

ZoneSmart™ Zone Pump Controller for Hydronic Heating Systems



ITT McDonnell & Miller's ZoneSmart is a ready to install controller for hydronic circulators in residential and light commercial applications. All ZoneSmart controllers are UL listed and feature multifunction LEDs that are visible without removing the cover for easy start-up and troubleshooting. All units are compatible with analog and digital 24 VAC thermostats, including "power stealing" designs.

The multi-zone controllers feature an advanced microprocessor design that provides domestic hot water (DHW) priority & timer, pump exercise and a post purge timer without the need for add-on circuit boards or modules.

Four and six zone controllers are field expandable for up to 18 pumps and are available with integrated, pre-wired boiler reset or mix reset controllers. Units with reset controllers include all necessary sensors.



Standard Features (multiple zone controllers only)

Priority: Enables DHW zone to have priority over heating zones for limited period of time. User adjustable settings include OFF (disables priority functionality), 30 minutes and 60 minutes.

Post Purge Timer: Circulator(s) will continue to run for 90 seconds after thermostat opens allowing additional extraction of BTUs from high mass boilers. User adjustable settings are OFF and ON.

Exercise: Runs each circulator for 10 seconds after each 72 hours of inactivity. User adjustable settings are ON and OFF.

Expandability: 4 & 6 zone controllers can easily be connected together via an RJ-11 cable to accommodate systems consisting of up to 18 circulators.

Optional Features (4 & 6 zone controllers only)

Boiler Reset: Incorporates a pre-wired integral boiler reset controller into the ZoneSmart enclosure. Reset controller cycles the burner to maintain the optimum system supply temperature relative to the outdoor air temperature. Warm weather shutdown functionality can be activated to prevent system operation above a user-selectable outdoor temperature threshold. All necessary sensors are included.

Mixing Reset: For use on hydronic systems incorporating a variable speed injection pump. Incorporates a pre-wired integral mixing reset controller into the ZoneSmart enclosure. Mixing Reset controller varies the speed of the injection pump to maintain optimum radiant loop temperature relative to the outdoor air temperature. The boiler return temperature is also monitored to ensure that the appropriate minimum water temperature is not violated. Warm weather shutdown functionality can be activated to prevent system operation above a user-selectable outdoor temperature threshold. All necessary sensors are included.

Design & Ordering Data

Model Number	Part Number	Zones	Combined Load (max.) @ 120 VAC	Dimensions W x L x D Inches (mm)	Weight Lbs (kg)
ZS-1	109439	1	5 amps	6.5 x 5 x 3 (165 x 127 x 76)	2.6 (1.18)
ZS-2	109440	2	20 amps	6.5 x 5 x 3 (165 x 127 x 76)	3 (1.36)
ZS-3	109441	3	20 amps	6.5 x 5 x 3 (165 x 127 x 76)	3.1 (1.4)
ZS-4	109442	4	20 amps	13.5 x 8.25 x 3.25 (343 x 210 x 83)	7.3 (3.3)
ZS-4M	109443	4	20 amps	13.5 x 8.25 x 3.25 (343 x 210 x 83)	8.5 (3.9)
ZS-4B	109444	4	20 amps	13.5 x 8.25 x 3.25 (343 x 210 x 83)	8.5 (3.9)
ZS-6	109445	6	20 amps	13.5 x 8.25 x 3.25 (343 x 210 x 83)	7.5 (3.4)
ZS-6M	109446	6	20 amps	13.5 x 8.25 x 3.25 (343 x 210 x 83)	8.7 (3.9)
ZS-6B	109447	6	20 amps	13.5 x 8.25 x 3.25 (343 x 210 x 83)	8.7 (3.9)
ZC-11*	109454	Communication cable for connection of multiple controllers			0.1 (0.05)

*fits 4 & 6 zone controllers only – one required for each slave controller