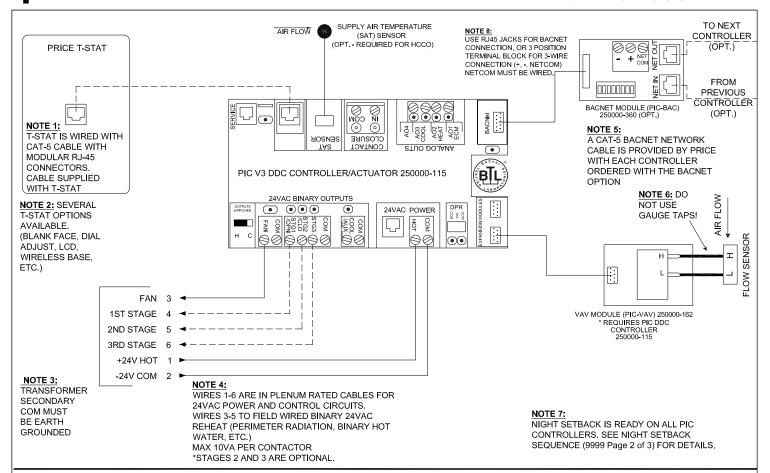
**Reheat Operation:** On a decrease in space temperature into the heating proportional band, the 1st stage binary 24VAC reheat output will energize. Upon futher decreases, the 2nd then 3rd stages of reheat (if used) will energize.



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# Control Sequence Number 6802



**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

# LEGEND

FACTORY FLOW SENSOR TUBING
FACTORY ELECTRICAL WIRING
FIELD ELECTRICAL WIRING

## **CONTROL GRAPH**

Continuous Fan Operation Max Heating Heat On Max Cooling Narm Air COOKI 9 Ā Std Stg 2nd Min. Heating 3rd Min. Cooling Room Set point Cool Room Condition Warm

# Sequence of Operation -- Constant Volume Heat/cool changeover OR cooling With up to 3 stage binary reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.

On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

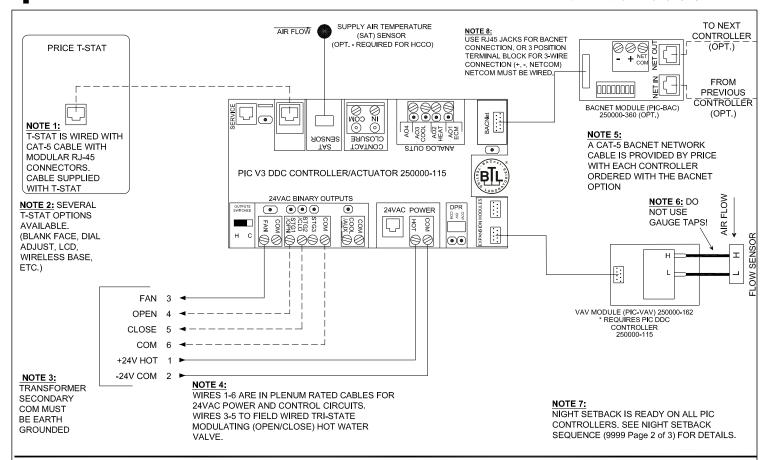
**Reheat Operation:** On a decrease in space temperature into the heating proportional band, the 1st stage binary 24VAC reheat output will energize. Upon futher decreases, the 2nd then 3rd stages of reheat (if used) will energize.

PROJECT:			
ENGINEER:		SC No	FAN POWERED CONSTANT VOLUME SERIES FLOW PIC - PRESSURE INDEPENDENT
CUSTOMER:		249507	HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH UP TO 3 STG BINARY REHEAT FIELD WIRED

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# Control Sequence Number 6803



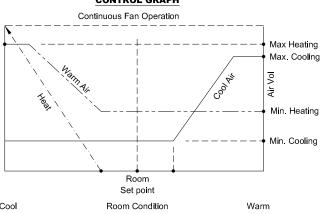
#### LEGEND

FACTORY FLOW SENSOR TUBING

FACTORY ELECTRICAL WIRING

FIELD ELECTRICAL WIRING

## **CONTROL GRAPH**



# Sequence of Operation – Constant Volume Heat/cool changeover OR Cooling With Tri-State modulating HW reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.

On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

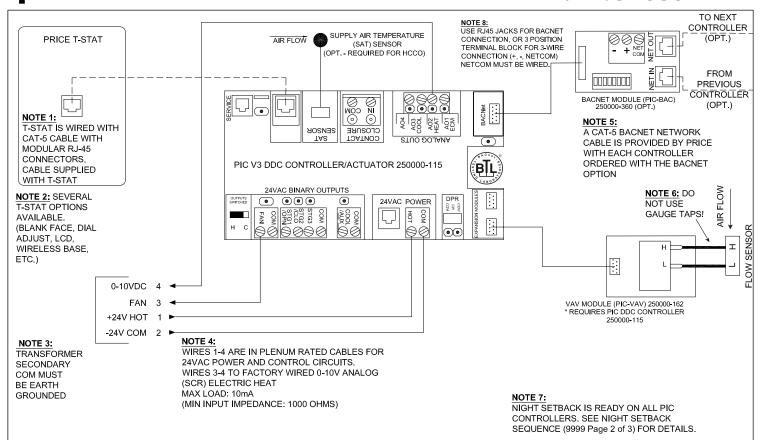
**Reheat Operation:** On a decrease in space temperature, the heating valve is modulated to increase heat proportionally to the room demand.

1.00			
PROJECT:			arice*
ENGINEER:		3° No	FAN POWERED CONSTANT VOLUME SERIES FLOW C.V. PRESSURE INDEPENDENT
CUSTOMER:		249508	HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH TRI-STATE MODULATING HOT WATER REHEAT, FIELD WIRED

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# **Control Sequence** Number 6804



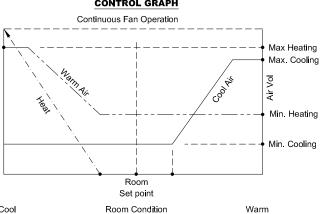
Calibration note: Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

## LEGEND

FACTORY FLOW SENSOR TUBING FACTORY ELECTRICAL WIRING

## **CONTROL GRAPH**

FIELD ELECTRICAL WIRING



## Sequence of Operation -- Constant Volume Heat/cool changeover OR Cooling With Analog modulating reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

Cool supply air: On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

Warm supply air: On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting. On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

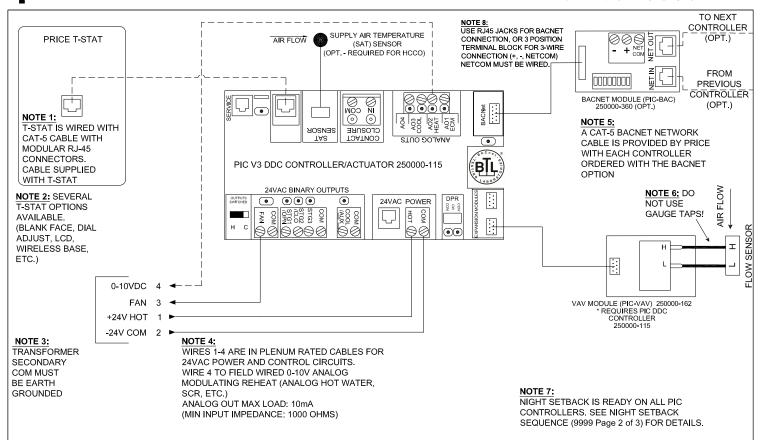
Reheat Operation: On a decrease in space temperature, the controller modulates the 0-10VDC ouput to increase heat proportionally to the room

PROJECT:			
ENGINEER:		BC Mo	FAN POWERED CONSTANT VOLUME SERIES FLOW
CUSTOMER:		249509	C.V. PRESSURE INDEPENDENT HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH ANALOG ELECTRIC HEAT FACTORY WIRED

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# **Control Sequence Number 6805**



**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

# FACTORY FLOW SENSOR TUBING FACTORY ELECTRICAL WIRING FIELD ELECTRICAL WIRING CONTROL GRAPH Continuous Fan Operation Max Heating Max. Cooling No. Cooling Room Set point

Room Condition

Sequence of Operation -- Constant Volume Heat/cool changeover OR Cooling With Analog modulating reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

Warm supply air: On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting. On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

**Reheat Operation:** On a decrease in space temperature, the controller modulates the 0-10VDC ouput to increase heat proportionally to the room demand.

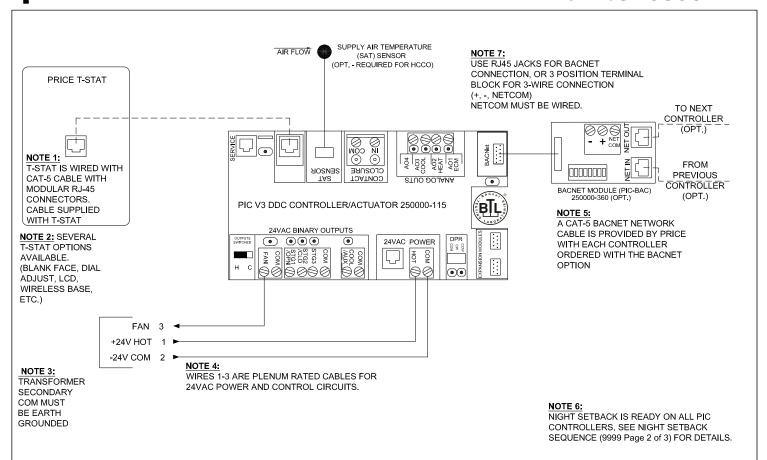
PROJECT:				
ENGINEER:		3c no	FAN POWERED CONSTANT VOLUME SERIES FLOW C.V. PRESSURE INDEPENDENT	
CUSTOMER:		249510	HEAT/COOL C/O OR COOLING	
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH ANALOG HEAT FIELD WIRED	

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Warm



# Control Sequence Number 6850

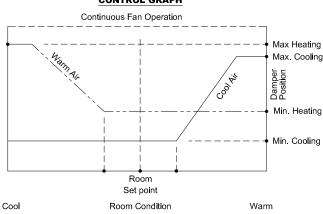


#### LEGEND

FACTORY ELECTRICAL WIRING

FIELD ELECTRICAL WIRING

## **CONTROL GRAPH**



# Sequence of Operation -- Constant Volume Heat/cool changeover OR cooling only - Pressure Dependent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

Cool supply air: On an increase in space temperature the controller regulates the actuator to open the air damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the damper position (%) is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the air damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the damper position (%) is maintained at the pre-selected minimum setting. Warm supply air: On a decrease in space temperature the controller regulates the actuator to open the air damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the damper position (%) is maintained at its pre-selected maximum setting.

