



Zone Panel Professional Installation Guide



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SPECIFICATIONS

Input Ratings:

Voltage: 18-30 VAC 50/60 Hz transformer of 40 VA or more.

Current Draw:

Zone Panel: 7.5 VA max.
THM4000R Wireless Adapter: 2 VA max.
All VA specifications at 24 VAC.

Wiring:

18- or 20-gauge solid (not stranded) wire.

Humidity Ratings:

5% to 90% RH non-condensing.

Temperature Ratings:

Shipping: -20° to 150°F (-29° to 66°C)
Operating: -40° to 165°F (-40° to 74°C)

Dimensions:

See below.

Emissions:

Complies with FCC Class B, part 15 requirements.

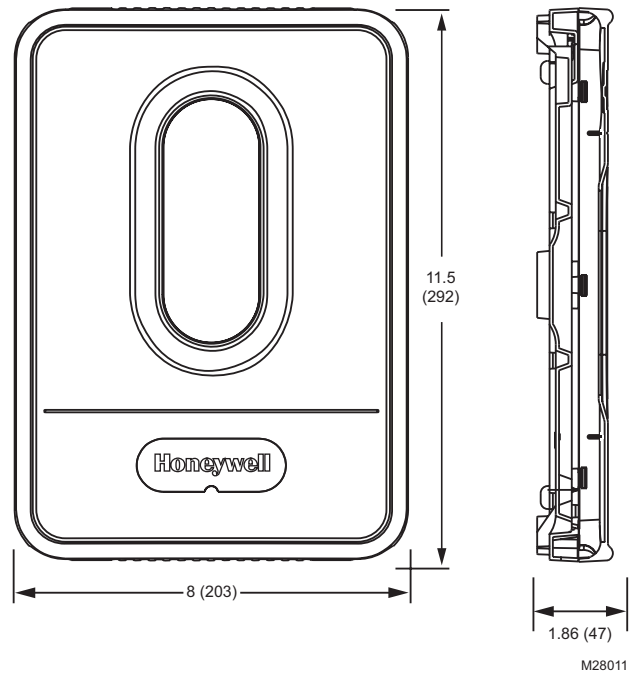


Fig. 1. HZ322 TrueZONE panel dimensions in in. (mm).

Need Help?

For assistance with this product please visit <http://customer.honeywell.com> and/or call Honeywell Zoning Hotline toll-free at **1-800-828-8367**

Read and save these instructions.

APPLICATION

The HZ322 TrueZONE® panel controls:

- Conventional gas, oil, or electric forced-air systems up to 2 stages heat and cool;
- Heat pump systems with single stage compressor and auxiliary heat, and two stage heat pumps with no auxiliary heat; and two stage heat pumps with no auxiliary heat;
- 2 or 3 forced-air zones with wired thermostats, or wireless thermostats using THM4000R wireless adapter.

Please refer to TrueZONE Panel Frequently Asked Questions form 50-9694 for operating details.
<http://customer.honeywell.com>

ACCESSORIES

Table 1. Recommended Thermostats.

| System | Non-Programmable | Programmable |
|--------------|------------------------|--|
| Single-Stage | TH5110D, TH3110D, T87N | TH8110U, TH6110D, TH4110D |
| Multi-Stage | TH5220D | TH8320U, TH8321U, TH6220D, YTH9421C |
| Heat-Pump | TH5220D TH3210D | TH8320U TH8321U TH6220D TH4210D YTH9421C |
| Wire-less* | TH5320R | TH6320R |

Note: All versions of the model numbers listed above will work with the applications they're listed for.

* For RedLINK™ wireless devices, a THM4000 is required.

Table 2. Recommended Dampers.

| Type | Honeywell Damper | Round | Rectangular |
|--------|-----------------------------------|-------------------------|--|
| Zone | Spring-open/ power-closed | ARD (6VA) | ZD (6 VA) |
| | Power-open/ power-closed | MARD/ RRD (2 VA) | For recommended dampers call the Honeywell Zoning Hotline at 1-800-828-8367. |
| Bypass | Static pressure regulating damper | SPRD/ MARD (2 VA) | SPRD |

Table 3. Recommended Commercial Dampers.*

| Type | Actuation | Round | Rectangular |
|--------|-----------------------------|---------------|------------------------------|
| Zone | Power-open/ power-closed | MARD | D2 or D3 with ML6161A2009* |
| Bypass | Power-open/ power-closed | MARD with SPC | D3 with ML6161B2024* and SPC |

* Or equivalent damper and actuator.

Table 4. Accessories.

| Accessory | Description |
|--|----------------------------|
| 40 VA transformer* | AT140A1042* |
| 75 VA transformer | AT175A1008 |
| Discharge Air Temperature Sensor * | DATS C7735A1000* |
| SDCR** | Slave Damper Control Relay |
| Wireless Adapter*** | THM4000R1000 |
| Wireless Outdoor Air Temperature Sensor*** | C7089R1013 |
| Portable Comfort Control*** | REM5000R1001 |
| RedLINK Internet Gateway*** | THM6000R1002 |

* Included in HZ322K kit.

