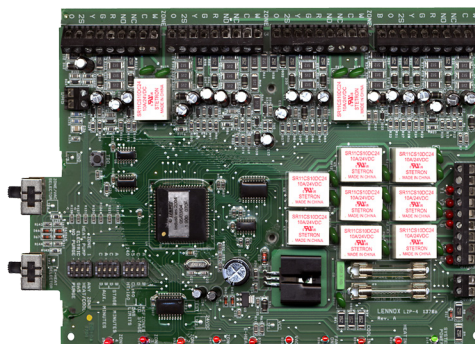


LENNOX**PRODUCT SPECIFICATIONS**

Bulletin No. 210400

October 2010

Supersedes June 2004



LZP-4 Zone Control Panel Board

FEATURES**EQUIPMENT WARRANTY**

Zone Control Panel - Two years limited warranty in residential applications.

Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

ZONE CONTROL SYSTEM

LZP-4 Zone Control Panel (**X3786**) is capable of controlling up to four separate zones.

Panel is capable of controlling multi-stage equipment, 2 heat / 2 cool conventional heating/cooling systems and 3 heat, 2 cool heat pump and dual fuel systems.

System consists of the LZP-4 Zone Control Panel, discharge air sensor (furnished), field supplied duct mounted motorized zone dampers with a thermostat in each zone and a field supplied bypass damper.

Panel is powered by a separate stand-alone transformer.

Zone dampers are automatically controlled to supply air flow only to zones with a thermostat demand.

Individual air volumes for heating or cooling are available to each zone.

Round or rectangular dampers can be used.

Zoning system allows temperature setback in unoccupied areas while maintaining comfort in occupied areas.

Auto-changeover control from any zone thermostat or control heating/cooling mode to all zones from the zone 1 thermostat.

Compatible with standard heat/cool or heat pump electronic thermostats (non-power robbing). See recommended thermostats.

Not for use with variable-speed gas furnaces or electro-mechanical thermostats.

ZONE CONTROL PANEL

Microprocessor controlled panel contains all necessary relays and controls to operate the system.

Automatic reset in case of operation error or power failure.

Built-in time delay function (4 minutes) prevents short cycling of system.

3A fuse protects panel from shorts in the thermostat and damper field wiring. Spare 3A fuse included.

Cabinet and removable cover constructed of high impact plastic.

Holes for mounting are furnished and electrical inlets are provided in cabinet.

Dimensions (H x W x D): 12 x 9-1/2 x 2 in.

Shipping weight: 2 lbs.

Power requirements: 24VAC (18-30VAC).

Low voltage equipment terminals

Four zones (dampers) (NC, NO, C)

Heating/Cooling equipment connections (RC, RH, Y1, Y2, O, B, G, W2, W1)

FEATURES

ZONE CONTROL PANEL (CONTINUED)

Low Voltage Control Terminals

- Four zone thermostats (W, C, R, G, Y, 2S, O, B)
(Note - Terminal B is on zone 1 only)
- Discharge air sensor

Setup DIP Switches

- # ZONES TO STAGE (A, B, C, D)
- DAS SENSOR (heating) (HT-160/140)
- DAS SENSOR (cooling) (CL-45/40)
- STAGE MINUTES (A, B, C, D)
- AUX. MINUTES (A, B, C, D)
- ZONE 1 / ANY ZONE
- HEAT PUMP / HEAT/COOL
- ELECTRIC / GAS
- NO PURGE / PURGE

See next section for descriptions.

Display LED's

- Damper 1, 2, 3, 4 Closed (LED's lit when zone dampers are closed)
- E-Heat Mode (LED lit in emergency heat mode, heat pump systems only)
- Central Mode (LED lit in vacation mode)
- Fan On (LED lit when fan is operating)
- Heating (LED lit when heating equipment is operating, flashes for high limit interrupt)
- Cooling (LED lit when cooling equipment is operating, flashes for low limit interrupt)
- Status (power, flashing)

Additional Control Board LED's

- Y1, Y2, O, B, W2, W1 (LED's lit showing heating/cooling equipment operation)

Timer Delay Override Button (TDO)

- Speeds up onboard timer by a factor of 60 for system checkout.