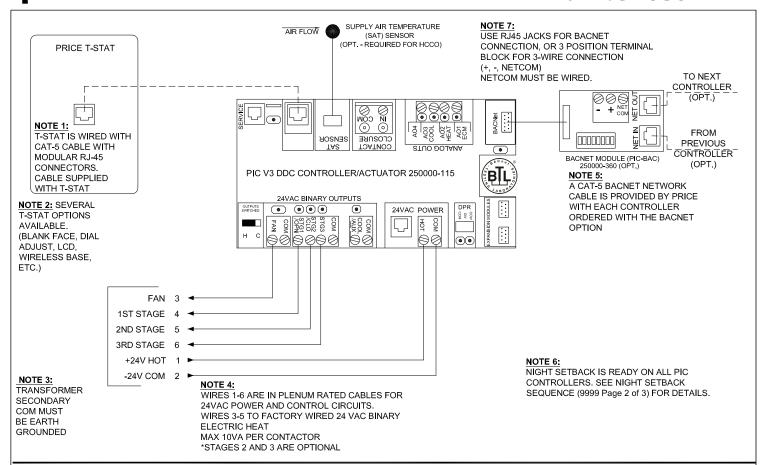
On an increase in space temperature the controller regulates the actuator to close the air damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

PROJECT:			
ENGINEER:		B No	FAN POWERED CONSTANT VOLUME SERIES FLOW C.V. PRESSURE DEPENDENT
CUSTOMER:		249511	HEAT/COOL CHANGEOVER
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	OR COOLING ONLY NO LOCAL REHEAT CONTROL

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# Control Sequence Number 6851



Calibration note: Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

# LEGEND FACTORY ELECTRICAL WIRING FIELD ELECTRICAL WIRING **CONTROL GRAPH** Continuous Fan Operation Max Heating Heat On Max Cooling Narm Air COOKI Std Stg 2nd Min. Heating 3rd Min. Cooling Room Set point Cool Room Condition Warm

Sequence of Operation – Constant Volume Heat/cool changeover OR cooling With 3 up to stage binary reheat - Pressure Dependent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

Cool supply air: On an increase in space temperature the controller regulates the actuator to open the air damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On a decrease in space temperature the controller regulates the actuator to close the air damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

*Warm supply air:* On a decrease in space temperature the controller regulates the actuator to open the air damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On an increase in space temperature the controller regulates the actuator to close the air damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

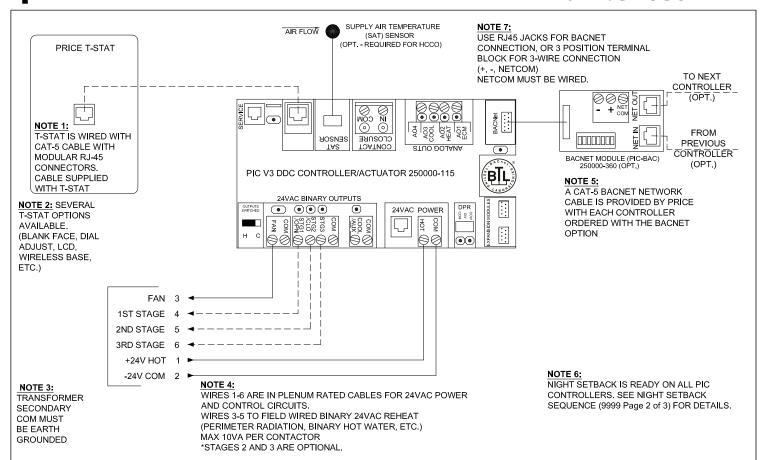
**Reheat Operation:** On a decrease in space temperature into the heating proportional band, the 1st stage binary 24VAC reheat output will energize. Upon futher decreases, the 2nd then 3rd stages of reheat (if used) will energize.

PROJECT:		-		
ENGINEER:		3° No	FAN POWERED CONSTANT VOLUME SERIES FLOW	
CUSTOMER:		249512	C.V. PRESSURE DEPENDENT HEAT/COOL C/O OR COOLING	
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH UP TO 3 STG BINARY REHEAT FACTORY WIRED	

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# Control Sequence Number 6852



**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

## LEGEND **FACTORY ELECTRICAL WIRING** FIELD ELECTRICAL WIRING **CONTROL GRAPH** Continuous Fan Operation Max Heating Heat On Max Cooling Narm Air COOKI Std Stg 2nd Min. Heating 3rd Min. Cooling Room Set point Cool Room Condition Warm

# Sequence of Operation – Constant Volume Heat/cool changeover OR cooling With up to 3 stage binary reheat - Pressure Dependent

On power up the damper will calibrate closed for 2 minutes.

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

Cool supply air: On an increase in space temperature the controller regulates the actuator to open the air damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On a decrease in space temperature the controller regulates the actuator to close the air damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

Warm supply air: On a decrease in space temperature the controller regulates the actuator to open the air damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On an increase in space temperature the controller regulates the actuator to close the air damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

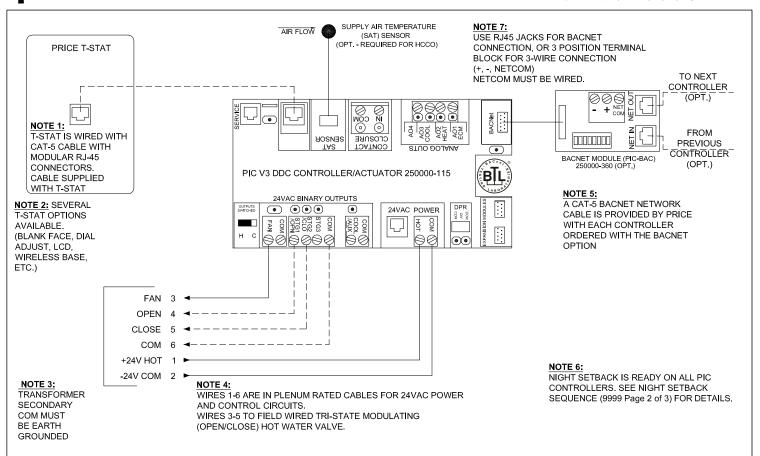
**Reheat Operation:** On a decrease in space temperature into the heating proportional band, the 1st stage binary 24VAC reheat output will energize. Upon futher decreases, the 2nd then 3rd stages of reheat (if used) will energize.

PROJECT:			Trice <sup>®</sup>
ENGINEER:		3C No	FAN POWERED CONSTANT VOLUME SERIES FLOW
CUSTOMER:		249513	C.V. PRESSURE DEPENDENT HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH UP TO STG BINARY REHEAT FIELD WIRED

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# Control Sequence Number 6853

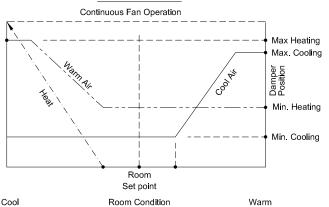


#### LEGEND

FACTORY ELECTRICAL WIRING

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FIELD ELECTRICAL WIRING

## **CONTROL GRAPH**



# Sequence of Operation – Constant Volume Heat/cool changeover OR Cooling With Tri-State modulating HW reheat - Pressure Dependent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

Cool supply air: On an increase in space temperature the controller regulates the actuator to open the air damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On a decrease in space temperature the controller regulates the actuator to close the air damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

Warm supply air: On a decrease in space temperature the controller regulates the actuator to open the air damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On an increase in space temperature the controller regulates the actuator to close the air damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

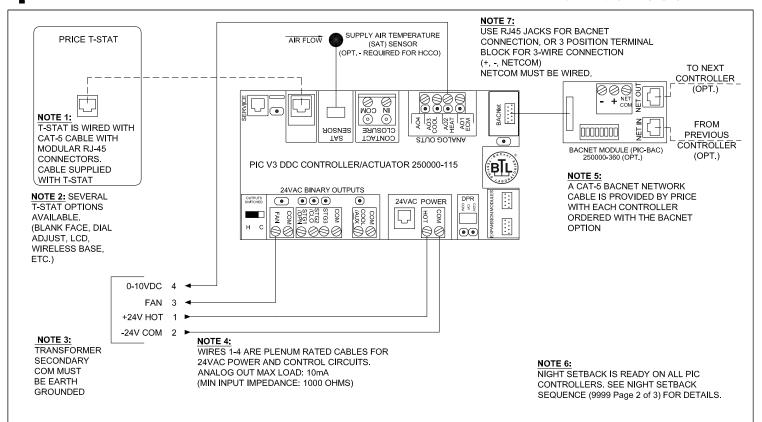
**Reheat Operation:** On a decrease in space temperature, the heating valve is modulated to increase heat proportionally to the room demand.

PROJECT:			
ENGINEER:		BC Mo	FAN POWERED CONSTANT VOLUME SERIES FLOW C.V. PRESSURE DEPENDENT
CUSTOMER:		249514	HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH TRI-STATE MODULATING HOT WATER REHEAT, FIELD WIRED

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# Control Sequence Number 6854



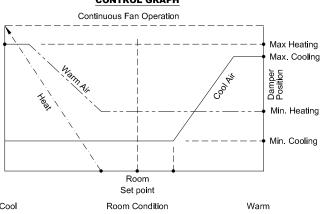
**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

## LEGEND

FACTORY ELECTRICAL WIRING

FIELD ELECTRICAL WIRING

## **CONTROL GRAPH**



# Sequence of Operation -- Constant Volume Heat/cool changeover OR Cooling With Analog modulating reheat - Pressure Dependent

On power up the damper will calibrate closed for 2 minutes.

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

Cool supply air: On an increase in space temperature the controller regulates the actuator to open the air damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On a decrease in space temperature the controller regulates the actuator to close the air damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the air damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the damper position (%) is maintained at its pre-selected maximum setting.

On an increase in space temperature the controller regulates the actuator to close the air damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

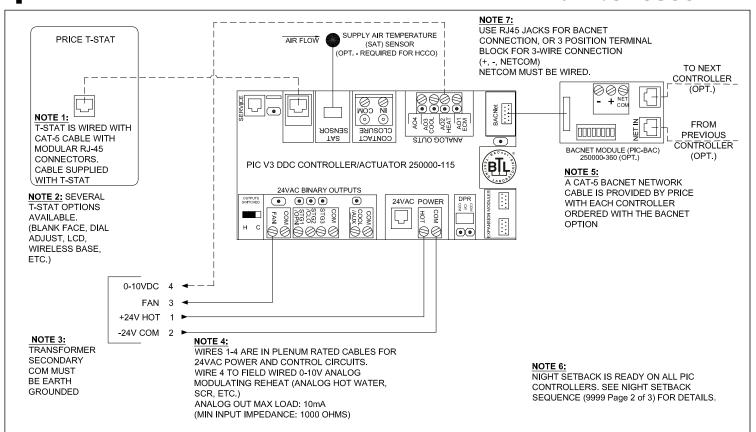
**Reheat Operation:** On a decrease in space temperature, the controller modulates the 0-10VDC ouput to increase heat proportionally to the room demand.

		mana.		
PROJECT:				
ENGINEER:		3° No	FAN POWERED CONSTANT VOLUME SERIES FLOW C.V. PRESSURE DEPENDENT	
CUSTOMER:		249515	HEAT/COOL C/O OR COOLING	
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	FACTORY WIRED	

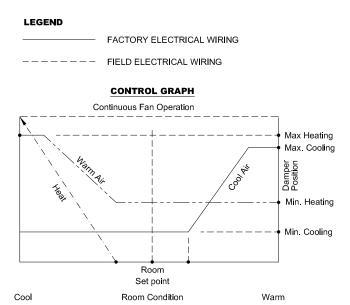
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# Control Sequence Number 6855



**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.



Sequence of Operation – Constant Volume Heat/cool changeover OR Cooling With Analog modulating reheat - Pressure Dependent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the air damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the damper position (%) is maintained at its pre-selected maximum setting. On a decrease in space temperature the controller regulates the actuator to close the air damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the air damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the damper position (%) is maintained at its pre-selected maximum setting.

On an increase in space temperature the controller regulates the actuator to close the air damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the damper position (%) is maintained at the pre-selected minimum setting.

**Reheat Operation:** On a decrease in space temperature, the controller modulates the 0-10VDC ouput to increase heat proportionally to the room demand.

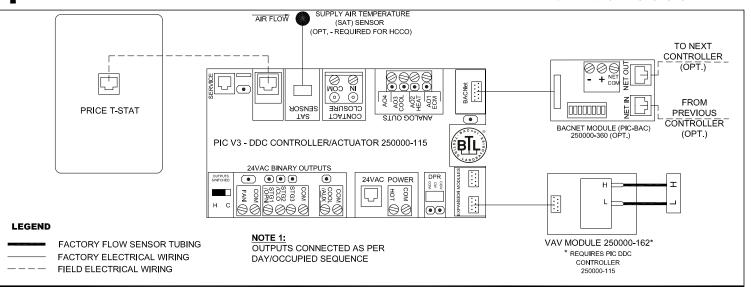
PROJECT:			Irice <sup>®</sup>
ENGINEER:		3 No	FAN POWERED CONSTANT VOLUME SERIES FLOW C.V. PRESSURE DEPENDENT
CUSTOMER:		249516	HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/08/11	WITH ANALOG HEAT FIELD WIRED

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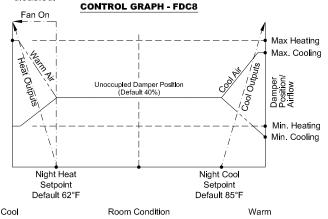
# **CONSTANT VOLUME SERIES FLOW NIGHT SETBACK SEQUENCE**

# **Control Sequence** Number 9999



Entering and Exiting Night Setback: There are several methods for the PIC to enter and exit night setback (unoccupied mode). All of the following methods can be enabled or disabled in software or from the T-Stat menu.

