



RESIDENTIAL PRODUCT SPECIFICATIONS

NOTE - NOT APPLICABLE TO HEAT PUMP SYSTEMS!

FEATURES

WARRANTY

- Zone Control Panel - Five year limited warranty in residential applications

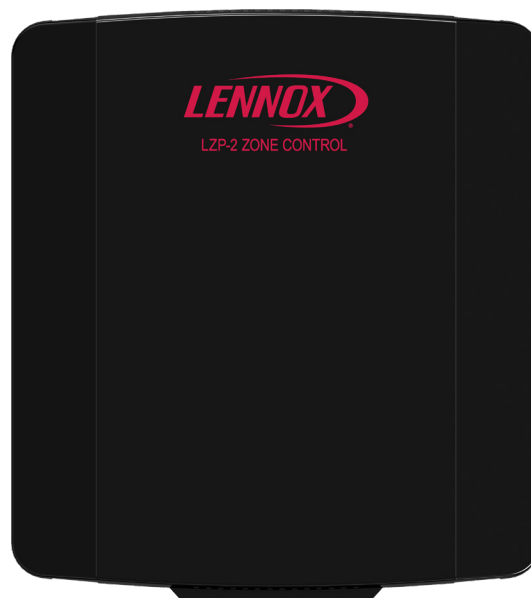
NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

ZONE CONTROL SYSTEM

- LZP-2 Zone Control Panel (**Y7766**) is capable of controlling up to two separate zones
- The Panel is coupled with a single non-variable speed indoor unit (gas/oil furnace or air handler) and a single stage air-conditioning unit
- Panel can be used with two-stage equipment when staging is controlled by the heating/cooling equipment
- System consists of the LZP-2 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
- Results in lower equipment costs by eliminating the need for two separate heating/cooling systems
- Compatible with standard heat/cool electronic thermostats (non-power robbing)
- See recommended thermostats on page 2
- Not for use with variable-speed gas furnaces, heat pump systems or electro-mechanical thermostats

SEQUENCE OF OPERATION

- When Zone 1 thermostat calls for heating or cooling, Zone 1 damper(s) remains open while Zone 2 damper(s) closes
- If Zone 2 calls for heating or cooling, the opposite occurs
- If both zone thermostats call for heating or cooling the dampers in both zones will open



- If zone thermostats are calling for both heating and cooling at the same time, the first zone calling is served
- The other zone will be served 4 minutes after the first zone is satisfied or after trying to satisfy the demand for 20 minutes
- System will operate on automatic or manual heat/cool changeover depending on thermostat settings

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
- Spring-loaded push terminals for easy wiring connections
- 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): 9-5/8 x 8-5/8 x 1-7/8 in.
- Shipping weight: 2 lbs.
- Power requirements: 24VAC (18-30VAC)

Low Voltage Equipment Terminal Designations

- DAMPER 1, DAMPER 2 (NO, NC, COM)
- HVAC (Heating/Cooling equipment connections) (RH, RC, W, Y, G)

FEATURES

ZONE CONTROL PANEL (continued)

Low Voltage Control Terminal Designations

- ZONE 1 THERMOSTAT, ZONE 2 THERMOSTAT (R, C, W, Y, G)
- DAMPER 1, DAMPER 2 (R, C, W, Y, G)
- SENSOR (Discharge air sensor) (DAT)

Status LED's (under cover)

Power

- Solid Green - Power on
- Flashing Green when TDO (Time Delay Override) button is pressed

Heating

- Solid Green - Heating is active
- Flashing Green - Discharge air temperature high limit is reached
- Flashing Green when Cooling LED is lit - Indicates Discharge Air Temperature Sensor error

Cooling

- Solid Green - Cooling is active
- Flashing Green - Discharge air temperature low limit is reached
- Flashing Green when Heating LED is lit to indicate Discharge Air Temperature Sensor error

Fan

- Solid Green - Fan is operating

Zone 1 and Zone 2

- Solid Green - Damper is open
- Solid Red - Damper is closed

Vacation

- Solid Green - Vacation mode is enabled

Vacation Mode Button (under cover)

- In vacation mode all zones are controlled by the Zone 1 thermostat

Timer Delay Override Button (TDO) (under cover)

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

SYSTEM EQUIPMENT DATA

- For furnace data, see Gas Furnaces or Oil Furnaces
- For air handler data, see Air Handlers
- For air conditioner data, see Air Conditioners
- For add-on indoor coil unit data, see Indoor Coils

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

NOTE - Zone Control Panel and Thermostats require 10VA total - Dampers require 10VA each. See table for additional information.

