



www.zonefirst.com



- ❑ NEW LCD Digital Configuration
- ❑ Expandable to 103 Zones
- ❑ Color Coded Wiring Terminals
- ❑ Plug-In Damper Motors
- ❑ LED and Digital System Status
- ❑ Zone Damper Test Buttons
- ❑ Zone-A-Lone™ System Setback
- ❑ Single Stage, Two Stage, Heat Pump, Dual Fuel

The NEW Digi-Zone™ Control Panel, Model MDP3, is a two and three zone, expandable, all in-one zone control panel. The digital menu driven display simplifies system set-up and eliminates DIP Switches and adjustable dials to set timings and temperatures. The NEW MDP3 controls only the New Plug-in Zone Motors that use modular cords, supplied with each damper. This panel is used exclusively with the ZDSP, ZDBP, OZD, RDP, RRP and RTP dampers.

The MDP3 panel is designed to use a minimum of wires to make zoning simple and affordable, no matter what type of HVAC system it is used to zone. Each zone can use a standard 4/5 wire (Y-G-R-W(-C)) thermostat for any type of system as the additional controls for staging, etc. are in the MDP3. Heat pump thermostats can also be used when controlling the second stage and emergency heat are desired from the thermostat. All terminal blocks are color coded for each wire and have push-in connections making wiring even simpler and no need for a small screwdriver, as with all other zoning panels. The state of the art surface mount technology for all electronic components makes for a highly reliable control panel.

The MZD3 is an all-in-one zone control panel that has following menu driven set-up features:

- System Type = Gas/Electric or Heat Pump
- Heat Pump Type = Conventional or Fossil/Dual Fuel
- Outdoor Balance Point (OBP) Adjustable – 5°F -53°F
- Thermostat Type – H/C or HP
- HP Stat RV – O or B
- Number of Zones – Adjustable 2 to 103
- Fan On In Heat – On or Off
- Fan On In Purge – On or Off
- Emergency Heat – On or Off
- Minimum On Timer – Adjustable
- Stage Timer – Adjustable
- Changeover Timer = Adjustable 10-30 Minutes
- Leaving Air Sensor – Capacity protection to shut off HVAC
- Stage Optimization – Controls staging by supply air temperature
- Centra-Zone™ - Zone 1 Master Changeover Disabled or Enabled
- DS-BK = Switch to low speed based on percentage of zones calling.
- Test – Enabled or Disabled

# DIGI-ZONE™

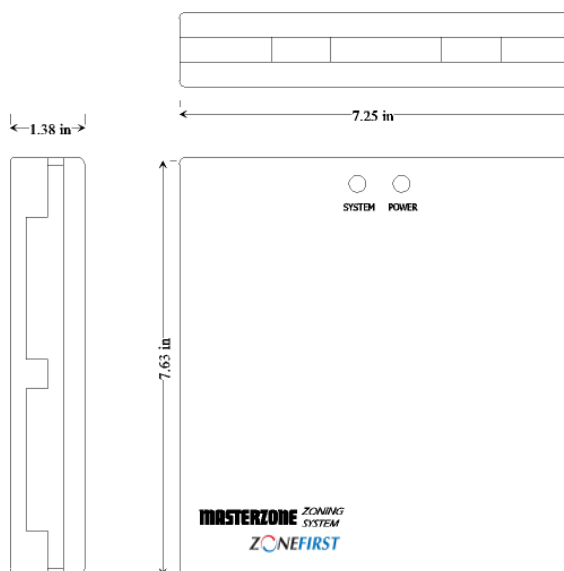
## Zoning System

### Model MDP3



MDP3 Panel Shown with Cover.

### Dimensional Drawing



### Panel Specifications

Construction – ABS plastic

Number of Zones – 2 and 3 Zones, Expandable

HVAC Type – Up to 3H/2C, Heat Pump and Dual Fuel

Dimensions – 7-5/8" x 7-1/4" x 1-3/8"