** Use an SDCR (Slave Damper Control Relay) to add additional dampers to a zone to surpass the maximum Damper VA rating per Zone.

*** For RedLINK™ wireless devices, a THM4000 is required.

MOUNTING

- 1 Mount the HZ322 TrueZONE panel near the HVAC equipment; locate it on a wall, stud, roof truss, or cold-air return.
NOTE: The HZ322 TrueZONE panel can be mounted in any orientation; level it for appearance only.

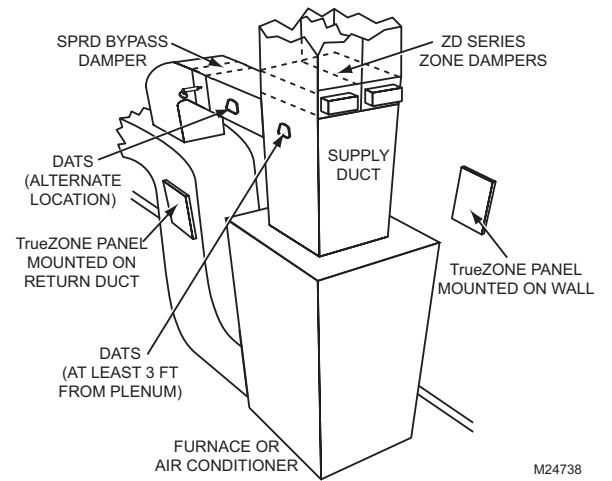


Fig. 2

- 2 Separate the zone panel cover from the base, and use the base as a template to drill mounting holes. Attach the base to the wall, stud, roof truss, or duct with appropriate screws (not included).

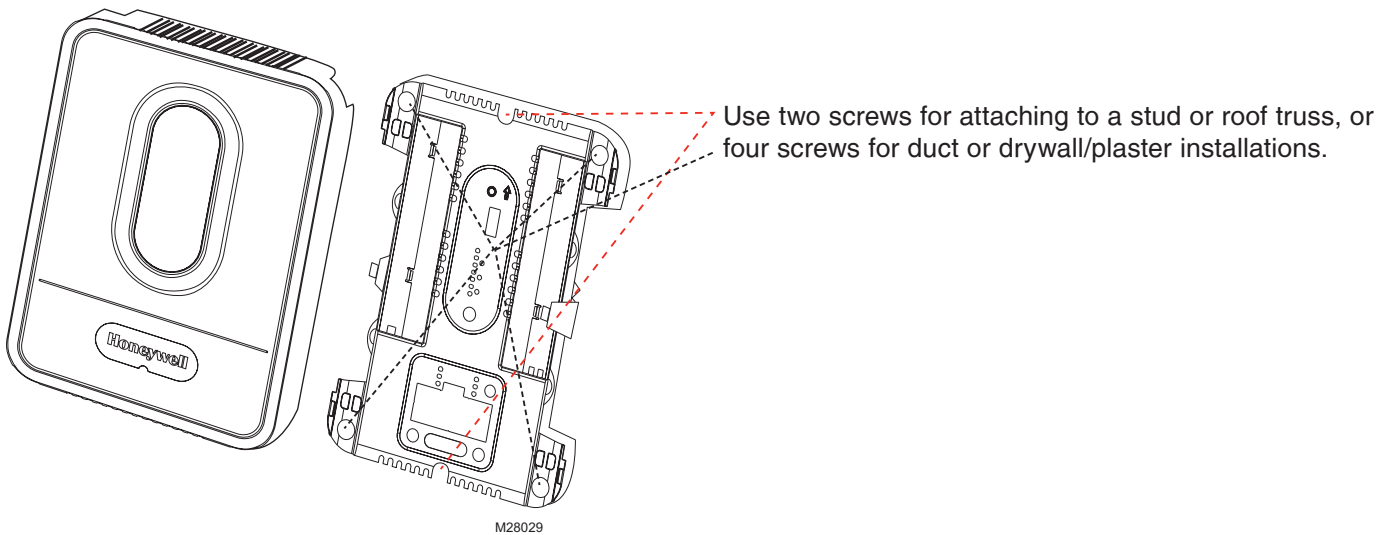


Fig. 3

WIRING



CAUTION: Voltage Hazard.

Can cause electrical shock or equipment damage. Disconnect power before beginning installation. Wire entire panel before applying transformer power.

Follow these steps for wiring all systems. However, wiring will vary depending on equipment. For conventional systems, refer to page 5. For heat pump systems, see page 6.

Wiring must comply with applicable codes, ordinances, and regulations. Use the following wiring diagrams to wire the zone panel to the thermostats and dampers.

3

Install thermostats using instructions provided with thermostats.