ZONE CONTROL PANEL DIP SWITCH SETTINGS

Zones to Stage

If multi-stage thermostats are not installed, 2nd stage operation can be initiated when more than one zone is calling for conditioning (does not apply to auxiliary heat on heat pump applications). Four combinations of switch settings are available: 1, 2, 3 or 4 zones. Set to 1 ZONE, thermostat inputs or timed length of demand controls staging, for all other settings the specified number of zones calling can control staging. Factory setting is 1 ZONE.

Stage Minutes

If multi-stage thermostats are not installed, and the "# Zones to Stage" is set to 1 ZONE, staging can be controlled by the amount of time that any one zone is calling for conditioning before initiating a 2nd stage heating or cooling (heat/cool systems) or 2nd stage compressor (heat pump systems) demand. Four combinations of switch settings are available: 0, 10, 30 or 60 minutes. Set to 0 minutes, thermostat inputs or "# of Zones to Stage" control staging. Factory setting is 0 minutes.

CL-45 / 40

Controls the cooling temperature cut-out. Sets the low temperature limit (45°F or 40°F). Factory setting is 45°F (recommended for optimum operation).

HT-160 / 140

Controls the heating temperature cut-out. 160°F for gas furnaces, 140°F for electric heat. Factory setting is 160°F.

Zone 1 / Any Zone

Determines thermostat zone control operation. ANY ZONE setting allows each thermostat to control the system. Different zones can have a cooling or heating demand at the same time. If zone thermostats are calling for both heating and cooling at the same time, the first zone calling is served. The other zones will be served 4 minutes after the first zone is satisfied or after trying to satisfy the demand for 20 minutes. If, after 20 minutes the original first zone demand is still not satisfied, the opposing demand is terminated and the original demand is run. ZONE 1 setting allows Zone 1 thermostat to control heating and cooling operation of the whole system. Factory setting is Any Zone.

Aux. Minutes

Controls auxiliary heat operation. If the control panel is set for ZONE 1 operation, auxiliary heat is controlled by time. If panel is set for ANY ZONE operation, auxiliary heat can be controlled by time or individual zone thermostats. For thermostat control of auxiliary heat, set AUX. MINUTES to 0 minutes. For timed control, set AUX. MINUTES to the amount of time the 1st and 2nd stage (if applicable) compressors are allowed to try and satisfy a call for heating before auxiliary heat will be activated. There are four time selections available: 0, 10, 30 and 60 minutes. Factory setting is 0 minutes.

FEATURES

Heat Pump / Heat/Cool

Select HEAT PUMP for heat pump or dual fuel systems. Select HEAT/COOL for conventional furnace/air conditioner. Factory setting is HEAT/COOL.

Electric / Gas

Select ELECTRIC when setting up for straight electric heating or auxiliary electric heating for heat pump applications. Select GAS to control fan with gas heating equipment and dual fuel heat pump applications. Factory setting is GAS.

No Purge / Purge

Allows the fan to operate a 60 second purge time. Works in heat and cool mode. Set the switch to NO PURGE to allow the heating or cooling system to operate it's own fan purge. NO PURGE setting will hold the damper position for 210 seconds, PURGE setting will hold damper position for 60 seconds. Factory setting is NO PURGE.

SLIDE SWITCHES

Central Mode (Vacation) (On/Off)

Allows Zone 1 to control entire system during unoccupied times. All zone dampers remain open. Central Mode LED is lit when operating.

Emergency Heat (On/Off)

Used with heat pump systems only. Allows any call for heat to use auxiliary heat. Allows homeowner to activate emergency heat when heat/cool thermostats are installed in all zones. E-Heat LED is lit when operating.

DISCHARGE AIR SENSOR (FURNISHED)

Field installed in supply air plenum.

Senses discharge air temperature to control system based on low temperature and high temperature limit DIP switch settings on Zone Control Panel.

SYSTEM EQUIPMENT DATA

For furnace data, see Gas Furnaces section.

For air handler data, see Air Handlers section.

For air conditioners data, see Air Conditioners section.

For heat pump data, see Heat Pump Outdoor Units section.

For add-on indoor coil unit data, see Indoor Coils section.

SEQUENCE OF OPERATION

When power is first applied, the green Status LED will flash, indicating that the board is functioning normally. When the board is first powered on, there is a 4 minute minimum off time delay during which only the fan output will respond.