- 1. Airflow Failure: (Disabled by default) If using a Pressure Independant day sequence (with the PIC-VAV module), the controller will enter night setback when minimal airflow is sensed in the duct. The controller does this based on Day Flow Trip and Night Flow Trip (adjustable). Day Flow Trip is enabled when the controller sees more than 1/2 of its minimum airflow - i.e. min airflow = 132 cfm, Day Flow Trip = 66 cfm. Night Flow Trip is enabled when the controller sees less than 1/2 of its day flow trip value - i.e. 33 cfm
- 2. Motion Sensor: (Disabled by default) If a motion sensor T-Stat is used, the controller can enter night setback if no motion has been detetected in the space for a specified period of time (default: 4 hours).
- 3. Contact Closure: (Disabled by default) Connecting the two contact closure inputs together using a dry contact will cause the controller to enter night setback. The controller will exit night setback once the contacts are released.
- 4. T-Stat Button: The T-Stat button allows the user to exit night setback. Pressing any button on the T-Stat will cause the controller to exit night setback for the override time period. (default: 4 hours). Occupancy override by T-Stat button is always enabled and cannot be disabled.



## Sequence of Operation -- FAN POWERED CONSTANT VOLUME **SERIES FLOW - PIC CONTROLLER - NIGHT SETBACK**

During night setback, the controller will respond to its night heat setpoint and its night cool setpoint.

While the room temperature is between the two night setpoints, by default the controller will maintain the damper position at 25% open (adjustable). All outputs (Fan, Heat, etc.) will go to their OFF or IDLE states.

#### Room temperature below Night Heat Setpoint:

Fan Operation: On a decrease in space temperature into the heating proportional band, the unit fan will energize.

Reheat Operation: On a decrease in space temperature into the heating proportional band, the reheat outputs (if used) are energized proportionally.

Cool supply air: On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. The airflow is maintained at the pre-selected minimum setting. Warm supply air: On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum settina.

## Room temperature above Night Cool Setpoint:

Fan Operation: On an increase in space temperature into the cooling proportional band, the unit fan typically will not energize. It is possible to configure the controller to energize the fan if using cooling coils.

Cooling Output Operation: On an increase in space temperature into the cooling proportional band, the cooling outputs (if used) are energized proportionally.

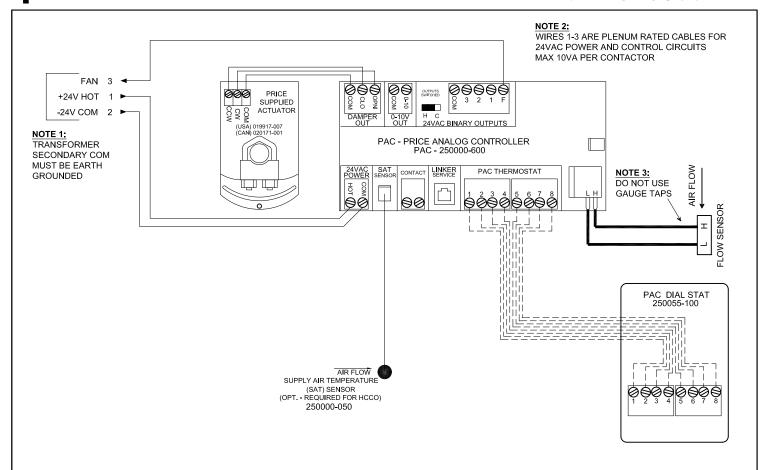
Cool supply air: On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

Warm supply air: On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. The airflow is maintained at the pre-selected minimum setting.

PROJECT:			Price <sup>®</sup>	
ENGINEER:		3° Mo	FAN POWERED SERIES FLOW NIGHT SETBACK SEQUENCE	
CUSTOMER:		269251	PIC - DDC CONTROLLER FDC	
SUBMITTAL DATE:	SPEC. SYMBOL:	2017/11/22		
© Copyright E.H.PRICE LIMITED 2017	·	SHEET 1 OF 1	REV 0	



# Control Sequence Number 5800



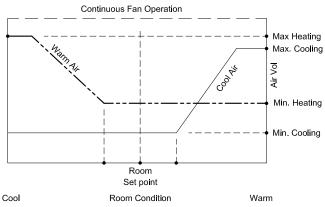
#### LEGEND

FACTORY FLOW SENSOR TUBING

FACTORY ELECTRICAL WIRING

---- FIELD ELECTRICAL WIRING

#### **CONTROL GRAPH**



# Sequence of Operation – Constant Volume Heat/cool changeover OR cooling only - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

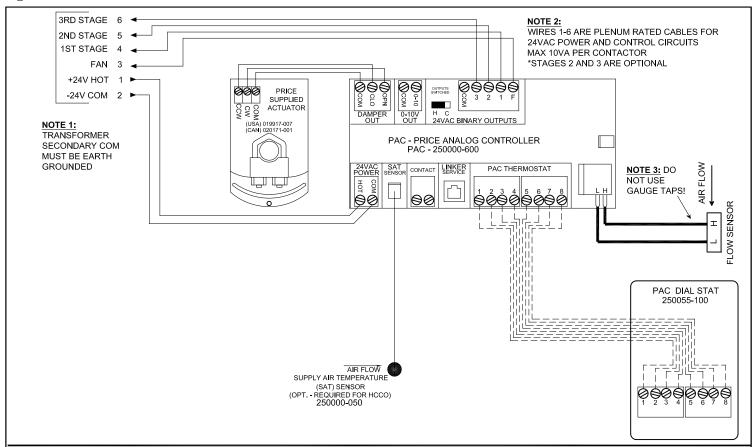
**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.

On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

PROJECT:			arice°
ENGINEER:		Krim	FAN POWERED PAC C.V.PRESSURE INDEPENDENT
CUSTOMER:		254835	HEAT/COOL CHANGEOVER
SUBMITTAL DATE:	SPEC. SYMBOL:	2012/11/13	OR COOLING ONLY NO LOCAL REHEAT CONTROL



# Control Sequence Number 5801

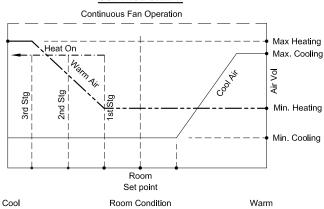


**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

## LEGEND

FACTORY FLOW SENSOR TUBING
FACTORY ELECTRICAL WIRING
FIELD ELECTRICAL WIRING

#### **CONTROL GRAPH**



Sequence of Operation – Constant Volume Heat/cool changeover OR cooling With up to 3 stage binary reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.

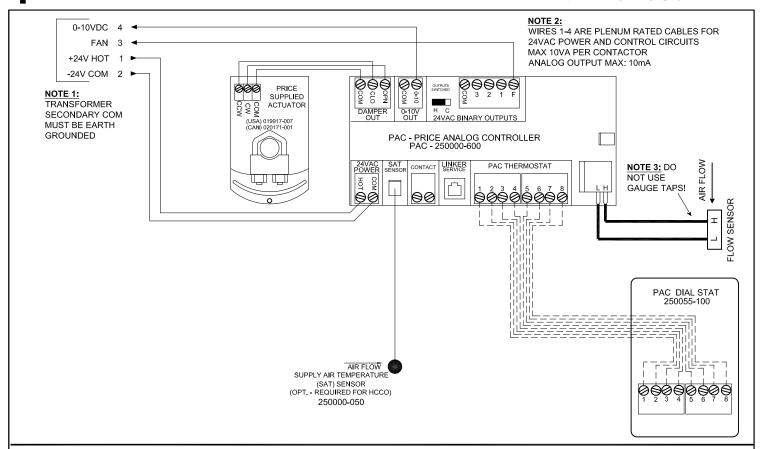
On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

**Reheat Operation:** On a decrease in space temperature into the heating proportional band, the 1st stage binary 24VAC reheat output will energize. Upon futher decreases, the 2nd then 3rd stages of reheat (if used) will energize.

PROJECT:			TIEE®	
ENGINEER:			KRmm	FAN POWERED PAC C.V.PRESSURE INDEPENDENT
CUSTOMER:		254836	HEAT/COOL C/O OR COOLING	
SUBMITTAL DATE:	SPEC. SYMBOL:		2012/11/13	WITH UP TO 3 STG BINARY REHEAT
Copyright DDICE INDUSTRIES LIMITED 2012				DEV. C



# Control Sequence Number 5802

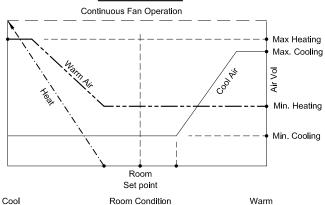


**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

#### LEGEND

FACTORY FLOW SENSOR TUBING
FACTORY ELECTRICAL WIRING
FIELD ELECTRICAL WIRING

#### **CONTROL GRAPH**



Sequence of Operation – Constant Volume Heat/cool changeover OR Cooling With Analog modulating reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting. On an increase in space temperature the controller regulates the actuator to

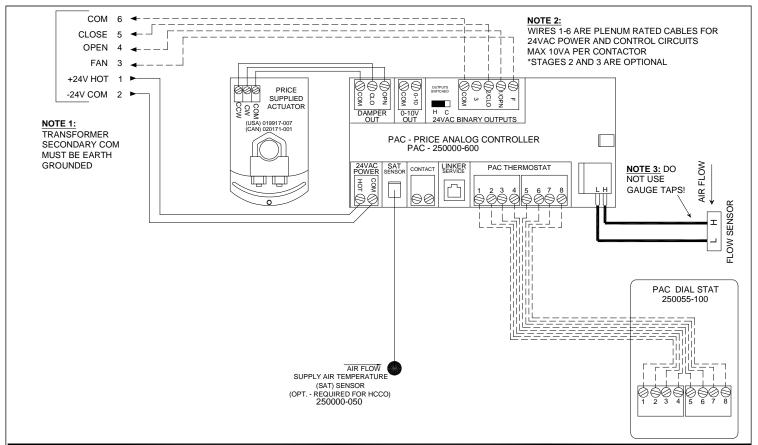
On an increase in space temperature the controller regulates the actuator t close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

**Reheat Operation:** On a decrease in space temperature, the controller modulates the 0-10VDC ouput to increase heat proportionally to the room demand.

PROJECT:				arice <sup>®</sup>
ENGINEER:		K	m	FAN POWERED PAC C.V.PRESSURE INDEPENDENT
CUSTOMER:		25	54837	HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	201	12/11/13	WITH ANALOG ELECTRIC HEAT
Converight DDICE INDUSTRIES LIMITED 2012		<b>_</b>		DEV. C



# Control Sequence Number 5803

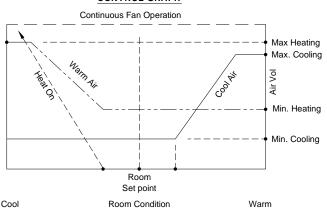


**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

#### LEGEND

FACTORY FLOW SENSOR TUBING
FACTORY ELECTRICAL WIRING
FIELD ELECTRICAL WIRING

## CONTROL GRAPH



Sequence of Operation -- Constant Volume Heat/cool changeover OR cooling With up to 3 stage binary reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.

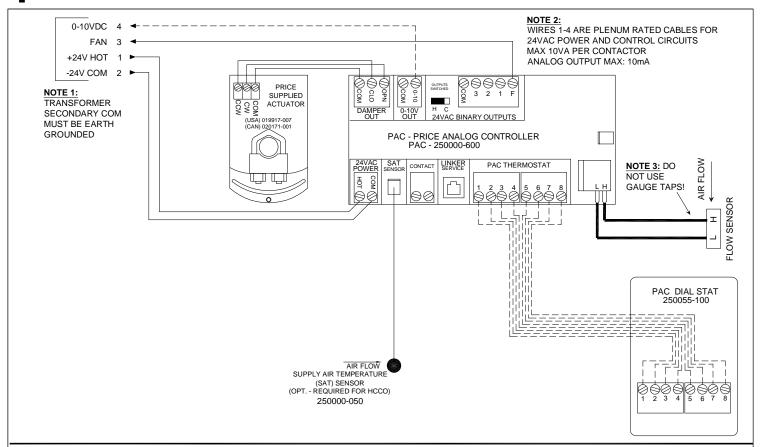
On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

**Reheat Operation:** On a decrease in space temperature into the heating proportional band, the HW valve is modulated to increase heat proportionally to room demand.

PROJECT:			orice <sup>®</sup>
ENGINEER:		GF mn	FAN POWERED PAC
CUSTOMER:		264453	C.V.PRESSURE INDEPENDENT HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2014/03/14	WITHFIELD WIRED TRI-STATE HW



# Control Sequence Number 5804

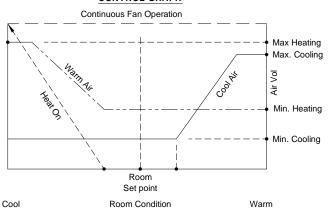


**Calibration note:** Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.

#### LEGEND

FACTORY FLOW SENSOR TUBING
FACTORY ELECTRICAL WIRING
FIELD ELECTRICAL WIRING

## **CONTROL GRAPH**



Sequence of Operation -- Constant Volume Heat/cool changeover OR Cooling With Analog modulating reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.