Connect thermostat to zone panel. To connect wire to the panel, strip approximately 1/4 in. of insulation and push wire into terminal. To release wire, press the button on top of the terminal.

In retrofit applications, trim end of wire if not straight.

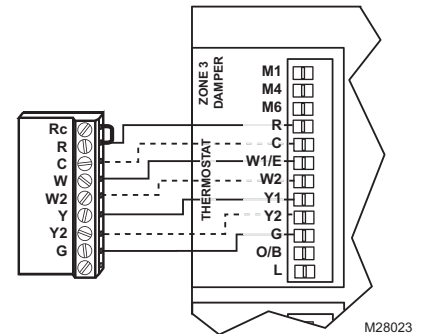


Fig. 4



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The HZ322 offers many innovations for wire management and organization: wires can be run behind the panel, through wire channels on its sides, and must be attached to a wiring anchor with a cable tie.

Fig. 5

4

Install dampers using instructions provided with dampers.

Connect dampers to zone panel.

NOTE: Multiple dampers can be wired in parallel.

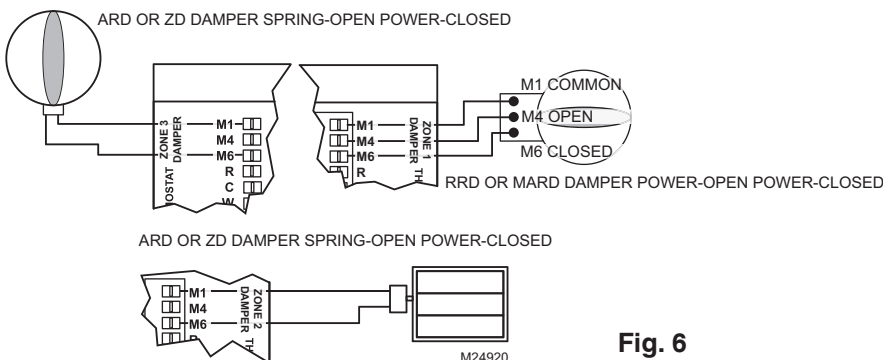


Fig. 6

WIRING

5

Connect DATS as shown.

For the placement of DATS in supply duct and troubleshooting assistance with the DATS, see the Discharge Air Temperature Installation Instructions Form Number 69-1521.

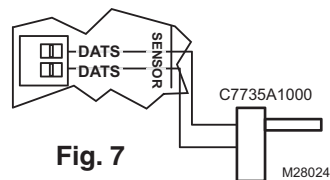


Fig. 7

6

Connect equipment as shown here and on page 5 and 6.

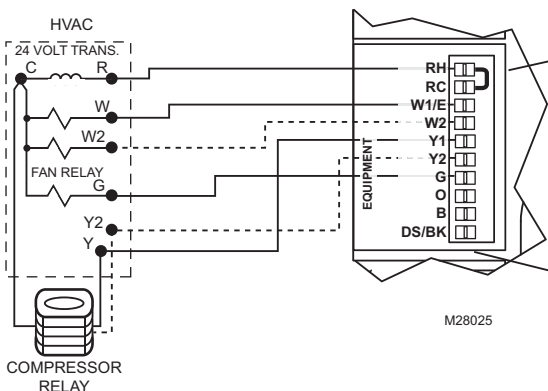


Fig. 8

For oil heat with a separate transformer for cooling, remove this jumper. For other systems leave jumper in place and wire to HVAC R terminal with 18 gauge solid wire.

The DS/BK terminal is used with a variable-speed fan. If the HVAC equipment has a DS, BK, ODD, or DHUM terminal, wire that terminal to the HZ322 DS/BK terminal. When 2 or 3 zones are calling for cooling this terminal will be energized which will run the blower fan at the normal speed. When only 1 zone is calling for cooling the fan runs at a reduced speed which will require less air to be by-passed. Refer to HVAC equipment manufacturer instructions.

7

When a wireless thermostat, Portable Comfort Control, wireless outdoor air temperature sensor, or other RedLINK™ wireless device is used, wire the THM4000 Wireless Adapter Module to the ABCD terminals on the zone panel.

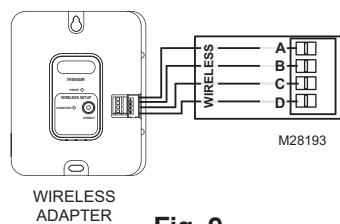


Fig. 9

CAUTION: Do not wire the A-B-C-D terminals of the THM5320R Wireless Equipment Interface Module to the A-B-C-D terminals on the HZ322 zone control panel. Doing so will damage the components.

8

Connect a dedicated transformer as shown.