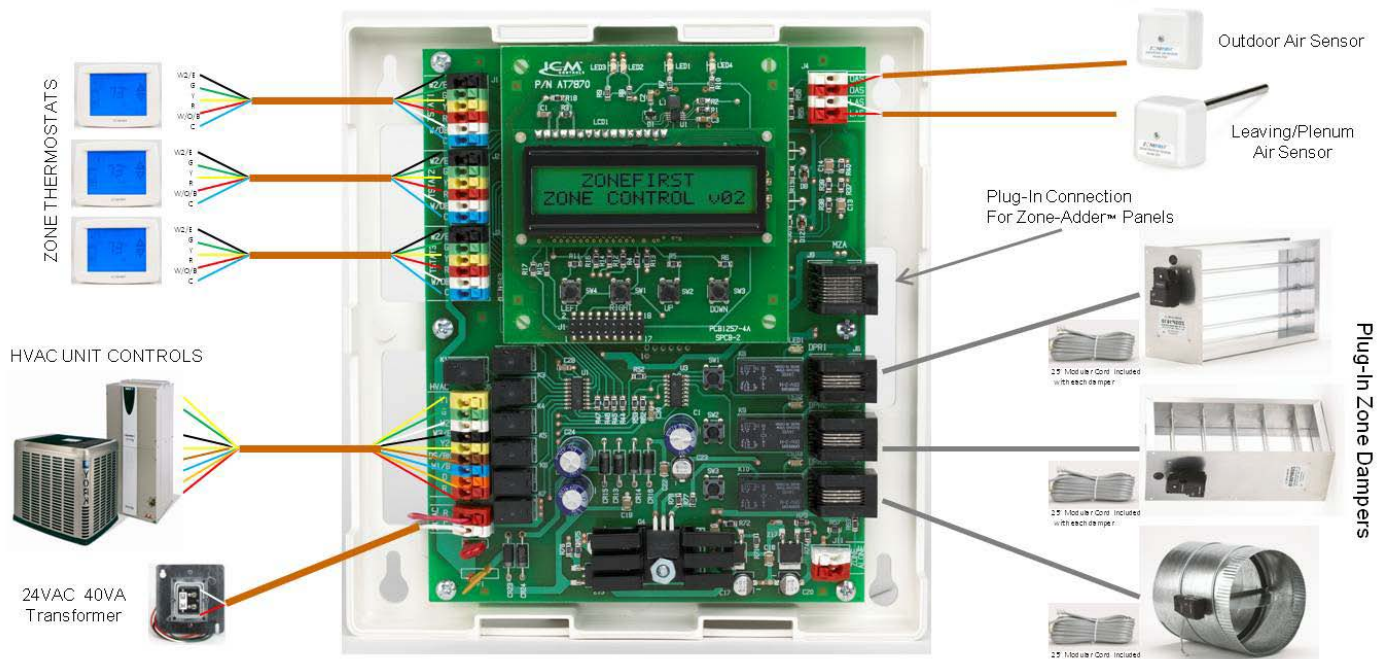
Voltage – 24 Volts AC, 50/60 Hz

Temperature Rating - 0°F to 170°F Operating, -20°F to 140°F Storage

Humidity – 5% to 95% Non-Condensing

Connection: Screwless, Push-In Terminal blocks

# WIRING DIAGRAM



## WIRING

**Zone Thermostats** – Each zone thermostat requires the basic Y-G-R-W connections for the respective Y-Cool, G-Fan, R-24V and W-Heat functions. A terminal is provided for the C-Common 24V to power the thermostat, if required. For Heating Only, only R and W are required. For Cooling Only, R, G and Y are required. When using heat pump thermostats, all zone thermostats must be heat pump thermostats and wired the same. Also the proper selection on the LCD Menu must be made for the appropriate thermostats.

**Zone Damper Motors** – The MDP3 requires the use of ZONEFIRST'S Plug-In Damper Motors. These motors use a modular cord with RJ11 plug-in connectors to the motor and the panel. A 25' cord is supplied with each damper and is plugged in at the damper and at the panel. Additional dampers, up to 10, can be wired in a "daisy chain" from one damper to the next via the second connection on each motor.

**Motor Test Button** – The damper motor(s) on each zone can be tested by simply pressing the button on each zone. This button can only be pressed when the Zone LED is lit. By doing so the damper motor powers closed. Releasing the button drives the damper motor back to open.

**Leaving Air Sensor** – The optional Leaving Air Sensor, Model ZPS requires two wires. When the ZPS is installed and wired to the panel, this must be entered in the LCD Menu, LAS, Enabled. Once enabled the menu allows you to set a heating limit, and cooling limit. If the ZPS is not used, the LAS setting should be set to Disabled.

**Outdoor Air Sensor** – The Outdoor Air Sensor, Model OAS, is used for Dual/Fossil Fuel Heat Pump operation. Sensing outdoor air temperature it will switch between the heat pump and back-up furnace.

**Transformer** – The MDP3 requires 24VAC to power the panel and damper motors. Two wires from the transformer R and C connections wires to the Red and White terminals on the MDP3. In some instances the transformer in the HVAC Unit may be used due to the low power requirement of the panel and damper motors.

**HVAC Equipment** – The control wires from the furnace/air conditioner or heat pump are required to the MDP3. These connections are similar to the thermostat, normally used with the HVAC when not being zoned. Instead of wiring these connections to the main thermostat wire to the MDP3 Control Panel.

**Systems Over Three Zones** – The MDP3 is a two and three zone only panel and can be added on to by adding the MDPA2. The MDPA2 is a two zone adder control panel. Multiple MDPA2 panels can be wired together in a "daisy chain" connecting one to another with an RJ45 Ethernet Cable, supplied with each MDPA2. A total of 50 – MDPA2 panels can be wired together to get up to 100 Zones additional to the MDP3 for a total of 103 Zones.



Model MDPA2 Zone-Adder™