\*\*If no SAT sensor is present, the controller assumes Cool supply air at all times\*\*

While the space is occupied, the unit fan operates continuously supplying a constant volume of supply air.

**Cool supply air:** On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.

On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

**Warm supply air:** On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting. On an increase in space temperature the controller regulates the actuator to

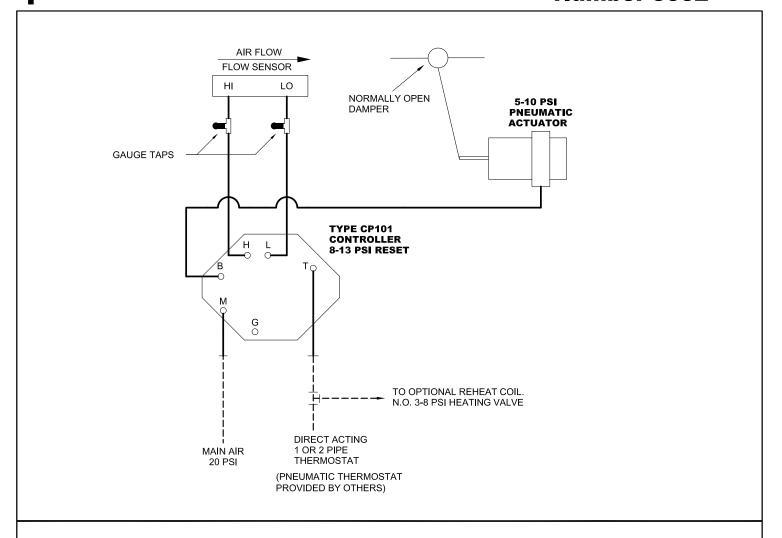
On an increase in space temperature the controller regulates the actuator close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

**Reheat Operation:** On a decrease in space temperature, the controller modulates the 0-10VDC ouput to increase heat proportionally to the room demand.

PROJECT:			ariee®
ENGINEER:		GF m	FAN POWERED PAC C.V.PRESSURE INDEPENDENT
CUSTOMER:		264454	HEAT/COOL C/O OR COOLING
SUBMITTAL DATE:	SPEC. SYMBOL:	2014/03/14	WITH FIELD WIRED ANALOG HW



# Control Sequence Number 5002



## NOTES:

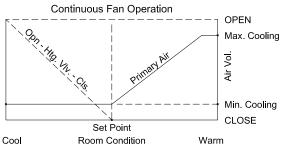
1. TOTAL AIR CONSUMPTION 0.017 SCFM.

## LEGEND

FACTORY PNEUMATIC TUBING

---- FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation -- Constant volume, continuous fan, pressure independent, normally open, direct acting cooling application. HW reheat is optional.

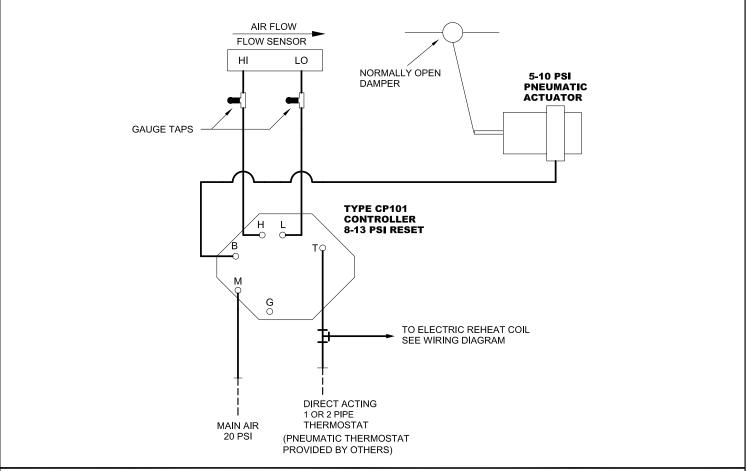
The unit fan operates continuously.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting. A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi or less, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures between 8 & 13 psi the VAV damper modulates between minimum & maximum flow settings. At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat may control an optional reheat coil. *Normally Open Damper:* On failure of the main air supply the damper will fail to the open position.

PROJECT:				3rice°
ENGINEER:		BH	/ ze	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		23	1760	Clg., HW Reheat Optional Constant Vol., Continuous Fan
SUBMITTAL DATE:	SPEC. SYMBOL:	2011	/11/07	Pressure Independent D.A. T'Stat, N.O. Damper



# Control Sequence Number 5003



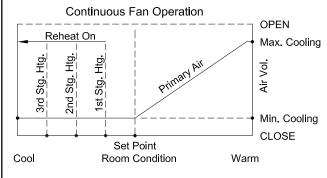
#### NOTES:

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

## LEGEND

FACTORY PNEUMATIC TUBING
FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation -- Constant volume, continuous fan, pressure independent, normally open, direct acting cooling application with electric reheat coil.

The unit fan operates continuously.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi or less, the VAV box damper is maintained at the pre-selected minimum flow setting.

At thermostat output pressures between 8 & 13 psi the VAV damper modulates between minimum & maximum flow settings.

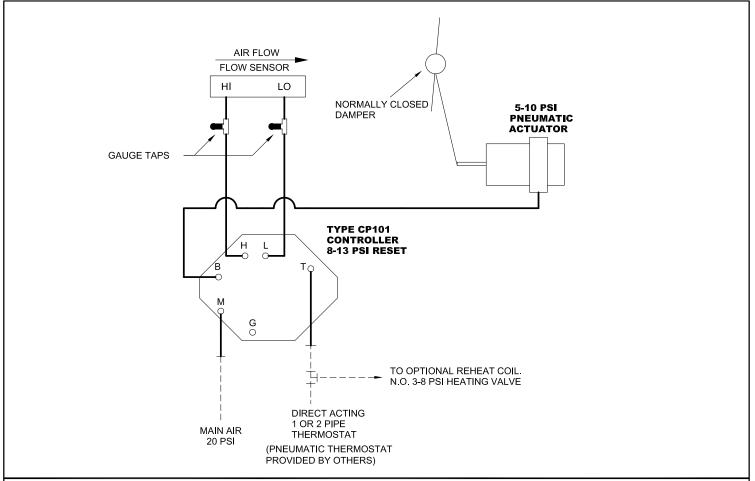
At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat will control the electric reheat coil. Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

**Normally Open Damper:** On failure of the main air supply the damper will fail to the open position.

PROJECT:				
ENGINEER:			B74/80	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		231761	Clg., Electric Reheat Coil Constant Vol., Continuous Fan	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.O. Damper
O			<u> </u>	I DEV. A



# Control Sequence Number 5004



## NOTES:

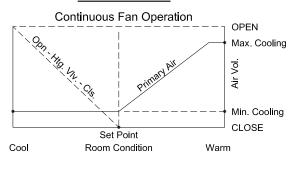
1. TOTAL AIR CONSUMPTION 0.017 SCFM.

## LEGEND

FACTORY
---- FIELD PNE

FACTORY PNEUMATIC TUBING FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation -- Constant volume, continuous fan, pressure independent, normally closed, direct acting cooling application. HW reheat is optional.

The unit fan operates continuously.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi or less, the VAV box damper is maintained at the pre-selected minimum flow setting.

At thermostat output pressures between 8 & 13 psi the VAV damper modulates between minimum & maximum flow settings.

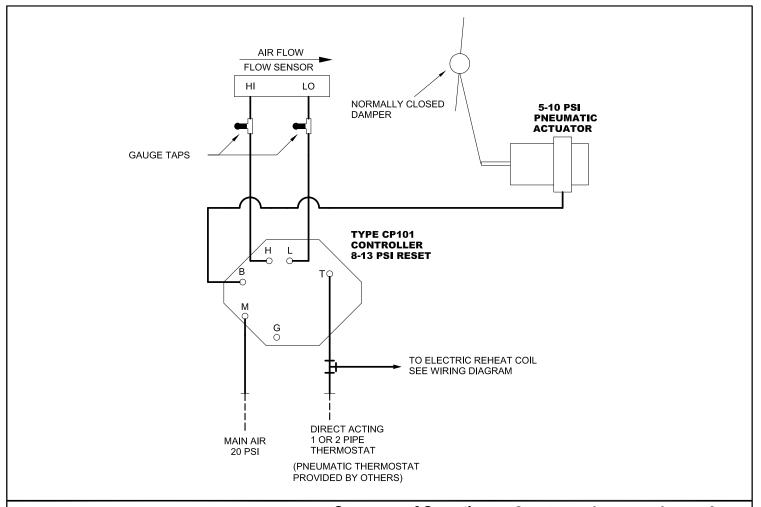
At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat may also control an optional reheat coil.

**Normally Closed Damper:** On failure of the main air supply the damper will fail to the closed position.

PROJECT:			Tree®	
ENGINEER:			674/ Be	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		231762	Clg., HW Reheat Optional Constant Vol., Continuous Fan	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.C. Damper
Conversable DDICE INDUSTRIES 2011	<del></del>		•	DEV. A



# Control Sequence Number 5005



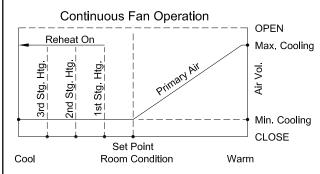
## NOTES:

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

#### LEGEND

FACTORY PNEUMATIC TUBING
---- FIELD PNEUMATIC TUBING

#### **CONTROL GRAPH**



Sequence of Operation -- Constant volume, continuous fan, pressure independent, normally closed, direct acting cooling application with electric reheat coil.

The unit fan operates continuously.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi or less, the VAV box damper is maintained at the pre-selected minimum flow setting.

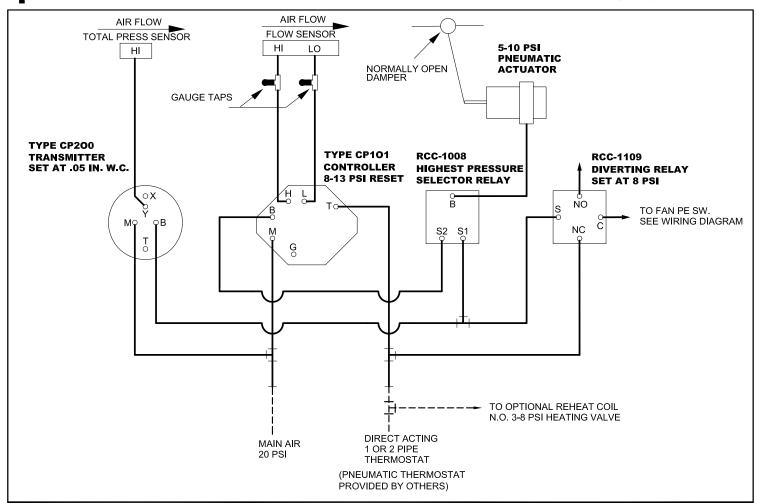
At thermostat output pressures between 8 & 13 psi the VAV damper modulates between minimum & maximum flow settings.

At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat will control the electric reheat coil. **Normally Closed Damper:** On failure of the main air supply the damper will fail to the closed position.

PROJECT:			arice <sup>®</sup>
		674/ BC	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		231763	Clg., Electric Reheat Coil Constant Vol., Continuous Fan
SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.C. Damper
	SPEC. SYMBOL:	SPEC. SYMBOL:	231763



# Control Sequence Number 5006



#### NOTES:

1. TOTAL AIR CONSUMPTION 0.025 SCFM.

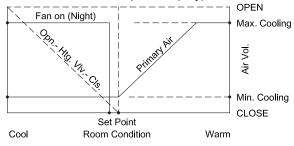
## LEGEND

FACTORY PNEUMATIC TUBING

---- FIELD PNEUMATIC TUBING

# CONTROL GRAPH

#### Continuous Fan Operation (Day)



Sequence of Operation -- Constant volume, fan interlock, pressure independent, normally open, direct acting cooling application with primary damper close-off. HW reheat is optional.