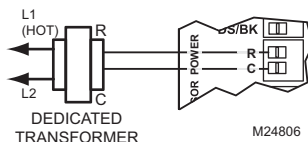
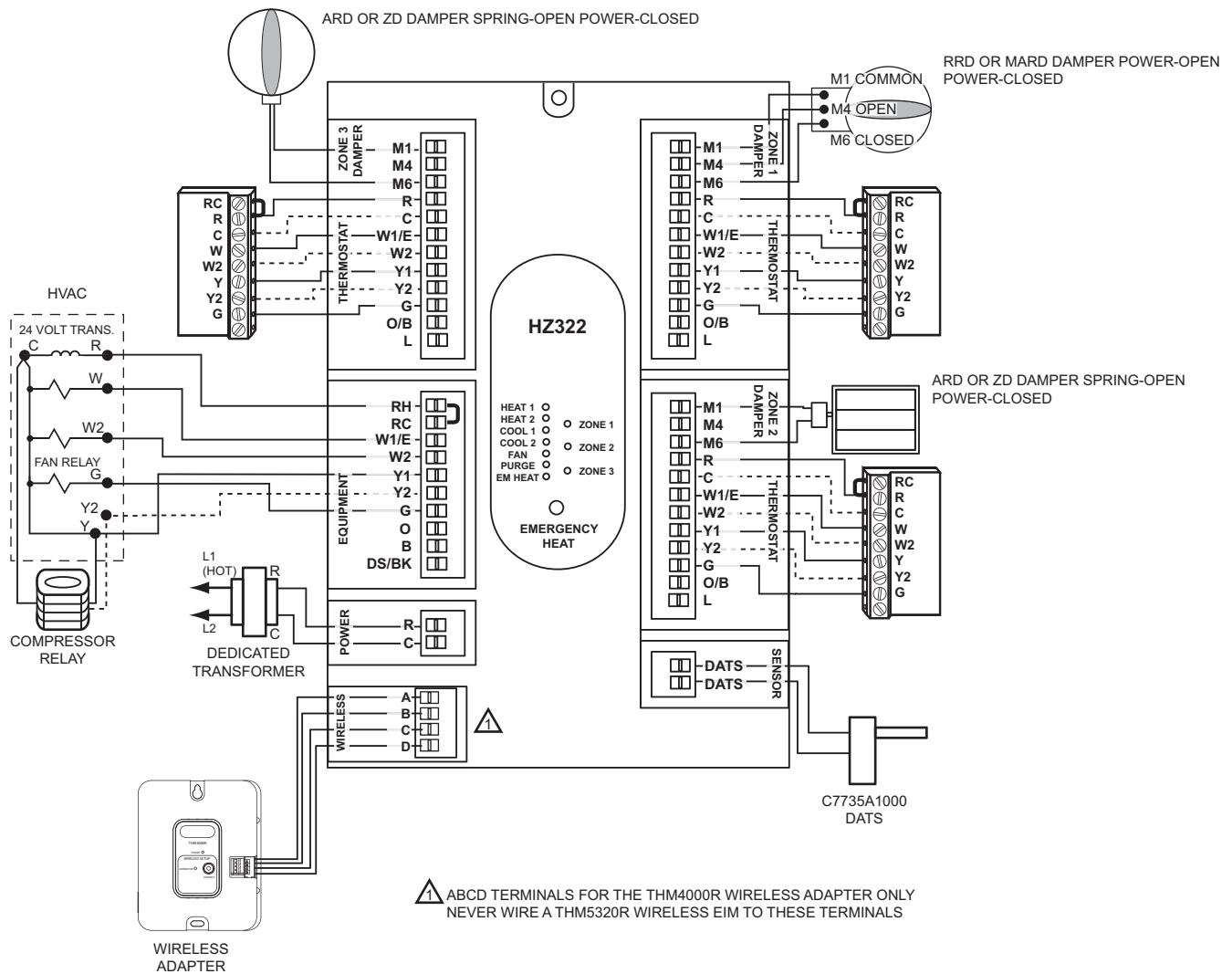


Fig. 10

CONVENTIONAL

The following diagram is an overall view of wiring for a conventional system as depicted in steps 3–8.



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Fig. 11. Zone panel wiring—conventional.

HEAT PUMP

Use the following diagram for wiring a heat pump with electric auxiliary heat.

NOTE: You can use a conventional thermostat for a heat pump system; however, em heat can only be controlled by heat pump thermostats. The diagram below shows a heat pump thermostat used with a heat pump system.