In the heating mode, heating operation will continue until all heat demands have been satisfied. Any existing cooling demands will then be satisfied. Heating operation is only interrupted if an Emergency Heat demand (heat pump applications only) exists or if a cooling demand from another zone exists for 20 minutes. Cooling operation will continue until all cooling demands have been satisfied or if a heating demand from another zone exists for 20 minutes. The sequence of operation is dependent on the position of the ZONE 1/ANY ZONE DIP switch and the HEAT PUMP / HEAT/COOL DIP switch.

Heat/Cool Changeover:

When a demand for heating or cooling exists and an opposing demand is made from another zone, a 20 minute timer is activated. If the original demand is not satisfied within the 20-minute time period, the demand will be interrupted, turning the equipment off and allowing for the normal fan purge cycle and minimum equipment off time delay. The opposing demand will then be initiated. After 20 minutes, if the original demand still exists, the opposing demand will be terminated and the original demand can once again be reinstated.

High/Low Limit Temperature

The high/low limit temperature settings are designed to prevent the heating unit from overheating or the cooling coil from freezing. The discharge air temperature sensor (furnished) in the supply duct senses the air temperature and interrupts the heating/cooling equipment based on the DAS SENSOR DIP switch settings on the control panel. When a heating/cooling demand is interrupted by the high/low temperature limit, the zone control panel turns the heating/cooling equipment off and energizes the fan (if not already energized). The Heating or Cooling LED on the control panel will flash during a high/low limit temperature interrupt. Once the temperature drops/rises 10°F (depending on high or low limit) and the minimum off time expires, the heating/cooling equipment is turned back on if the demand still exists. The Heating or Cooling LED will stop flashing.

DAMPER OPERATION

The "NO" output will be energized and the "NC" output will be de-energized for any zone not calling for heating or cooling during heating/cooling equipment operation and during the damper purge time delay. During heating/cooling equipment operation or during the damper purge time delay, should all zones stop calling for heating or cooling, the dampers will remain in the position they were in before all zones stopped calling.

FEATURES

SEQUENCE OF OPERATION (CONTINUED)

Damper Purge Time Delay

When the NO PURGE/PURGE DIP switch is set to NO PURGE, damper purge time delay is 210 seconds and begins when the heating/cooling equipment turns off. When PURGE is selected, the damper purge time delay is 60 seconds. NO PURGE is the preferred control setting.

CONTINUOUS FAN OPERATION

Continuous fan operation is available from any zone thermostat. Zone dampers not calling for continuous fan operation will close.

HEATING/COOLING OPERATION

Cooling Operation - Conventional Heat/Cool and Heat Pump Systems

When a zone thermostat makes a demand for cooling, the zone damper opens and the cooling equipment begins operating.

Cooling demand is terminated when:

1. All zone demands for cooling are terminated.
2. The demand has exceeded the heat/cool changeover time limit (20 minutes) while a heat demand exists.
3. The demand is terminated by a low temperature limit interrupt.

When cooling demand is terminated, a 4 minute minimum off time delay is initiated.

2nd stage cooling is energized if:

1. Any demand for cooling is not satisfied in the time that is set on the STAGE MINUTES DIP switch setting.
2. 2nd stage of any zone thermostat is energized.
3. The number of zones calling for cooling is greater or equal to the # ZONES TO STAGE DIP switch setting.

When none of the conditions that initiated 2nd stage cooling are present, 2nd stage cooling terminates. Once terminated, 2nd stage cooling cannot occur again until after a 4 minute minimum off time delay.

Fan Purge Time Delay

If the NO PURGE/PURGE DIP switch is in the PURGE position, the fan will remain energized for 60 seconds after cooling stops. If the NO PURGE/PURGE DIP switch is in the NO PURGE position, the fan will stop immediately.

Heating Operation - Conventional Heating/Cooling Equipment

When a zone thermostat makes a demand for heating, the zone damper opens and heating equipment begins operating. The fan will also energize if the ELECTRIC/GAS DIP switch is in the ELECTRIC position.

Heating demand is terminated when:

1. All zone demands for heating are terminated.
2. The demand has exceeded the heat/cool changeover time limit (20 minutes) while a cooling demand exists.
3. The demand is terminated by a high temperature limit interrupt.