**Day Operation:** The unit fan starts and runs continuously when primary air static pressure is sensed at the CP200 controller.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi, the VAV box damper is maintained at the pre- selected minimum flow setting. At thermostat output pressures below 8 psi, the minimum flow setting is maintained, and the thermostat may also control an optional reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

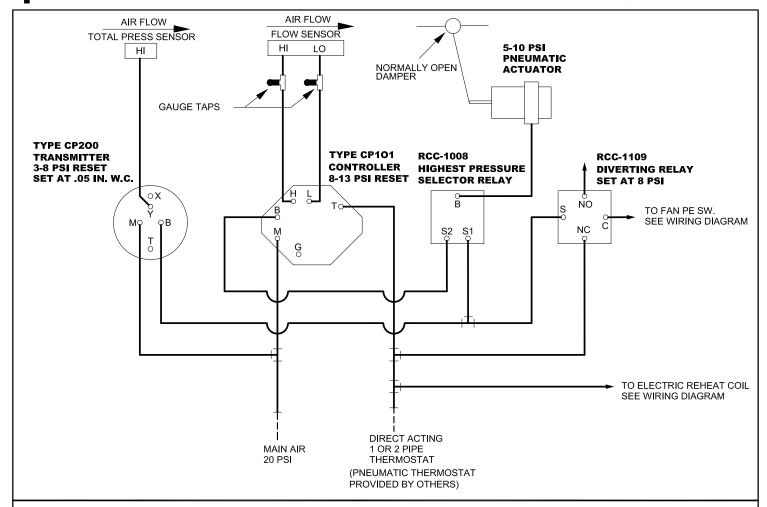
**Night Operation:** When no primary air static pressure is sensed at the CP200 controller the VAV damper is driven to the closed position and the unit fan is off.

On a continued decrease in space temperature the thermostat will energize the unit fan and control an optional reheat coil to maintain the thermostat setting. **Normally Open Damper:** On failure of the main air supply the damper will fail to the open position.

PROJECT:				orice°
ENGINEER:		BY	480	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		23	31764	Clg., HW Reheat Optional Constant Vol., Fan Interlock
SUBMITTAL DATE:	SPEC. SYMBOL:	201	1/11/07	Pressure Independent D.A. T'Stat, N.O. Damper



# Control Sequence Number 5007



## NOTES:

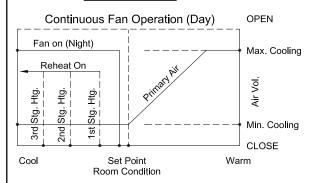
1. TOTAL AIR CONSUMPTION 0.025 SCFM.

# LEGEND

FACTORY PNEUMATIC TUBING

---- FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation -- Constant volume, fan interlock, pressure independent, normally open, direct acting cooling application with electric reheat coil and primary damper close-off.

**Day Operation:** The unit fan starts and runs continuously when primary air static pressure is sensed at the CP200 controller.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi, the VAV box damper is maintained at the pre- selected minimum flow setting. At thermostat output pressures below 8 psi, the minimum flow setting is maintained, and the thermostat will also control the electric reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

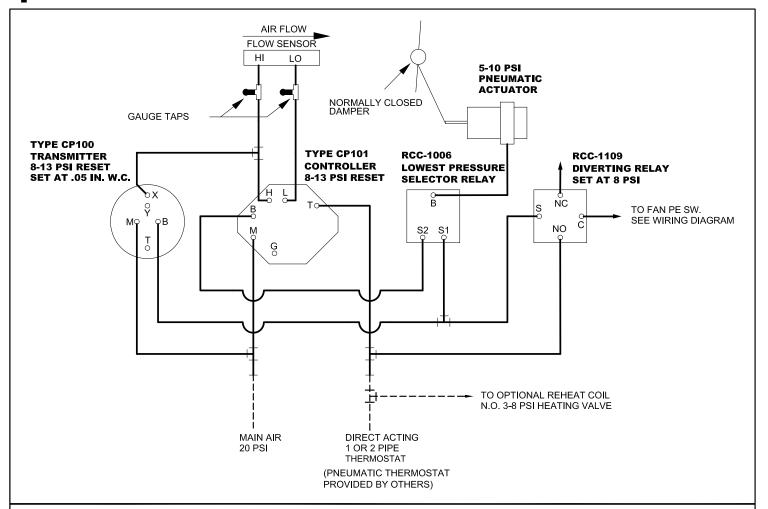
**Night Operation:** When no primary air static pressure is sensed at the CP200 controller the VAV damper is driven to the closed position and the unit fan is off

On a continued decrease in space temperature the thermostat will energize the unit fan and control an electric reheat coil to maintain the thermostat setting. **Normally Open Damper:** On failure of the main air supply the damper will fail to the open position.

PROJECT:			TIEE®	
ENGINEER:			B76/ 30	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		231765	Clg., Electric Reheat Coil Constant Vol., Fan Interlock	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.O. Damper
O C			•	DE)/ A



# Control Sequence Number 5008



## NOTES:

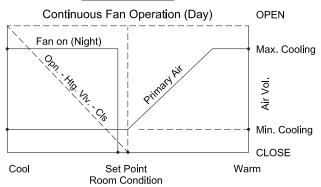
1. TOTAL AIR CONSUMPTION 0.038 SCFM.

#### **LEGEND**

FACTORY PNEUMATIC TUBING

---- FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation -- Constant volume, fan interlock, pressure independent, normally closed, direct acting cooling application with primary damper close-off. HW reheat coil is optional.

**Day Operation:** The unit fan starts and runs continuously when primary air static pressure is sensed at the CP100 controller.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures below 8 psi, the minimum flow setting is maintained, and the thermostat may also control an optional reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

**Night Operation:** When no primary air static pressure is sensed at the CP100 controller the VAV damper is driven to the closed position and the unit fan is off.

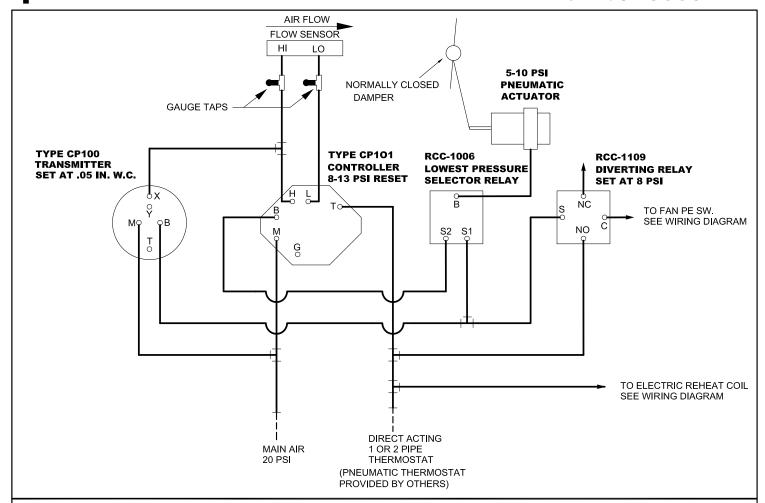
On a continued decrease in space temperature the thermostat will energize the unit fan and control an optional reheat coil to maintain the thermostat setting.

**Normally Closed Damper:** On failure of the main air supply the damper will fail to the closed position.

PROJECT:		1	3rice°	
ENGINEER:			b>1-/ 3c	FPC8 / FPCE8 / FPCQ8 Kreuter CP-101
CUSTOMER:		231766	Clg., HW Reheat Optional Constant Vol., Fan Interlock	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.C. Damper
Converget DDICE INDUSTRIES 2011	•			DEV B



# **Control Sequence Number 5009**



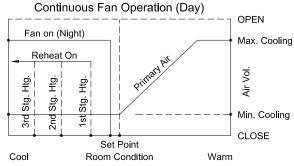
#### NOTES:

1. TOTAL AIR CONSUMPTION 0.038 SCFM.

## **LEGEND**

FACTORY PNEUMATIC TUBING FIELD PNEUMATIC TUBING

#### **CONTROL GRAPH**



Sequence of Operation -- Constant volume, fan interlock, pressure independent, normally closed, direct acting cooling application with electrid reheat coil and primary damper close-off.

Day Operation: The unit fan starts and runs continuously when primary air static pressure is sensed at the CP100 controller.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostal will also control the electric reheat coil.

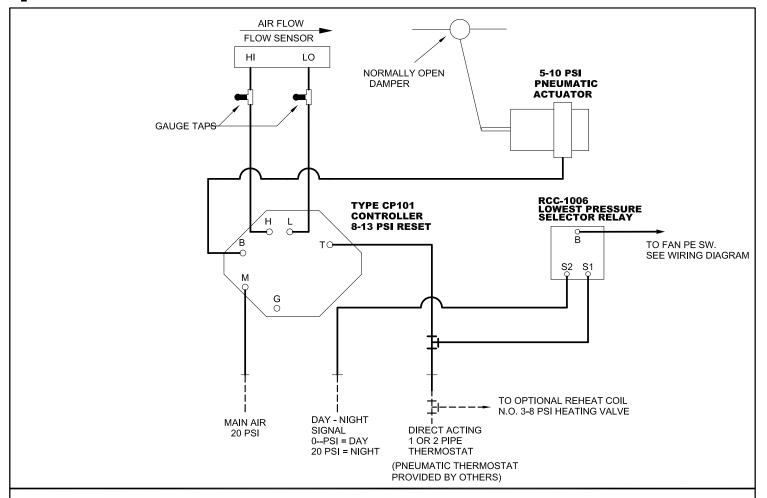
Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

Night Operation: When no primary air static pressure is sensed at the CP100 controller the VAV damper is driven to the closed position and the unit fan is off. On a continued decrease in space temperature the thermostat will energize the unit fan and control an electric reheat coil to maintain the thermostat setting. Normally Closed Damper: On failure of the main air supply the damper will fail to the closed position

	to the closed position.			
PROJECT:				3rice®
ENGINEER:			674/ Be	FPC8 / FPCE8 / FPCQ8 Kreuter CP-101
CUSTOMER:		231767	Clg., Electric Reheat Coil Constant Vol., Fan Interlock	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.C. Damper
Copyright PRICE INDUSTRIES 2011				REV A



# Control Sequence Number 5010



NOTES:

1. TOTAL AIR CONSUMPTION 0.0295 SCFM.

EGEND

FACTORY PNEUMATIC TUBING
FIELD PNEUMATIC TUBING

# **CONTROL GRAPH**

Continuous Fan Operation (Day)

Fan on (Night)

OPEN

Max. Cooling

ORIGINAL PAIR

Min. Cooling

CLOSE

Cool

Room Condition

Warm

Sequence of Operation -- Constant volume, Day-Night Fan, pressure independent, normally open, direct acting cooling application with optional HW reheat.

**Day Operation:** The unit fan starts and runs continuously when the pneumatic signal from the central control system is at 0 psi.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. A thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat may also control an optional reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

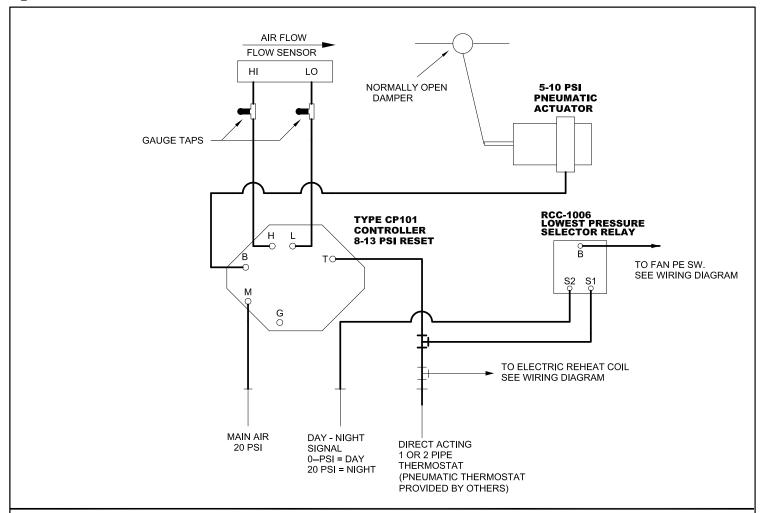
**Night Operation:** The unit fan is off when the pneumatic signal from the central control system is at 20 psi. On a continued decrease in space temperature the thermostat will energize the unit fan and control an optional reheat coil to maintain the thermostat setting.

**Normally Open Damper:** On failure of the main air supply the damper will fail to the open position.

PROJECT:				
ENGINEER:			674/ Be	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:			231768	Clg., HW Reheat Optional Constant Vol., Day-Night Fan
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.O. Damper
Conversable DDICE INDUSTRIES 2011			CUEET 1 OF 1	DEV. A



# Control Sequence Number 5011



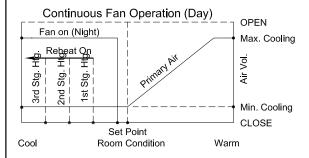
#### NOTES:

1. TOTAL AIR CONSUMPTION 0.0295 SCFM.

#### LEGEND

FACTORY PNEUMATIC TUBING
FIELD PNEUMATIC TUBING

#### **CONTROL GRAPH**



Sequence of Operation -- Constant volume, Day-Night Fan, pressure independent, normally open, direct acting cooling application with electric reheat coll.