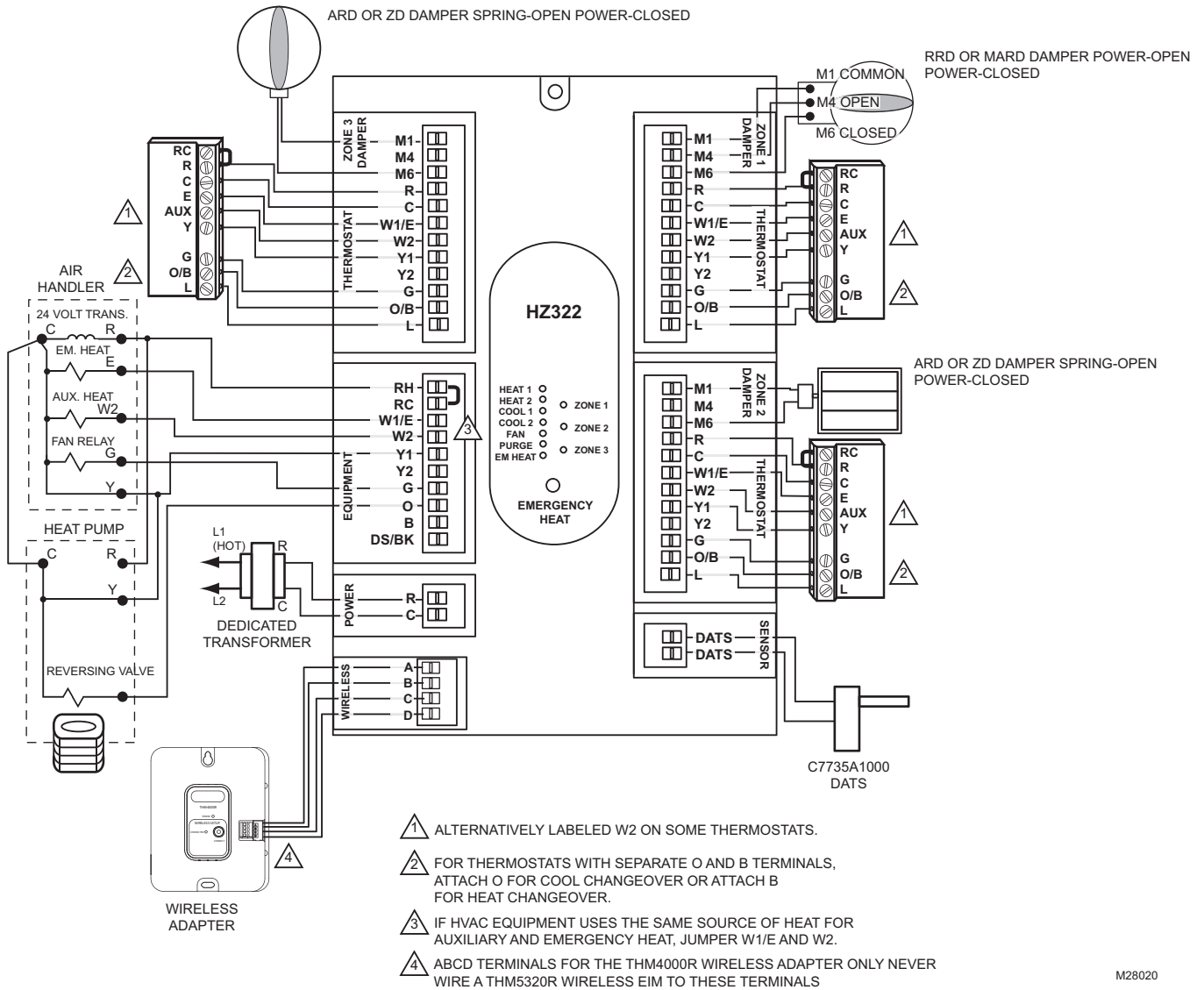


Fig. 12. Zone panel wiring—heat pump with electric auxiliary heat.

CONFIGURATION

To enter Configuration:

- 1 Press the Mode button (the Config LED will light up).
- 2 Use the Back and Next buttons to navigate through the configuration settings. Scroll through the selection choices by using the "Adjust Setting" Left and Right arrow buttons. Pressing Next enters the selected option for that menu item and advances to the next menu.