When heating demand is terminated, a 4 minute minimum off time delay is initiated.

2nd stage heating is energized if:

1. Any demand for heating is not satisfied in the time that is set on the STAGE MINUTES DIP switch setting.
2. 2nd stage of any zone thermostat is energized.
3. The number of zones calling for heating is greater or equal to the # ZONES TO STAGE DIP switch setting.

2nd stage heating will be energized in addition to 1st stage heating. When none of the conditions that initiated 2nd stage heating are present, 2nd stage heating terminates. Once terminated, 2nd stage heating cannot occur again until after a 4 minute minimum off time delay if Heat Pump / Heat/Cool DIP switch is set to Heat/Cool and the Electric/Gas DIP switch is set to Electric.

Fan Purge Time Delay

If the ELECTRIC/GAS DIP switch is set to ELECTRIC and the NO PURGE/PURGE DIP switch is set to PURGE, the fan will remain energized for 60 seconds after the heating demand is satisfied.

If the ELECTRIC/GAS DIP switch is set to GAS, the fan does not turn on during purge regardless of the position of the NO PURGE or PURGE DIP switch. The heating equipment will control the fan purge through the furnace control board.

The NO PURGE DIP switch setting is the preferred purge control setting.

FEATURES

Heating Operation - Heat Pump Systems

When a zone thermostat makes a demand for heating, the zone damper opens and the heat pump begins operating.

Heating demand is terminated when:

1. All zone demands for heating are terminated.
2. The demand has exceeded the heat/cool changeover time limit (20 minutes) while a cooling demand exists.
3. The demand is terminated by a high temperature limit interrupt.

When heating demand is terminated, a 4 minute minimum off time delay is initiated.

2nd stage heating is energized if:

1. Any demand for heating is not satisfied in the time that is set on the STAGE MINUTES DIP switch settings.
2. 2nd stage of any zone thermostat is energized.
3. The number of zones calling for heating is greater or equal to the # ZONES TO STAGE DIP switch setting.

2nd stage heating will be energized in addition to 1st stage heating.

When none of the conditions that initiated 2nd stage heating are present, 2nd stage heating terminates. Once terminated, 2nd stage heating cannot occur again until after a 4 minute minimum off time delay.

Auxiliary Heat Operation - Heat Pump Systems

Auxiliary heat can be controlled by the zone thermostats or by a time setting. There is no minimum time on or off delay if the Heat Pump / Heat/Cool DIP switch is set to Heat Pump and the Electric/Gas DIP switch is set to Electric.

Thermostat Control

(Heat Pump thermostats in all zones)

AUX. MINUTES DIP switch set to 0 minutes allows zone thermostat control of auxiliary heat.

Time Control

(Conventional Heat/Cool thermostats in all zones)

AUX. MINUTES DIP switch set to desired time (10, 30 or 60 minutes) allows 1st and 2nd stage compressors to try to satisfy a call for heating before allowing auxiliary heat to operate.

The heat pump heating immediately terminates when the condition no longer exist.

NOTE - Conventional heat/cool thermostats must be used when staging the auxiliary heat by time. DO NOT USE heat pump thermostats.

Fan Purge Time Delay

If ELECTRIC/GAS DIP switch is in the ELECTRIC position and if the NO PURGE/PURGE DIP switch is in the PURGE position, the fan will remain energized for 60 seconds after heating stops. If the NO PURGE/PURGE DIP switch is in the NO PURGE position, the fan will stop immediately.

Dual Fuel Operation

The Control Panel will control a dual fuel system when the HEAT PUMP/HEAT COOL DIP switch is set to the HEAT PUMP position and the ELECTRIC/GAS DIP switch is set to the GAS position. The dual fuel system is set up so that the 1st and 2nd stage compressor operation turns off before the auxiliary heat is turned on. Dual fuel mode effects auxiliary heat operation only.