Day Operation: The unit fan starts and runs continuously when the pneumatic signal from the central control system is at 0 psi. An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting. A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat will control the electric reheat coil. Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

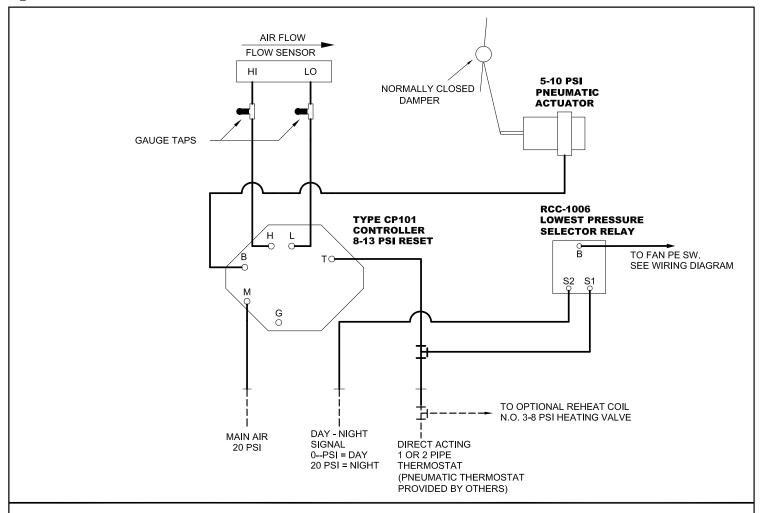
**Night Operation:** The unit fan is off when the pneumatic signal from the central control system is at 20 psi. On a continued decrease in space temperature the thermostat will energize the unit fan and control an electric reheat coil to maintain the thermostat setting.

**Normally Open Damper:** On failure of the main air supply the damper will fail to the open position.

PROJECT:				
ENGINEER:			674/ BC	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:			231769	Clg., Electric Reheat Coil Constant Vol., Day-Night Fan
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.O. Damper
2 0 : LL PRIOE INDUSTRIES 2014			1	DEV. 4



# Control Sequence Number 5012



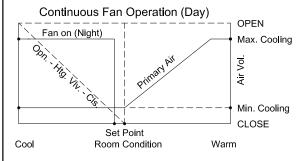
#### NOTES:

1. TOTAL AIR CONSUMPTION 0.0295 SCFM.

## LEGEND

FACTORY PNEUMATIC TUBING
FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation -- Constant volume, Day-Night Fan, pressure independent, normally closed, direct acting cooling application with optional HW reheat.

**Day Operation:** The unit fan starts and runs continuously when the pneumatic signal from the central control system is at 0 psi.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat may also control an optional reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in the inlet duct static pressure.

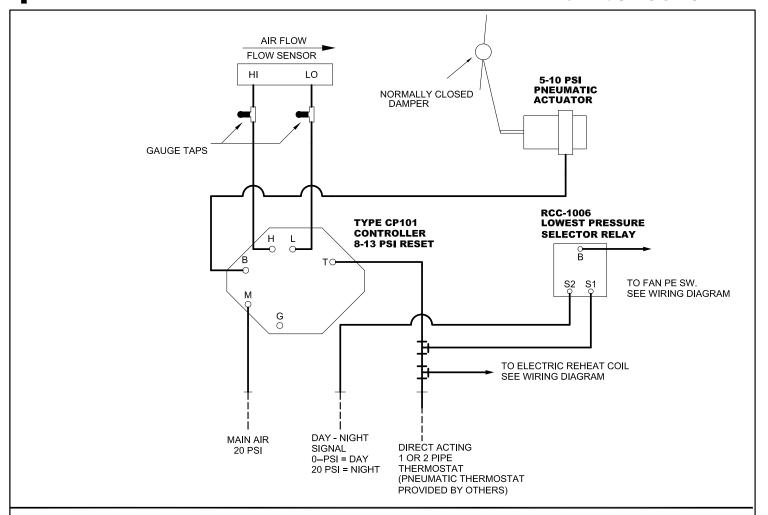
**Night Operation:** The fan is off when the pneumatic signal from the central control system is at 20 psi. On a continued decrease in space temperature the thermostat will energize the unit fan and control an optional reheat coil to maintain the thermostat setting.

**Normally Closed Damper:** On failure of the main air supply the damper will fail to the closed position.

PROJECT:				irice®
ENGINEER:			b>14/80	FPC8 / FPCE8 / FPCQ8 Kreuter CP-101
CUSTOMER:		231770	Clg., HW Reheat Optional Constant Vol., Day-Night Fan	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.C. Damper
Converget PRICE INDUSTRIES 2011				DEV/ A



# Control Sequence Number 5013



#### NOTES:

1. TOTAL AIR CONSUMPTION 0.0295 SCFM.

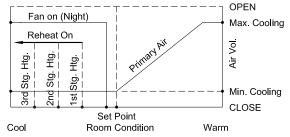
## LEGEND

FACTORY PNEUMATIC TUBING

-- FIELD PNEUMATIC TUBING

# CONTROL GRAPH

# Continuous Fan Operation (Day)



Sequence of Operation -- Constant volume, Day-Night Fan, pressure independent, normally closed, direct acting cooling application with electric reheat coil.

**Day Operation:** The unit fan starts and runs continuously when the pneumatic signal from the central control system is at 0 psi.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases to 13 psi or more, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures below 8 psi the minimum flow setting is maintained, and the thermostat will control an electric reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

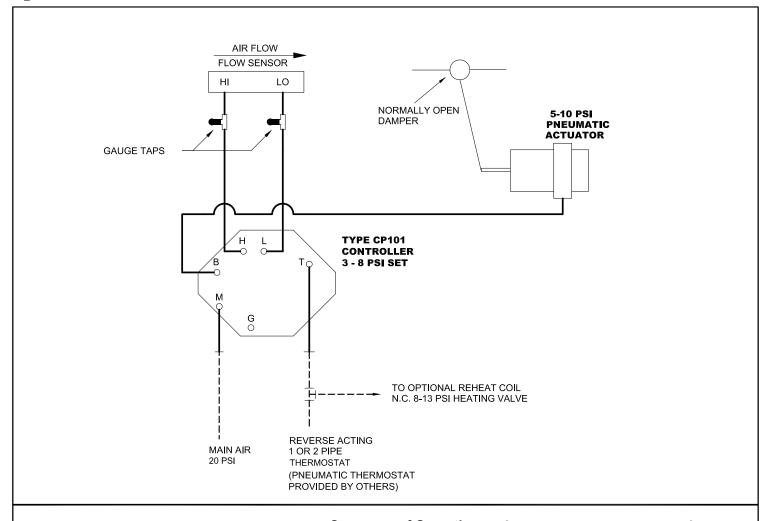
**Night Operation:** The unit fan is off when the pneumatic signal from the central control system is at 20 psi. On a continued decrease in space temperature the thermostat will energize the unit fan and control an electric reheat coil to maintain the thermostat setting.

**Normally Closed Damper:** On failure of the main air supply the damper will fail to the closed position.

PROJECT:				
ENGINEER:			B74/80	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:			231771	Clg., Electric Reheat Coil Constant Vol., Day-Night Fan
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent D.A. T'Stat, N.C. Damper
Converight DDICE INDUSTRIES 2011	<u> </u>			DEV. A



# **Control Sequence Number 5016**



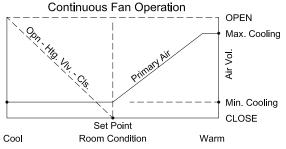
#### NOTES:

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

## **LEGEND**

FACTORY PNEUMATIC TUBING
FIELD PNEUMATIC TUBING

# **CONTROL GRAPH**



Sequence of Operation -- Constant volume, continuous fan, pressure independent, reverse acting, normally open cooling application. HW reheat coil is optional.

The unit fan operates continuously.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting. A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi or more, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures between 3 & 8 psi the VAV damper modulates between minimum & maximum flow settings.

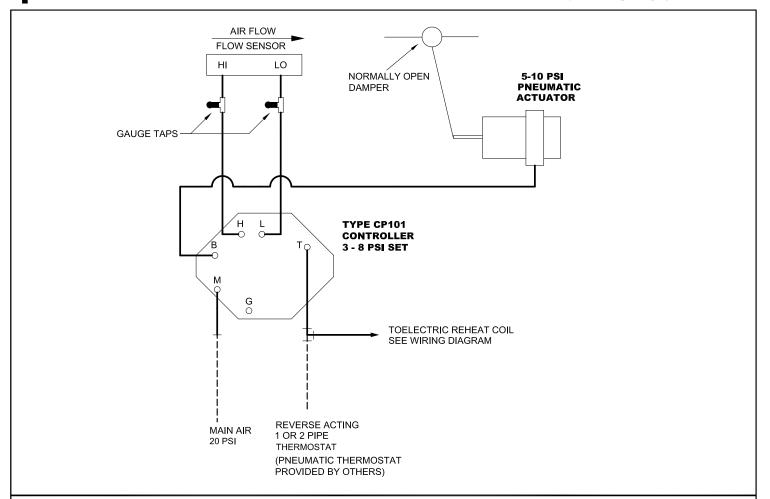
At thermostat output pressures above 8 psi the minimum flow setting is maintained, and the thermostat may control an optional reheat coil. Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

**Normally Open Damper:** On failure of the main air supply the damper will fail to the open position.

1 Cool 1 Condition W	aiiii		
PROJECT:			orice°
ENGINEER:		674/ EL	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		231774	Clg., HW Reheat Optional Constant Vol., Continuous Fan
SUBMITTAL DATE:	SPEC. SYMBOL:	2011/11/07	Pressure Independent R.A. T'Stat, N.O. Damper



# Control Sequence Number 5017



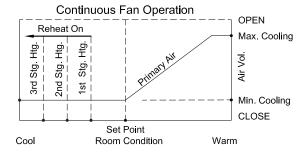
#### **NOTES:**

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

# LEGEND

FACTORY PNEUMATIC TUBING
FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



# Sequence of Operation -- Constant volume, continuous fan, pressure independent, normally open, reverse acting cooling application with electric reheat coil.

The unit fan operates continuously.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi or more, the VAV box damper is maintained at the pre-selected minimum flow setting.

At thermostat output pressures between 3 & 8 psi the VAV damper modulates between minimum & maximum flow settings.

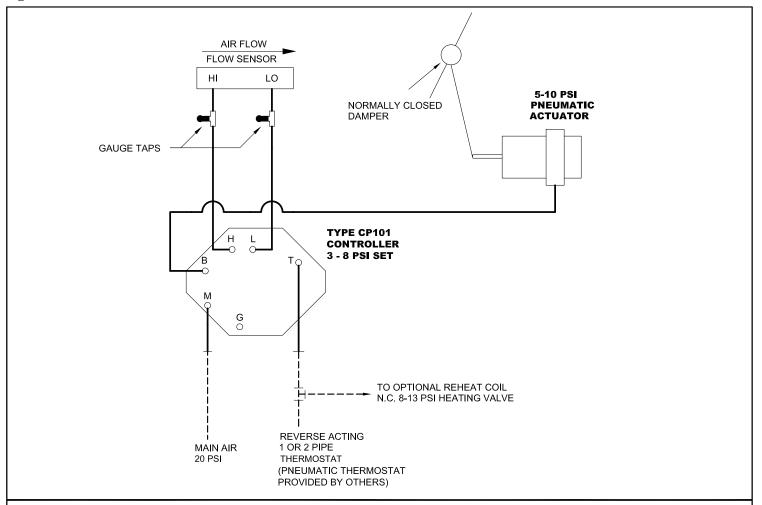
At thermostat output pressures above 8 psi the minimum flow setting is maintained, and the thermostat will control the electric reheat coil. Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

**Normally Open Damper:** On failure of the main air supply the damper will fail to the open position.

PROJECT:			irice°	
ENGINEER:			674/ BC	FPC8 / FPCE8 / FPCQ8 Kreuter CP-101
CUSTOMER:			231775	Clg., Electric Reheat Coil Constant Vol., Continuous Fan
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent R.A. T'Stat, N.O. Damper
Converget PRICE INDUSTRIES 2011	<u>'</u>		•	DEV/ A



# Control Sequence Number 5018



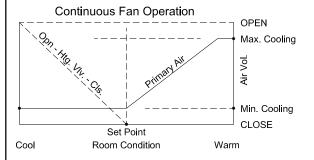
## NOTES:

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

# LEGEND

FACTORY PNEUMATIC TUBING
----- FIELD PNEUMATIC TUBING

# **CONTROL GRAPH**



Sequence of Operation -- Constant volume, continuous fan, pressure independent, reverse acting, normally closed cooling application. HW reheat coil is optional.