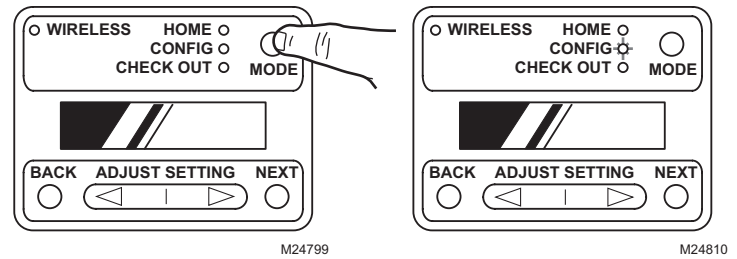
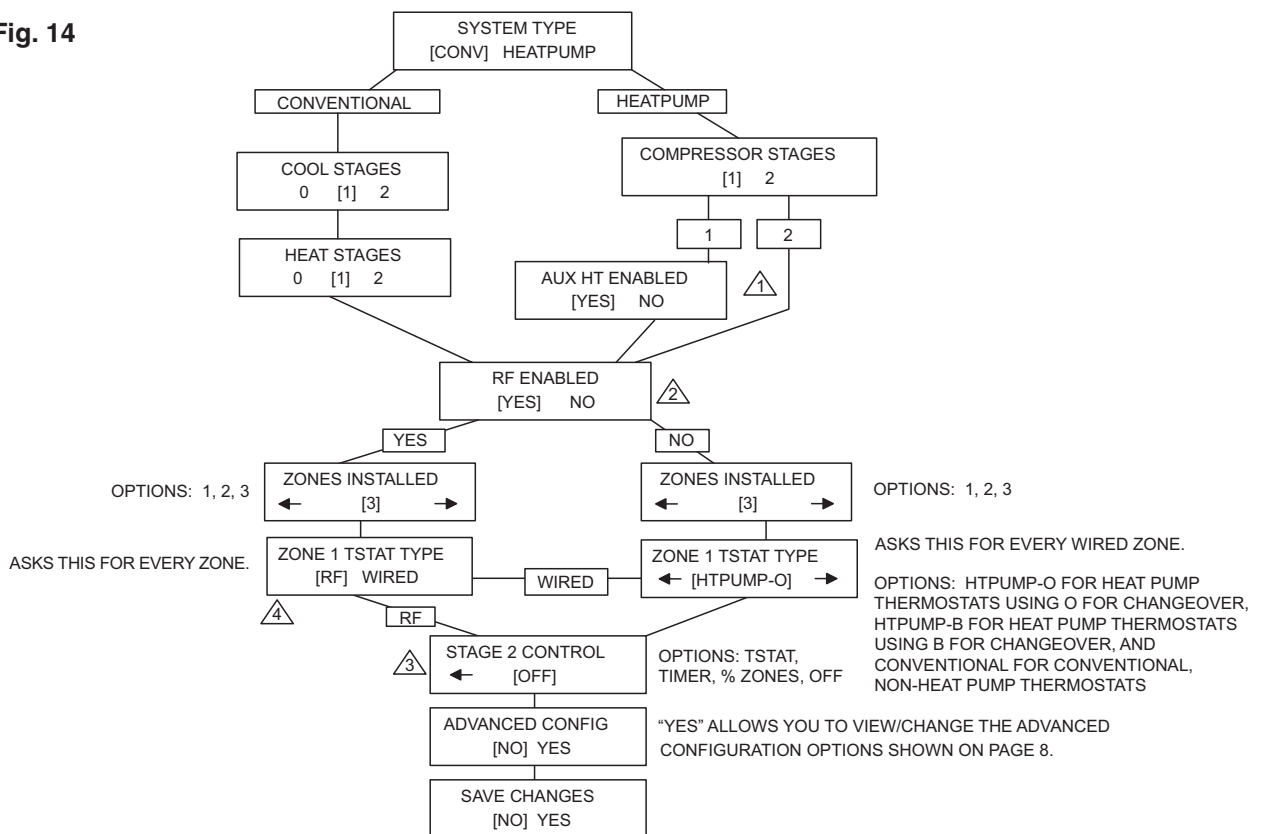


Fig. 13

- 3 The flow chart below illustrates basic zone panel configuration. For additional configuration, see Advanced Configuration on page 8. The label on the inside cover of the HZ322 Zone Panel also contains configuration information.

Fig. 14



- ⚠️ 1 PANEL WILL NOT ASK IF YOU HAVE AUX HEAT WHEN 2 COMPRESSOR STAGES ARE SELECTED. THE HZ432 IS REQUIRED FOR A 3H/2C HEAT-PUMP.
- ⚠️ 2 SET TO "YES" IF WIRELESS (RADIO FREQUENCY) THERMOSTATS AND THM4000R ADAPTER ARE USED.
- ⚠️ 3 SHOWN IF COMPRESSOR STAGES OR HEAT STAGES IS SET TO 2, OR AUX HT ENABLED IS SET TO "YES"
- ⚠️ 4 RF MEANS "WIRELESS THERMOSTAT"

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CONNECT WIRELESS DEVICES

4

Press the Mode button until the Wireless LED lights up. The TrueZONE must be configured for wireless devices to select Wireless mode.

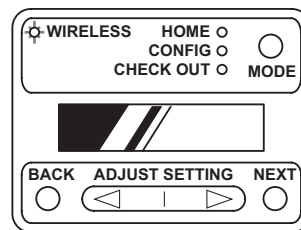
Press Next to add devices.

While the display alternates the Press Connect and Exit screens, push the Connect button(s) on the wireless device(s).

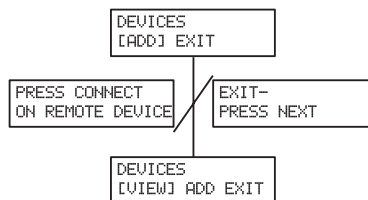
-OR-

Follow the instructions that came with the wireless device(s).

Press Next to exit.



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Fig. 15

ADVANCED CONFIGURATION

Use the Adjust Setting, Next, and Back buttons to configure the zone panel. See the Configuration section on page 7 for instructions on using these buttons.

