

Model ZCDC

2-Zone Automatic Comfort Control

For Residential New Construction

eControls



The ZCDC 2-Zone Comfort Control automatically controls the distribution of heating and cooling to provide a uniformly comfortable home and save energy.

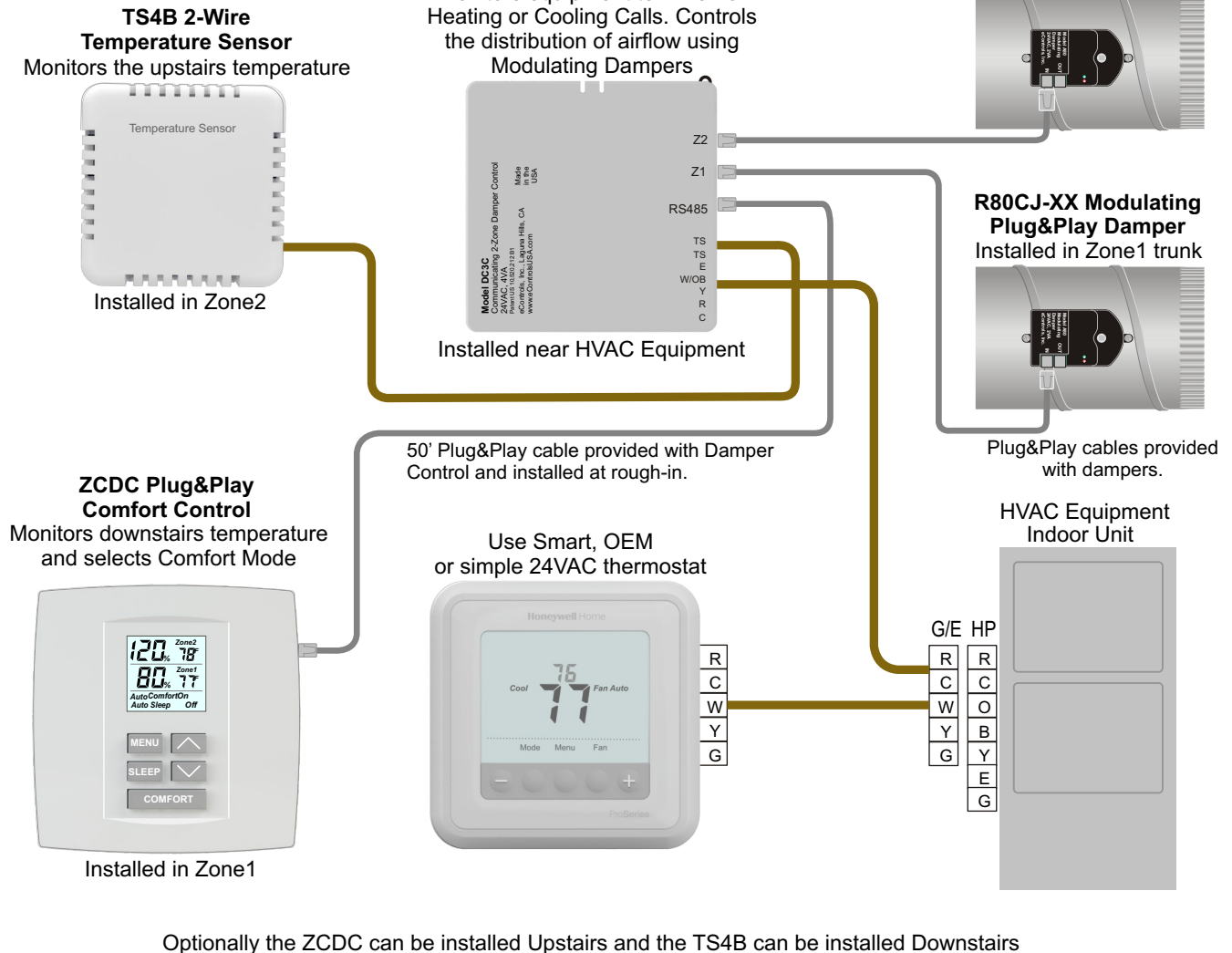
- ▶ Eliminates Bypass.
- ▶ Eliminates DAT sensor and separate 24VAC transformer.
- ▶ About half the material cost of zoning.
- ▶ About half the installation time of zoning.
- ▶ Works with Smart Thermostats, OEM Thermostats and Simple 24VAC Thermostats.



Proudly designed, engineered
and assembled in the USA



Wiring Diagram



Installation

Typical installation includes two round R80CJ or rectangular RT80CJ Modulating Plug&Play Dampers installed in the trunks feeding the upstairs and downstairs zones.

The DC3C Damper Control is installed near the equipment and wires to gas/electric equipment terminals R, C, Y and W or heat pump equipment terminals R, C, Y, O/B and E for 24VAC power and to monitor the equipment for heating and cooling calls. The dampers connect to the DC3C using the included plug&play cables.

The low cost TS4B-1 2-wire temperature sensor is installed in the upstairs zone and wires to the DC3C.