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.)

ZONE THERMOSTATS

- Any single stage heating/cooling digital electronic thermostat with 24VAC common terminal may be used
- Also see Thermostat bulletins and the Lennox Price Book

Recommended thermostats:

iComfort® E30 Smart Wi-Fi Thermostat



Model	Stages	Catalog No.
iComfort® E30 Smart Wi-Fi Thermostat	3 htg. / 2 clg.	20A65
iComfort® M30 Smart Wi-Fi Thermostat	4 htg. / 2 clg.	15Z69
ComfortSense® 5500 Programmable Touchscreen	1 htg. / 1 clg.	13H13
ComfortSense® 3000 Programmable	1 htg. / 1 clg.	51M34
ComfortSense® 3000 Programmable	2 htg. / 2 clg.	51M35
ComfortSense® 3000 Non-Programmable	1 htg. / 1 clg.	51M32

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

NOTE - If additional dampers are required, refer to the special wiring diagram in the installation instructions for additional information.

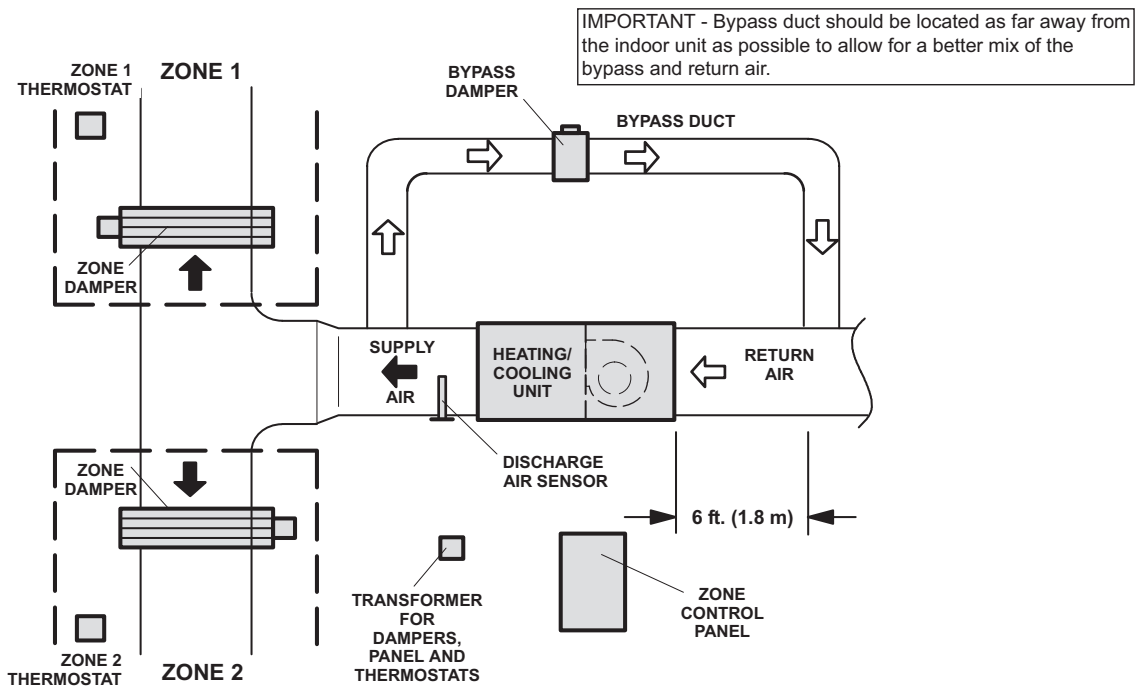
Bypass Damper

Description	Catalog No.
8 in. round	X4142
10 in. round	X4203
12 in. round	X4204
14 in. round	X4205
16 in. round	X4206