Table 5. Advanced Configuration.

| Menu Name | Menu Title (LCD top line) | Menu Options (LCD bottom line; defaults in bold) | Menu option description | Notes: |
|--------------------------------------|---------------------------|--|--|---|
| Heat Fan | HEAT FAN CONTROL | [HVAC] PANEL HVAC [PANEL] | Fan control by HVAC Fan control by Panel | In heat mode, fan controlled by HVAC or turned on by panel in call for heat. |
| Stage 2 Timer | STAGE 2 TIMER | [5 MIN] > - < [60 MIN] [5 MIN] > | 5 minutes–60 minutes | Number of minutes to delay before engaging second stage. |
| Purge Timer | PURGE TIME | [2] 3.5 5 MIN 2 [3.5] 5 MIN 2 3.5 [5] MIN | 2.0 minutes 3.5 minutes 5.0 minutes | Number of minutes panel will purge following call for heat or cool. |
| Purge Fan | FAN IN PURGE | [HVAC] PANEL HVAC [PANEL] | Fan control by HVAC Fan control by Panel | Fan controlled by HVAC or panel during purge. |
| Purge Dampers | PURGE DAMPERS | [UNCHANGD] OPEN UNCHANGD [OPEN] | Dampers Unchanged Dampers All Open | Damper position unchanged or all dampers open during purge. |
| Auto Changeover Delay | CHANGEOVER DELAY | [15] 20 30 MIN 15 [20] 30 MIN 15 20 [30] MIN | 15 minutes auto changeover timer 20 minutes auto changeover timer 30 minutes auto changeover timer | Number of minutes to delay auto changeover when one zone is calling for heat and another is calling for cooling. |
| DATS Enabled | DISCHARGE SENSOR | [NO] YES NO [YES] | Disabled Enabled | Enables or disables DATS. If Disabled, the Multistage DATS Inhibit setting is Disabled. |
| DATS High Limit | DAT HIGH LIMIT | [110 F] > - < [180 F] < [160 F] > | 110 deg F–180 deg F | High temperature limit. |
| DATS Low Limit | DAT LOW LIMIT | [30 F] > - < [60 F] < [40 F] > | 30 deg F–60 deg F | Low temperature limit. |
| OT Temp Enabled* | OT SENSOR | [NO] YES NO [YES] | Disabled Enabled | Enables or disables wireless outdoor temperature sensor. If Disabled, the Multistage OT Temp Lockout setting is Disabled. |
| OT Trip Point for Multistage Lockout | OT LOCKOUT TEMP | [0 F] > - < [50 F] < [50 F] > | 0 deg F–50 deg F | Above this temperature 2nd stage heat is locked out. |
| Multistage DATS Inhibit | DAT MSTG INHIBIT | NO [YES] [NO] YES | Enabled Disabled | Allow panel to downstage multistage equipment when near DATS high or low limit. |
| LCD Contrast Adjust | LCD CONTRAST | [1] > - < [10] < [5] > | Contrast value 1–10 | Sets LCD display contrast for ease of viewing. Lowest contrast is 1, highest contrast is 10. |
| Save Changes | SAVE CHANGES? | [NO] YES NO [YES] | Disabled Enabled | Saves or rejects the configuration settings. |

* Used only if Wireless Adapter THM4000R and Wireless Outdoor Sensor C7089R are used.

OPERATION

The HZ322 TrueZONE panel contains an LED display that communicates system and zone status. The LEDs indicate the following information.

Much of this information, as well as configuration information, is listed on the label on the inside of the HZ322 cover. For users who prefer French or Spanish labels, they are provided in form 69-2199FS. Cut them out and attach them to the inside of the HZ322 cover.

Table 6. LED Operation.

| LED | Description |
|--------------|---|
| HEAT 1 | Solid when in heat stage 1. Blinking when DATS high limit mode has been reached. |
| HEAT 2 | Solid when in heat stage 2. Blinking when stage 2 locked out due to DATS or OT. |
| COOL 1 | Solid when in cool stage 1. Blinking when DATS low limit mode has been reached. |
| COOL 2 | Solid when in cool stage 2. Blinking when stage 2 locked out due to DATS. |
| PURGE | Solid when in purge (at power-up and after a call for heat or cool). Blinking when the DATS sensor has failed, or the wires are shorted or open. Will blink for 3 minutes at power-up if DATS is not present. |
| FAN | Solid with a call for fan. |
| EM HEAT | Solid when in emergency heat mode. This light does not indicate a call for heat. Emergency heat will only run when both HEAT and EM HEAT are lit. |
| ZONE 1, 2, 3 | Solid green when open or opening. Solid red when closed or closing. Blinking amber when the damper VA exceeds the specified zone VA or there is a damper or thermostat short circuit (circuit breaker trip). |

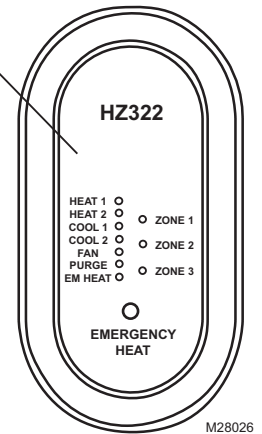


Fig. 16

CHECKOUT

To enter Checkout, with the zone panel cover off, press the Mode button until the Check out LED lights up. Use the Adjust Setting and Next buttons to work through the checkout menu as listed below. See the Configuration section on page 7 for instructions on using these buttons.