To lock out the heat pump at low ambient conditions (below the system balance point) and use the gas furnace for heating demands, use the ComfortSense® heat pump zone thermostats (with outdoor temperature sensors installed on all zone thermostats). See Recommended Thermostats. See thermostat instructions for setting balance points for dual fuel control. When the thermostat is properly configured, it will send the appropriate signals to the Zone Control Panel. When the outdoor temperature is between the low and high balance points, 1st stage heating demands are serviced through the heat pump and 2nd stage heating demands are serviced through the gas furnace. Below the low balance point, all heat demands are serviced through the gas furnace. Above the high balance point, all heating demands are serviced with the heat pump. If using a two-stage furnace with a dual fuel application, set the furnace to stage heating.

If using a standard heat pump thermostat to control the dual fuel system, the furnace will turn on with an auxiliary heat demand after the condensing unit stops regardless of the outdoor temperature. This auxiliary heat demand will be serviced with a W1 furnace demand. An emergency heat demand will be serviced with a W1 + W2 furnace demand.

FEATURES

SEQUENCE OF OPERATION (CONTINUED)

Emergency Heat Operation - Heat Pump Systems

When the HEAT PUMP / HEAT/COOL DIP switch is set for HEAT PUMP, an emergency heat demand is initiated by a zone thermostat calling for emergency heat or by a zone thermostat calling for normal heat when the EMERGENCY HEAT slide switch on the panel is in the ON position. A thermostat can only call for emergency heat when the ZONE 1/ ANY ZONE DIP switch is in the ANY ZONE position and the AUX. MINUTES DIP switches are set to 0 minutes. When a demand for emergency heat is initiated compressor operation will terminate (if operating) B, W1 and W2 terminals (and the fan if the ELECTRIC/GAS DIP switch is set to ELECTRIC) will energize.

Emergency heat will terminate if:

1. Heating demand for all zones has been met.
2. The demand has exceeded the heat/cool changeover time limit (20 minutes) while a cooling demand exists.
3. The demand is terminated by a high temperature limit interrupt.

Once terminated, there is a 4 minute minimum off time delay.

NOTE - Heat pump thermostats are required in all zones for proper emergency heat operation.

Fan Purge Time Delay

If the ELECTRIC/GAS DIP switch is set to GAS, the fan is not turned on during purge regardless of the position of the NO PURGE/PURGE DIP switch.

OPTIONAL ACCESSORIES

CONTROLS

Transformer

24VAC transformer is required for operation of Zone Control Panel, thermostats and zone dampers.

Transformer size is determined by the total power requirements of the control panel, thermostats and damper.

See below for additional information.

NOTE - Zone Control Panel and Thermostats require 10VA
- Dampers require 10VA each

Catalog No.	Size	Description
10P17	40VA	120/208/240v - 24v
10P87	50VA	120/208/240v - 24v
12P61	75VA	120/208/240v - 24v
83P74	- - -	Electrical Box (4 in. sq.)

DAMPERS

Zone Dampers

Must be field supplied.

Any style 24VAC damper is compatible with the Zone Control Panel.

Spring Open / Power Close is the preferred type damper to use with this system.

At least one damper per zone is required.

Up to 5 dampers per zone may be connected in parallel to the Zone Control Panel - not to exceed a total of six dampers for entire system. If additional dampers are required, refer to the special wiring diagram in the installation instructions for additional information.

Bypass Damper

Bypass damper is required and must be field supplied. See Bypass Damper Sizing requirements on Page 6.

ZONE THERMOSTATS

Any single or multi-stage heating/cooling or heat pump digital electronic thermostat with 24VAC common terminal may be used (non-power robbing).

Also see Thermostat bulletins in Controls section and Lennox Price Book.

Recommended thermostats:

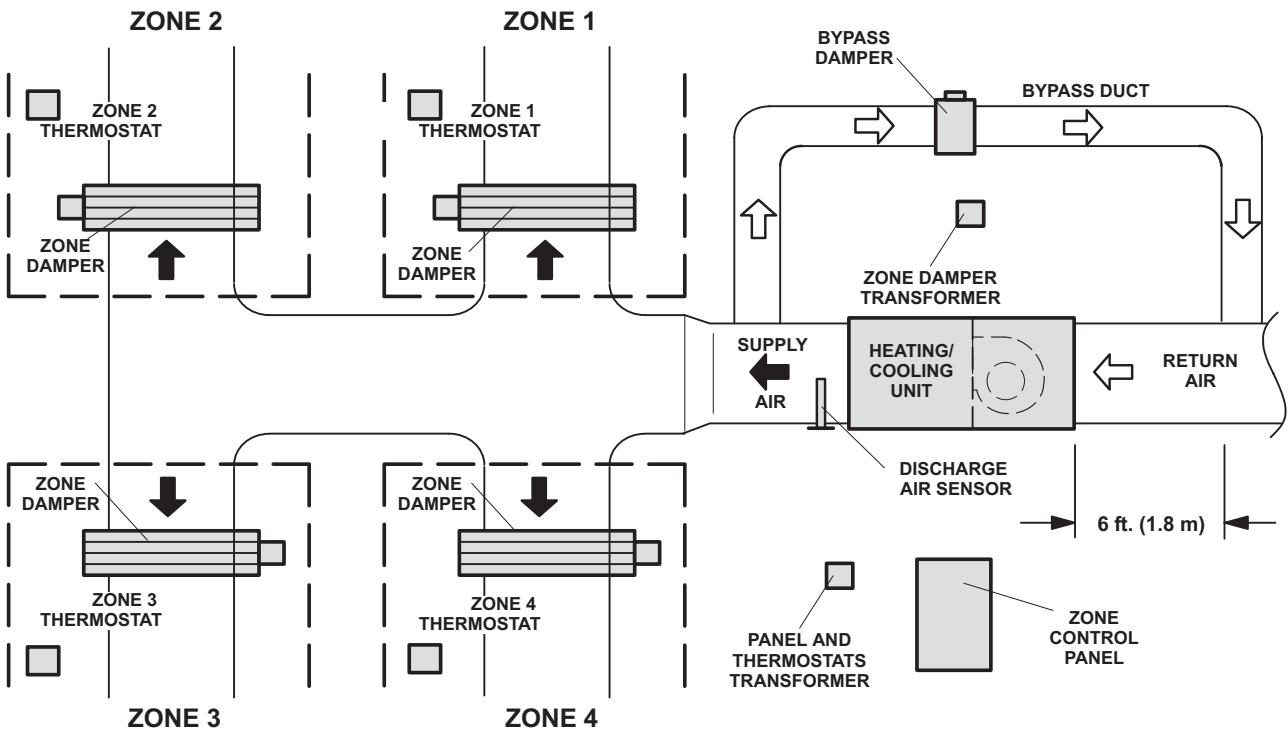
Conventional Heating / Cooling

- ComfortSense® 5000 1 htg. / 1 clg. (X4146)
- ComfortSense® 5000 3 htg. / 2 clg. (X4147)
- ComfortSense® 3000 1 htg. / 1 clg. (51M34)
- ComfortSense® 3000 2 htg. / 2 clg. (51M35)

Heat Pump

- ComfortSense® 5000 3 htg. / 2 clg. (X4147)
- ComfortSense® 3000 3 htg. / 2 clg. (51M37)

TYPICAL SYSTEM LAYOUT



BYPASS DAMPER SIZING

- 100% of the rated air volume must always move through the duct work when zoning with high cooling demand areas. (i.e. Florida)
- Assume that the smallest zone will be the only one to have a demand at any given time.
- 65%-70% of the rated air volume should always move through the duct system with standard heating systems.
- If one zone is less than 15% of total air volume, consider more equally sizing the zones.
- Bypass damper method takes the excess pressure from the supply duct and sends it back to the return duct. This is done by tapping into the supply air and running a duct back to the return air and mounting a bypass damper in that run.
- When tapping back into the return duct, the tap should be a minimum of at least 6 ft. away from the equipment to insure that the hot or cold air coming off of the plenum has time to mix with the return air before going across the coil again. The Discharge Air Sensor (furnished) will prevent any damage to the equipment from overheating or coil freeze-up.
- The bypass should be sized to handle the excess pressure build-up for the smallest zone. This is the worst possible condition for the airflow and will cause the most excess pressure build-up. The calculation is done by taking the total air volume capacity of the smallest zone and subtracting it from the total air volume of the system.