The unit fan operates continuously.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting. A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi or more, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures between 3 & 8 psi the VAV damper modulates between minimum & maximum flow settings.

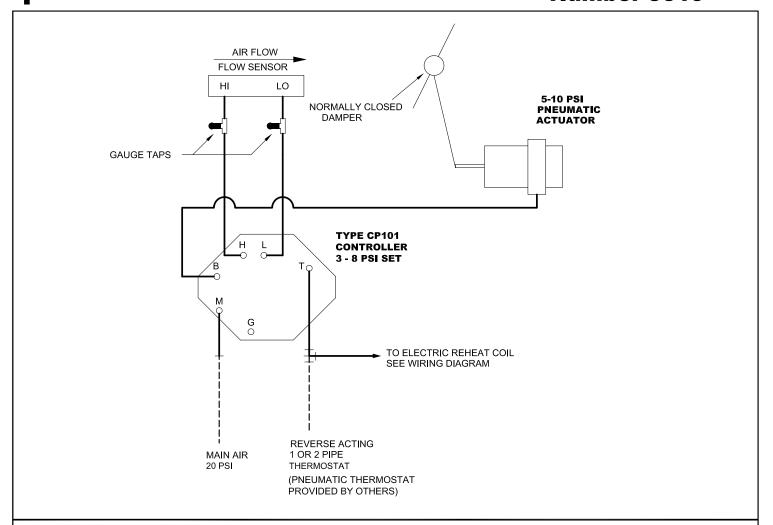
At thermostat output pressures above 8 psi the minimum flow setting is maintained, and the thermostat may control an optional reheat coil. Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

**Normally Closed Damper:** On failure of the main air supply the damper will fail to the closed position.

PROJECT:				
ENGINEER:			674 ge	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:			231776	Clg., HW Reheat Optional Constant Vol., Continuous Fan
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent R.A. T'Stat, N.C. Damper
© C	•		•	DEV. A



# **Control Sequence Number 5019**



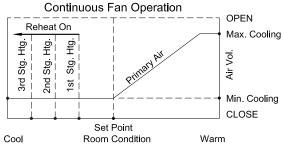
## **NOTES:**

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

# **LEGEND**

**FACTORY PNEUMATIC TUBING** FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation - Constant volume, continuous fan, pressure independent, normally closed, reverse acting cooling application with electric reheat coil.

The unit fan operates continuously.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting. A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi or more, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures between 3 & 8 psi the VAV damper modulates between minimum & maximum flow settings.

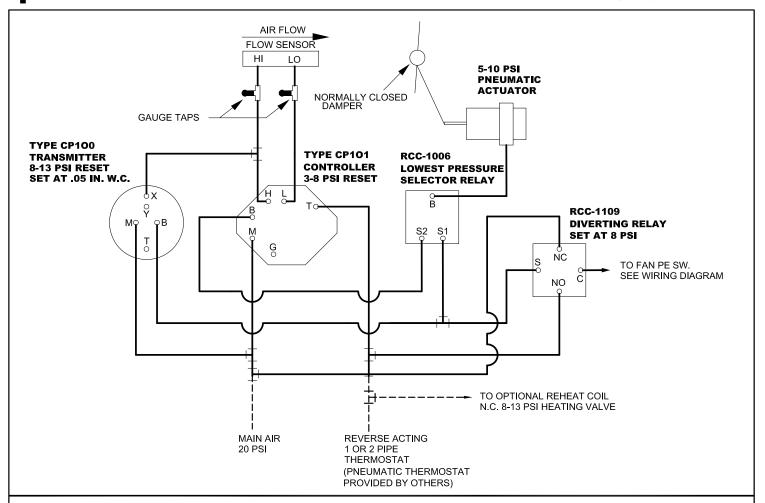
At thermostat output pressures above 8 psi the minimum flow setting is maintained, and the thermostat will control the electric reheat coil. Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

Normally Closed Damper: On failure of the main air supply the damper will fail to the closed position.

PROJECT:			3rice <sup>®</sup>	
ENGINEER:			674 ge	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:			231777	Clg., Electric Reheat Coil Constant Vol., Continuous Fan
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent R.A. T'Stat, N.C. Damper
C Copyright PRICE INDUSTRIES 2011	•			REV A



# Control Sequence Number 5020



#### NOTES:

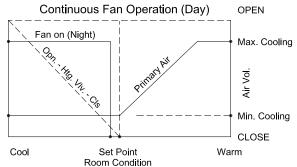
1. TOTAL AIR CONSUMPTION 0.038 SCFM.

# LEGEND

FACTORY PNEUMATIC TUBING

---- FIELD PNEUMATIC TUBING

# **CONTROL GRAPH**



Sequence of Operation -- Constant volume, fan interlock, pressure independent, normally closed, reverse acting cooling application with primary damper close-off. HW reheat coil is optional.

**Day Operation:** The unit fan starts and runs continuously when primary air static pressure is sensed at the CP100 controller. An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures above 8 psi, the minimum flow setting is maintained, and the thermostat may also control an optional reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

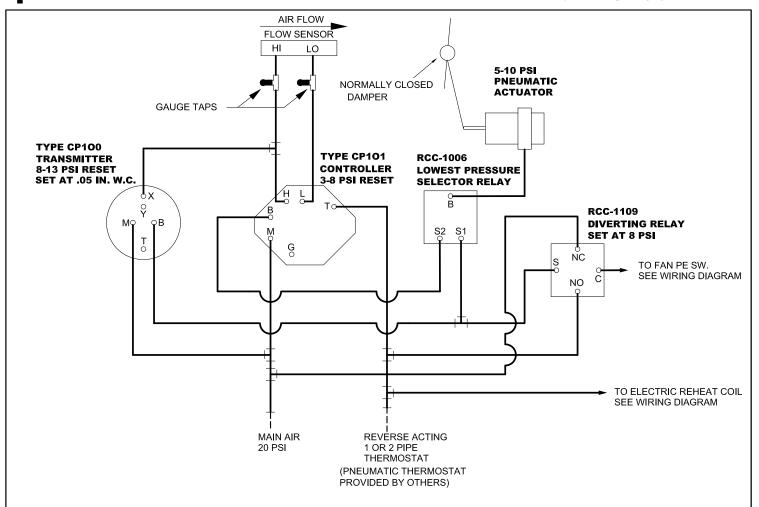
**Night Operation:** When no primary air static pressure is sensed at the CP100 controller the VAV damper is driven to the closed position and the unit fan is off. On a continued decrease in space temperature the thermostat will energize the unit fan and control an optional reheat coil to maintain the thermostat setting.

**Normally Closed Damper:** On failure of the main air supply the damper will fail to the closed position.

PROJECT:		Price <sup>®</sup>		
ENGINEER:			674/ Be	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:			231778	Clg., HW Reheat Optional Constant Vol., Fan Interlock
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent R.A. T'Stat, N.C. Damper
© Carriely DDICE INDUCTDICS 2014				DEV D



# **Control Sequence** Number 5021



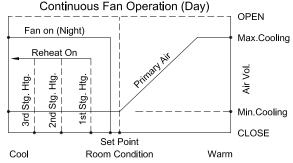
#### NOTES:

1. TOTAL AIR CONSUMPTION 0.038 SCFM.

## **LEGEND**

FACTORY PNEUMATIC TUBING - FIELD PNEUMATIC TUBING

## **CONTROL GRAPH**



Sequence of Operation -- Constant volume, fan interlock, pressure independent, normally closed, reverse acting cooling application with electric reheat coil and primary damper close-off.

Day Operation: The unit fan starts and runs continuously when primary air static pressure is sensed at the CP100 controller.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi, the VAV box damper is maintained at the pre-selected minimum flow setting. At thermostat output pressures above 8 psi, the minimum flow setting is maintained, and the thermostat may also control the electric reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

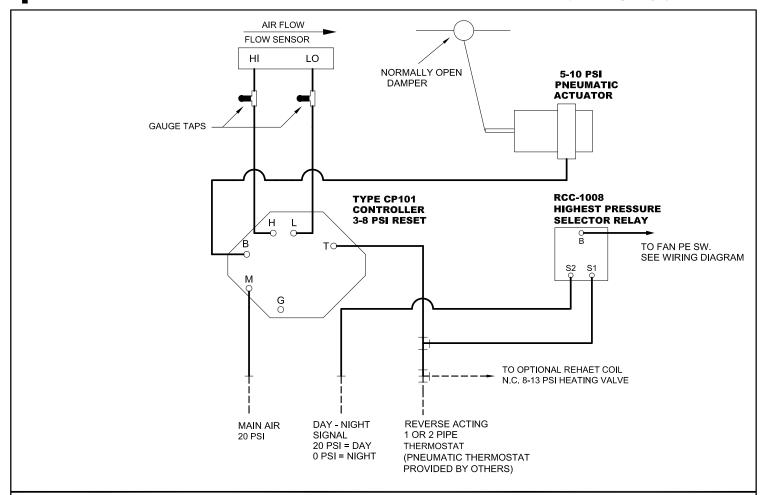
Night Operation: When no primary air static pressure is sensed at the CP100 controller the VAV damper is driven to the closed position and the unit fan is off. On a continued decrease in space temperature the thermostat will energize the unit fan and control an electric reheat coil to maintain the thermostat setting.

Normally Closed Damper: On failure of the main air supply the damper will fail to the closed position.

7 TOOM CONGRESS	vvaiiii		
PROJECT:			IPIE®
ENGINEER:		6H/30	FPC8 / FPCE8 / FPCQ8 Kreuter CP-101
CUSTOMER:		231779	Clg., Electric Reheat Coil Constant Vol., Fan Interlock
SUBMITTAL DATE:	SPEC. SYMBOL:	2011/11//07	Pressure Independent R.A. T'Stat, N.C. Damper
© Copyright PRICE INDUSTRIES 2011	<u>.</u>		REV B



# Control Sequence Number 5022



#### NOTES:

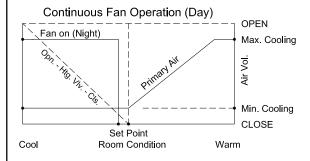
1. TOTAL AIR CONSUMPTION 0.017 SCFM.

## LEGEND

FACTORY PNEUMATIC TUBING

FIELD PNEUMATIC TUBING

# **CONTROL GRAPH**



Sequence of Operation -- Constant volume, Day-Night fan, pressure independent, normally open, reverse acting cooling application. HW reheat coil is optional.

**Day Operation:** The unit fan starts and runs continuously when the pneumatic signal from the central control system is at 20 psi.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi the VAV box damper is maintained at the pre-seleced minimum flow setting. At thermostat output pressures above 8 psi the minimum flow setting is maintained, and the thermostat may also control an optional reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

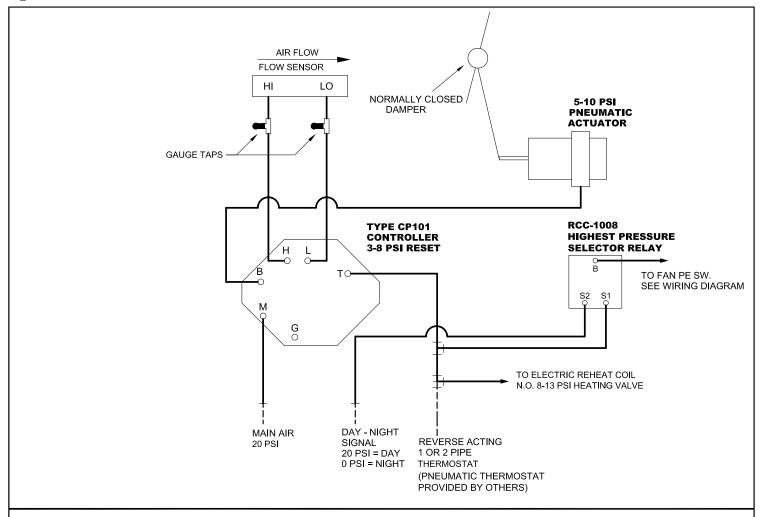
**Night Operation:** The unit fan is off when the pneumatic signal from the central control system is at 0 psi. On a continued decrease in space temperature the thermostat will energize the unit fan and control an optional reheat coil to maintain the thermostat setting.