Steps 3–10 cycle through heating and cooling stages and open and close dampers to verify proper operation of the equipment and dampers. These steps energize the equipment and damper terminals.

Steps 11–14 verify thermostat operation and correct wiring. This is done by making the thermostats call for heat or cool and viewing the active wires as displayed on the LCD screen. This is a useful way to troubleshoot which thermostat terminals are actually energized on each zone.

Table 7. Checkout.

| Checkout Step | Line 1 display | Line 2 Display | Notes: |
|-------------------------|------------------|--|---|
| 1. Display shows OT* | OT SENSOR VAL | current OT temp (dynamic) | All zone dampers open, all other relays OFF. |
| 2. Display shows DATS** | DAT SENSOR VAL | current DATS (dynamic) | |
| 3. Heat stages test | TEST HEAT | [OFF] 1 2 | Heat turns on (fan also turns on if configured for fan on in heat). |
| 4. EM Heat stages test | TEST EMERG HEAT | [OFF] 1 2 | Emergency heat turns on (fan also turns on). |
| 5. Cool stages test | TEST COOL | [OFF] 1 2 | Cooling turns on (fan also turns on). |
| 6. Fan Test | TEST FAN | [OFF] ON | Fan cycles on and off. |
| 7. Damper 1 test | TEST Z1 DAMPER | [OPEN] CLOSED | Cycles damper position with fan on. |
| 8. Damper 2 test | TEST Z2 DAMPER | [OPEN] CLOSED | Cycles damper position with fan on. |
| 9. Damper 3 test | TEST Z3 DAMPER | [OPEN] CLOSED | Cycles damper position with fan on. |
| 10. View Tstat1 inputs | ZONE1 STAT INPTS | Displays active Tstat1 terminals or displays wireless thermostat operation | Tests thermostat wiring with HVAC off. |
| 11. View Tstat2 inputs | ZONE2 STAT INPTS | Displays active Tstat2 terminals or displays wireless thermostat operation | Tests thermostat wiring with HVAC off. |
| 12. View Tstat3 inputs | ZONE3 STAT INPTS | Displays active Tstat3 terminals or displays wireless thermostat operation | Tests thermostat wiring with HVAC off. |
| 13. Exit checkout mode? | EXIT CHECKOUT? | (NEXT = EXIT) | |

* Wireless outdoor Sensor C7089R and Wireless Adapter THM4000R required for OT Temperature.

**Discharge Air Temperature Sensor C7735A required to display Discharge Air Temperature.

WARRANTY

Honeywell warrants the products in this catalog (except those parts designated on Honeywell's price lists as not covered by this warranty) to be free from defects due to workmanship or materials, under normal use and service, for the following warranty periods. Honeywell VisionPRO®, Commercial VisionPRO™, FocusPRO®, PRO 4000, PRO 3000, LineVolt™ PRO, Digital Round™, and Modern Round™ (T87K, N) Series Thermostats with a date code of 0501 or later: sixty (60) months from date of installation. CommercialPRO, PRO 2000 and PRO 1000 thermostats: twenty-four (24) months from date of installation. All other Honeywell thermostats and thermostats with a date code of 0452 or earlier: twelve (12) months from date of installation, unless specified otherwise. Honeywell Air Cleaners, Humidifiers, Ventilators, Ultraviolet Treatment and Zoning Products with a date code of 0501 or later, excluding replacement maintenance parts: sixty (60) months from date of installation. All other Honeywell indoor air quality and zoning products with a date code of 0452 or earlier: twenty-four (24) months from date of installation, unless specified otherwise. Variable frequency drive devices (VFD) and accessories: new products for thirty-six (36) months and factory refurbished drives for twelve (12) months from date of installation when start-up and commissioning is performed by Honeywell VFD Authorized and trained personnel. All VFD warranty return products must have prior authorization (Form No. 87-0284) and be returned only to the VFD Service Center in Chattanooga, TN. MS, MN and Fact Acting 2-position Direct Coupled Actuators: sixty (60) months from date of installation. The warranty period for all other products is twelve (12) months from date of installation.

If a product is defective due to workmanship or materials, is removed within the applicable warranty period, and is returned to Honeywell in accordance with the procedure described below, Honeywell will, at its option, either repair, replace or credit the customer for the purchase price of the product, in accordance with the procedure described below. This warranty extends only to persons or organizations who purchase products in this catalog for resale.

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