- See Bypass Damper Sizing requirements on page 3

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 sizing the zones more equally

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

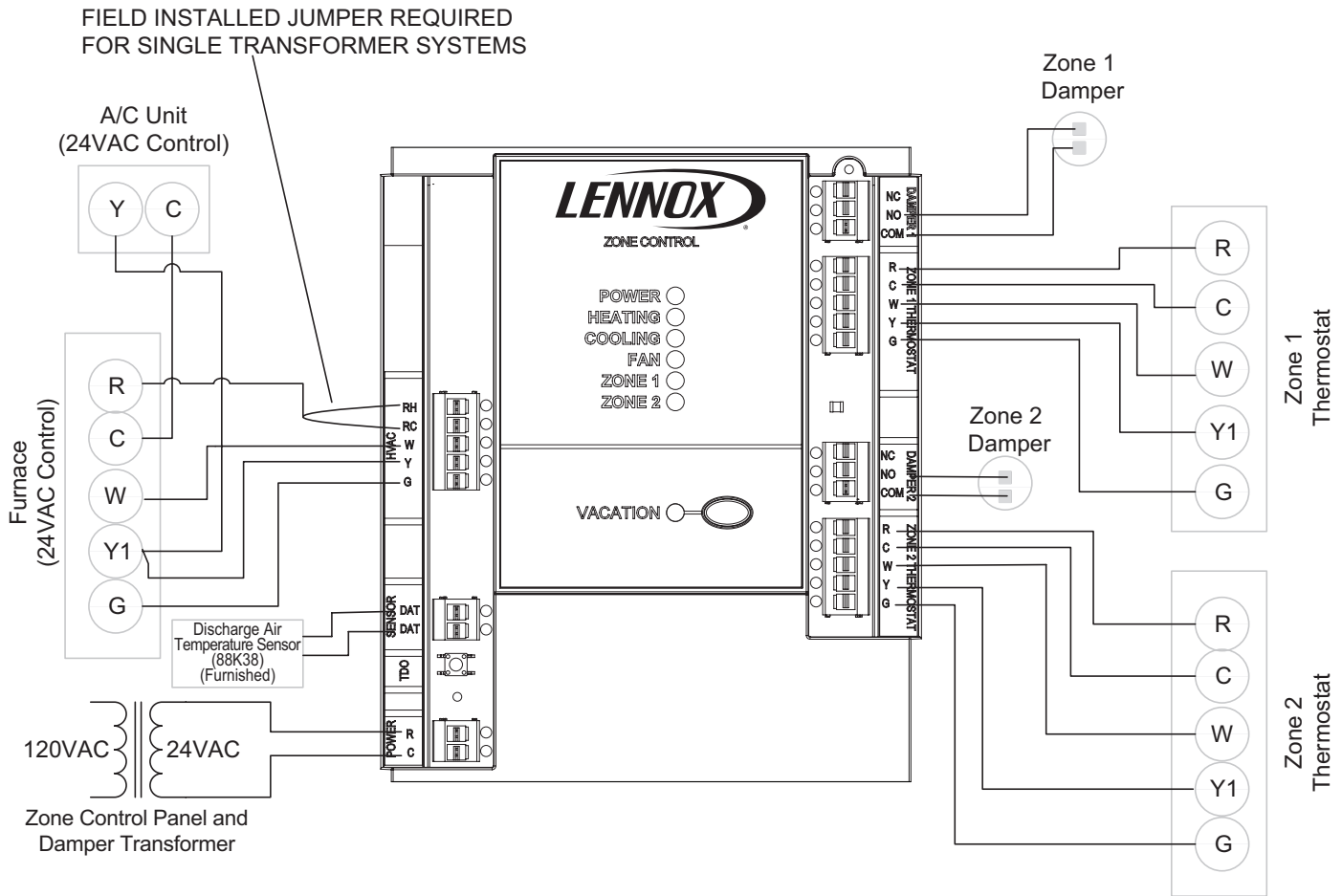
Example:

- 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

TYPICAL FIELD WIRING



REVISIONS

Sections	Description of Change
Warranty	Warranty updated for residential applications.



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NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

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