Example:

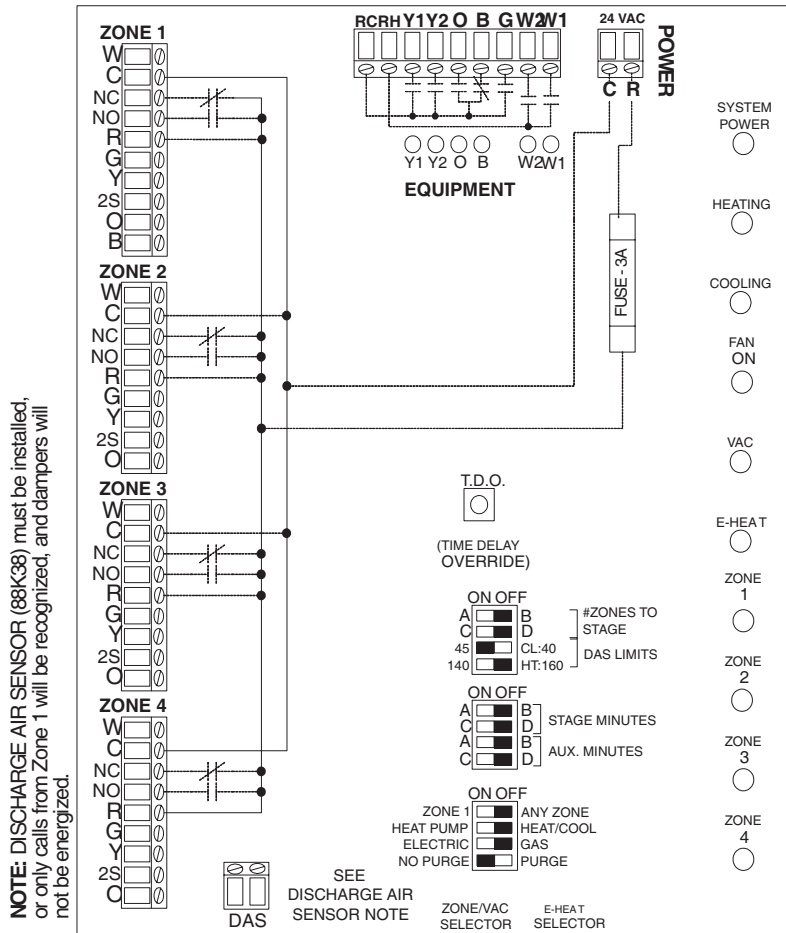
Total System air volume: 2000 cfm
 Less smallest zone air volume: - 600 cfm
 Bypass amount: 1400 cfm

- The bypass duct would be sized to handle the 1400 cfm which would be the excess pressure when only the smallest zone has a demand. The bypass method must be used on zoning systems that will have unequal size zones and might be needed on some jobs that will have a smaller number of zones. This will be determined by the dealer at the time of installation. For bypass damper air volume capacities see the chart below.

Round	Rectangular
8 in. dia. - 400 cfm	12 x 8 - 1000 cfm
10 in. dia. - 750 cfm	12 x 10 - 1200 cfm
12 in. dia. - 1200 cfm	12 x 12 - 1400 cfm
14 in. dia. - 1800 cfm	20 x 8 - 1600 cfm
16 in. dia. - 2400 cfm	20 x 10 - 2000 cfm
	20 x 12 - 3000 cfm

FIELD WIRING

MODEL LZP-4 CONTROL PANEL SCHEMATIC



TERMINAL DEFINITIONS

R = 24V - HOT
C = 24V - COMMON
RH = SWITCHING VOLTAGE - W1 & W2
RC = SWITCHING VOLTAGE - Y1, Y2 and G
NO = NORMALLY OPEN DAMPER
NC = NORMALLY CLOSED DAMPER
(SEE TABLES AT RIGHT FOR REMAINING TERMINAL DEFINITIONS.)
DIP SWITCHES SHOWN AS BLACK

	# ZONES TO STAGE	STAGE MINUTES	AUX. MINUTES
ON/OFF		0	0
A/B C/D	1	0 (Staging not time controlled)	0 (Aux. heat not time controlled)
A/B C/D	2	10	10
A/B C/D	3	30	30
A/B C/D	4	60	60

DIP SWITCH DEFAULTS SHOWN AS BLACK

DIP SETTINGS	DESCRIPTION
ON/OFF 45 CL:40 140 HT:160	Select the HVAC plenum air temperature at which active cooling/heating outputs will deactivate.
ON/OFF ZONE 1 HEAT PUMP ANY ZONE HEAT/COOL	Defines required thermostats and equipment outputs - see table at upper right
ON/OFF ELECTRIC GAS	Turn ON for systems with electric heat. Leave OFF for dual fuel heat pump systems or fossil fuel furnaces.
ON/OFF NO PURGE PURGE	Leave ON for systems with equipment that has built in cooling fan purge.