The ZCDC Plug&Play 2-Zone Comfort Control is installed in the downstairs zone and connects to the DC3C Damper Control using the included plug&play cable for 24VAC power and communication to the DC3C. The ZCDC is compatible with simple, Smart and OEM thermostats. Alternately, the ZCDC can be installed in the upstairs zone and the sensor installed in the downstairs zone.

How It Works

The ZCDC monitors the equipment for heating and cooling calls and monitors the downstairs temperature at its location and the upstairs temperature at the sensor.

If the upstairs and downstairs temperatures differ by 2 degrees or more, the ZCDC automatically distributes 2% more heating or cooling to the zone that needs it every 2 minutes.

To distribute more heating or cooling upstairs, the upstairs damper fully opens and the downstairs damper partially closes, forcing more heating or cooling to the upstairs zone. To distribute more heating or cooling downstairs, the downstairs damper fully opens and the upstairs damper partially closes, forcing more heating or cooling to the downstairs zone.

The ZCDC system dynamically adjusts the dampers to find the right distribution of heating and cooling to provide a comfortable home and save energy in every season.

Comparison to Zoning

	ZCDC Control	Traditional Zoning
Install Bypass Duct and Damper	Not Required. Modulating dampers never close.	May be required or in-zone bypass damper may be used.
Bypass Calibration and Test	Not Required.	Requires testing and setting of bypass.
Install Damper Control or Zoning Panel	Install Damper Control. Connect 6 wires and 3 plug&play cables.	Install Zoning Panel. Connect 23-25 wires.
Line Voltage Wiring	Not Required. Uses equipment 24VAC.	Required for 24VAC transformer.
Install 24VAC Transformer and Box	Not Required. Uses equipment 24VAC.	Required.
Install and wire DAT sensor in plenum	Not Required. Discharge air temperature is not affected by modulating zoning.	Required.
Wire Dampers	Not Required. Plug&Play	Required.
Install Thermostat Downstairs	Required.	Required.
Install 2-Zone Wall Control Downstairs	Required. Plug&Play connection to DC3C for 24VAC power and communication.	Not Required.
Install Thermostat Upstairs	Install Sensor. Connect 2 wires.	Required. Connect 5 wires.
HERS Testing	Only 1 HERS test required.	Requires three airflow tests - Each zone open, closed and both zones open.



Easiest to Install 2-Zone System Available

- ▶ No Bypass to Install
- ▶ No Bypass to Calibrate and Test
- ▶ Only 6 Wires to Connect vs. 23-25 Wires
- ▶ No DAT Sensor to Install
- ▶ No 24VAC Transformer to Install
- ▶ Only 1 HERS Test vs. 3 Tests
- ▶ Works with Any 24VAC Thermostat



Homeowner Features

Save 30% in Energy at Night

Improves comfort and saves 30% in energy at night by automatically distributing more heating or cooling to the upstairs zone and 30% less to the unoccupied downstairs zone.

Automatic or Focused Comfort Control

Automatically controls the distribution of heating or cooling to keep the upstairs and downstairs uniformly comfortable. Or, the homeowner can focus more heating or cooling to the upstairs or downstairs zone as desired.

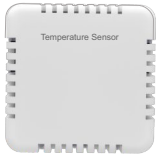
Ordering Information

Typical Installation - (1) ZCDC, (1) DC3C Damper Control, (1) TS4B Temperature Sensor and (2) Dampers.



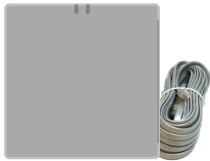
ZCDC 2-Zone Comfort Control.

Compatible with smart, OEM and simple 24VAC thermostats.
Connects to the DC3C using the plug&play cable included with the DC3C.



TS4B Temperature Sensor

2-Wire sensor. Connects to the DC3C using 2 conductor 18 or 20ga thermostat cable.



DC3C Damper Control

The DC3C Damper Control is compatible with both gas/electric and heat pump equipment with O or B type reversing valve. A 50" plug&play cable is included.

R80CJ-XX

Round, Modulating, Plug&Play Damper. Includes 25' plug&play cable. Available in 6-20 inch diameters.



RT80CJ-HHxDD

Rectangular, Modulating, Plug&Play Damper. Includes 25' plug&play cable. Available in 8 x 8 thru 16 x 20 in 2 inch increments. Actuator on HH, first dimension side.



Other Zoning Products



ZTWD11, ZTWD21 and ZTWD21WF

Thermostat with integrated equipment and 2-Zone automatic comfort control. Eliminates bypass, DAT sensor and separate 24VAC transformer.



ZCMWL

2-Zone manual comfort control. Eliminates bypass, DAT sensor and separate 24VAC transformer.



Pro332PDL

Low cost 3-Zone panel with automatic bypass control, on-panel display and cloning feature. For gas/electric or heat pump equipment w/ 2H/2C.

Where to Purchase

Available through distribution.

Contact Information:

949-916-0945
Sales@eControlsUSA.com

Visit eControlsUSA.com to see other 2-Zone Comfort Controls and Zone Panel solutions.

Limited 5-Year Warranty

The 5-year warranty is limited to the repair or replacement of defective product due to parts failure or defective workmanship.

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