**NormallyOpen Damper:** On failure of the main air supply the damper will fail to the open position.

PROJECT:		1	1rice®	
ENGINEER:			674/ Be	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		231780	Clg., HW Reheat Optional Constant Vol., Day-Night Fan	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent R.A. T'Stat, N.O. Damper
Conviget DRICE INDUSTRIES 2011			<u> </u>	DEV. A



# **Control Sequence** Number 5023

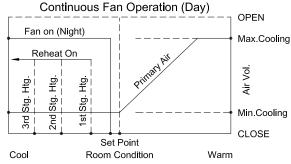


1. TOTAL AIR CONSUMPTION 0.017 SCFM.

#### **LEGEND**

 FACTORY PNEUMATIC TUBING ---- FIELD PNEUMATIC TUBING

# CONTROL GRAPH



Sequence of Operation -- Constant volume, Day-Night fan, pressure independent, normally closed, reverse acting cooling application with electric reheat coil.

Day Operation: The unit fan starts and runs continuosly whan the pneumatic signal from the central control system is at 20 psi.

An increase in space temperature decreases the thermostat output pressure. When the thermostat output decreases to 3 psi or less, the VAV box damper is maintained at the pre-selected maximum flow setting.

A decrease in space temperature increases the thermostat output pressure. When the thermostat output increases to 8 psi, the VAV box damper is maintained at the pre-seleced minimum flow setting. At thermostat output pressures above 8 psi the minimum flow setting is maintained, and the thermostat may control the electric reheat coil.

Airflow is held constant at any given thermostat output pressure regardless of changes in inlet duct static pressure.

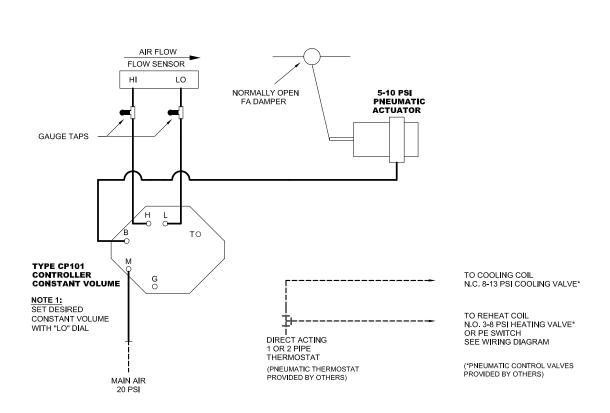
Night Operation: The unit fan is off when the pneumatic signal from the central control system is at 0 psi. On a continued decrease in space temperature the thermostat will energize the unit fan and control an electric reheat coil to maintain the thermostat setting.

Normally Closed Damper: On failure of the main air supply the damper will fail to the closed position.

PROJECT:				
			I	
ENGINEER:			BH 30	FPC8 / FPCE8 / FPCQ8  Kreuter CP-101
CUSTOMER:		231781	Clg., Electric Reheat Coil Constant Vol., Day-Night Fan	
SUBMITTAL DATE:	SPEC. SYMBOL:		2011/11/07	Pressure Independent R.A. T'Stat, N.C. Damper
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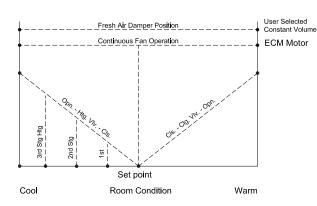
# Control Sequence Number 5700



FACTORY PNEUMATIC TUBING
---- FIELD PNEUMATIC TUBING

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

#### **CONTROL GRAPH**



Sequence of Operation – Constant Volume, pressure independant fresh Air, continous fan, normally open, direct acting heating/cooling application.

#### Operation:

The unit fan runs continuously.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases from 8 PSI or more, the CW valve is modulated open.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases from 8 PSI or less, the CW valve is closed and the HW valve is modulated open or PE switches activate one or more stages of electric repeat.

Fresh air volume is held constant at any given thermostat output pressure regardless of changes in thermostat pressure.

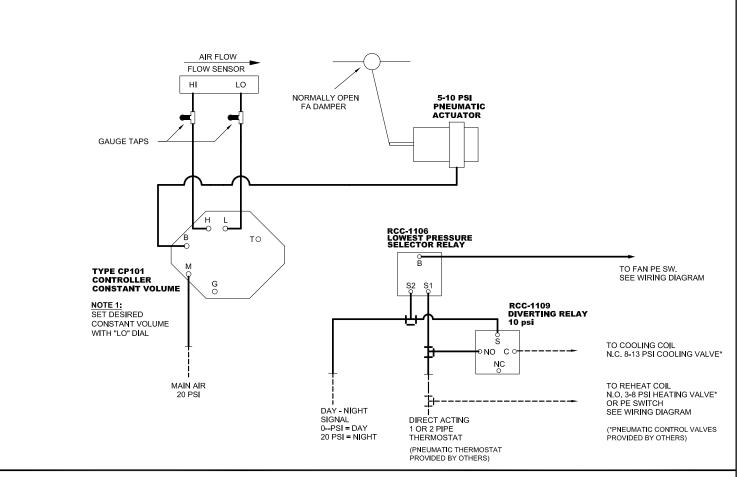
# Normally Open Damper:

On failure of the main air supply the fresh air damper will fail to the open position.

PROJECT:		Price°	
ENGINEER:		MW/BU	FPCOA KREUTER CP-101
CUSTOMER:		261371	FA, CLG/HTG Constant Volume, Continuous Fan
SUBMITTAL DATE:	SPEC. SYMBOL:	2012/10/19	D.A. T-STAT, N.O. DAMPER NON-CONDENSING APPLICATION



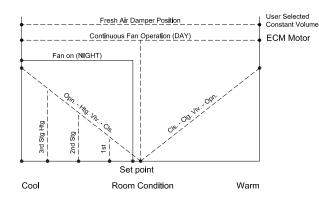
# Control Sequence Number 5701





1. TOTAL AIR CONSUMPTION 0.0291 SCFM.

#### **CONTROL GRAPH**



Sequence of Operation – Constant Volume, pressure independent fresh Air, day/night fan, normally open, direct acting heating/cooling application.

#### Day Operation:

The unit fan starts and runs continuously when the pneumatic signal from the central control system is 0 PSI.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases from 8 PSI or more, the CW valve is modulated open.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases from 8 PSI or less, the CW valve is closed and the HW valve is modulated open or PE switches activate one or more stages of electric reheat.

Fresh air volume is held constant at any given thermostat output pressure regardless of changes in thermostat pressure.

# Night Operation:

The unit fan is off when the pneumatic signal from the central control system is at 20 PSI.

On a continued decrease in space temperature the thermostat will energize the unit fan and control the reheat coil to maintain the thermostat setting. The CW valve is disabled.

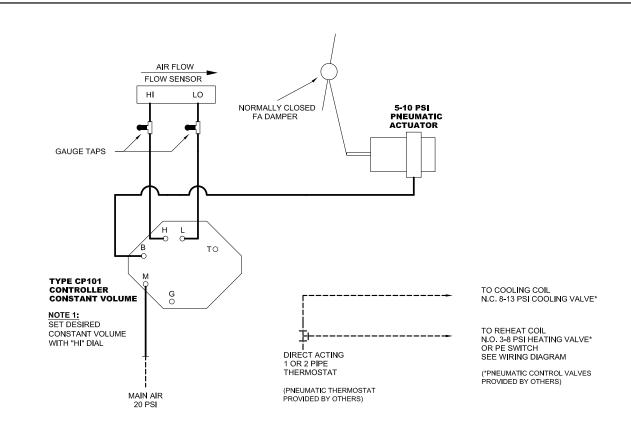
#### Normally Open Damper:

On failure of the main air supply the fresh air damper will fail to the open position.

PROJECT:			Price®	
ENGINEER:		MW/BU	FPCOA  KREUTER CP-101  FA, CLG/HTG	
CUSTOMER:		261372	Constant Volume, Day-Night Fan	
SUBMITTAL DATE:	SPEC. SYMBOL:	2012/10/19	D.A.T-STAT, N.O. DAMPER NON-CONDENSING APPLICATION	



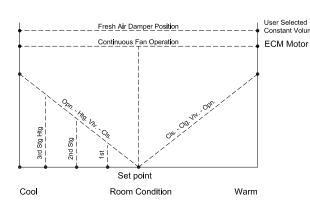
# Control Sequence Number 5702



FACTORY PNEUMATIC TUBING
---- FIELD PNEUMATIC TUBING

1. TOTAL AIR CONSUMPTION 0.017 SCFM.

#### **CONTROL GRAPH**



Sequence of Operation – Constant Volume, pressure independant fresh Air, continous fan, normally open, direct acting heating/cooling application.

#### Operation:

The unit fan runs continuously.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases from 8 PSI or more, the CW valve is modulated open.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases from 8 PSI or less, the CW valve is closed and the HW valve is modulated open or PE switches activate one or more stages of electric reheat

Fresh air volume is held constant at any given thermostat output pressure regardless of changes in thermostat pressure.

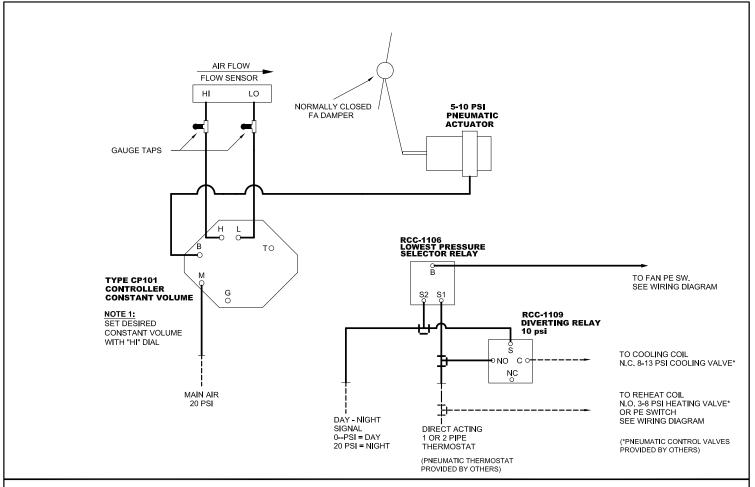
# Normally Closed Damper:

On failure of the main air supply the fresh air damper will fail to the closed position.

PROJECT:		Price°	
ENGINEER:		Shu/Bu	FPCOA KREUTER CP-101
CUSTOMER:	OMER: 261373		FA, CLG/HTG Constant Volume, Continuous Fan
SUBMITTAL DATE:	SPEC. SYMBOL:	2012/10/19	D.A. T-STAT, N.C. DAMPER NON-CONDENSING APPLICATION



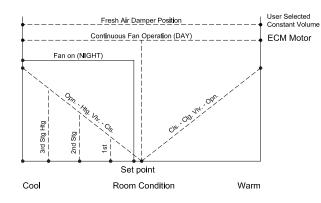
# Control Sequence Number 5703





1. TOTAL AIR CONSUMPTION 0.0291 SCFM.

#### **CONTROL GRAPH**



Sequence of Operation – Constant Volume, pressure independent fresh Air, day/night fan, normally open, direct acting heating/cooling application.

#### Day Operation:

The unit fan starts and runs continuously when the pneumatic signal from the central control system is 0 PSI.

An increase in space temperature increases the thermostat output pressure. When the thermostat output increases from 8 PSI or more, the CW valve is modulated open.

A decrease in space temperature decreases the thermostat output pressure. When the thermostat output pressure decreases from 8 PSI or less, the CW valve is closed and the HW valve is modulated open or PE switches activate one or more stages of electric reheat.

Fresh air volume is held constant at any given thermostat output pressure regardless of changes in thermostat pressure.

# Night Operation:

The unit fan is off when the pneumatic signal from the central control system is at 20 PSI.

On a continued decrease in space temperature the thermostat will energize the unit fan and control the reheat coil to maintain the thermostat setting. The CW valve is disabled.

#### Normally Closed Damper:

On failure of the main air supply the fresh air damper will fail to the closed position.

PROJECT:		Price <sup>®</sup>	
ENGINEER:		m Bu	FPCOA KREUTER CP-101
CUSTOMER:		261374	FA, CLG/HTG Constant Volume, Day-Night Fan
SUBMITTAL DATE:	SPEC. SYMBOL:	2012/10/19	D.A. T-STAT, N.C. DAMPER NON-CONDENSING APPLICATION