DIP SWITCH SETTINGS <small>(SWITCHES ARE SHOWN AS BLACK) SEE NOTE 3</small>	REQUIRED THERMOSTAT INPUTS	EQUIPMENT OUTPUTS
ZONE 1 HEAT PUMP ANY ZONE HEAT/COOL	ALL ZONES HEAT/COOL - W, Y, G, 2S (OPTIONAL)	HEAT/COOL
ZONE 1 HEAT PUMP ANY ZONE HEAT/COOL SEE NOTE 1	ZONE 1 HEAT/COOL - W, Y, G, O, B, 2S (OPTIONAL) ALL OTHER ZONES HEAT/COOL - W, Y, G, 2S (OPTIONAL)	HEAT/COOL
ZONE 1 HEAT PUMP ANY ZONE HEAT/COOL SEE NOTE 2	ALL ZONES (AUX = 0) HEAT PUMP - W, Y, G, O, 2S (OPTIONAL) ALL ZONES (AUX > 0) HEAT/COOL - W, Y, G, 2S (OPTIONAL)	HEAT PUMP
ZONE 1 HEAT PUMP ANY ZONE HEAT/COOL SEE NOTE 1	ZONE 1 HEAT/COOL - W, Y, G, O, B, 2S (OPTIONAL) ALL OTHER ZONES HEAT/COOL - W, Y, G, 2S (OPTIONAL)	HEAT PUMP

NOTE 1: Equipment will not respond to heat calls unless the Zone 1 "B" terminal is energized, and will not respond to cool calls unless the Zone 1 "O" terminal is energized.
NOTE 2: Heat pump thermostats can only be used when the AUX MINUTES dip switches are set for 0 minutes.
NOTE 3: If any DIP switch is moved while the panel has power applied, the board will automatically reset in order for the new setting to take effect.

HEAT/COOL THERMOSTAT INPUT DEFINITIONS
W = HEAT
Y = COOL
G = FAN
2S = 2nd STAGE HEAT AND/OR 2nd STAGE COOL (OPTIONAL)
O = COOL MODE (SEE NOTE 1)
B = HEAT MODE (SEE NOTE 1)

HEAT/COOL EQUIPMENT OUTPUT DEFINITIONS
W1 = 1st STAGE HEAT
W2 = 2nd STAGE HEAT
Y1 = 1st STAGE COOL
Y2 = 2nd STAGE COOL
O & B ARE NOT USED

HEAT PUMP THERMOSTAT INPUT DEFINITIONS
W = AUXILIARY HEAT
Y = COMPRESSOR
G = FAN
2S = 2nd STAGE COMPRESSOR (OPTIONAL)
O = REV. VALVE - COOLING

HEAT PUMP EQUIPMENT OUTPUT DEFINITIONS
W1 = AUXILIARY HEAT
W2 = EMERGENCY HEAT
Y1 = 1st STAGE COMPRESSOR
Y2 = 2nd STAGE COMPRESSOR
O = REVERSING VALVE - COOL
B = REVERSING VALVE - HEAT

LED DEFINITIONS

POWER - Blinks during normal operation
HEAT - Lights when equipment heating outputs are energized and blinks when discharge air exceeds set temperature limit (LED's next to equipment terminals show which outputs are on).
COOL - Lights when equipment cooling outputs are energized and blinks when discharge air drops below set temperature limit (LED's next to equipment terminals show which outputs are on).
FAN ON - Lights when equipment G terminal is energized
VAC - Lights when ZONE/VAC switch is in VAC position
E-HEAT - Lights when E-HEAT switch is ON
ZONE 1 to ZONE 4 Lights when the NO damper terminal for that zone is energized (i.e. LED's show which zones are NOT calling when the HVAC equipment is operating)

REVISIONS

Sections	Description of Change
Optional Accessories	Revised recommended zone thermostats.



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 Contact us at 1-800-4-LENNOX

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