



Z-ONE RELAYS™ ZONE CONTROLS

Z-ONE SERIES

CALEFFI
Hydronic Solutions



Certified to CSA C22-2 No.24
Conforms to UL Standard 873

FUNCTIONS AND FEATURES

- Single zone switching relay, multi-zone 3, 4, 5 and 6 pump switching relays and multi-zone 3, 4, 5 and 6 zone valve switching.
- Unlimited zone expansion standard on multi-zone, large terminal connections simplifies wiring, front bright LED function lights.
- Selectable priority, post purge and exercise, two dry contacts for DHW, XX, ZR/ZC capable of switching 120 VAC.
- Heavy duty sealed relays, fuse protected, 100% factory tested with 3 year warranty, ETL certified to CSA and UL standards.

ZSR SERIES SWITCHING PUMP RELAYS

CODE	DESCRIPTION
ZSR101	Single zone control
ZSR103	3 zone pump control
ZSR104	4 zone pump control
ZSR106	6 zone pump control

ZSR103, ZSR104 & ZSR106 OPERATING PRINCIPLE

The DIP Switches on the ZSR series can be positioned for the following operations.

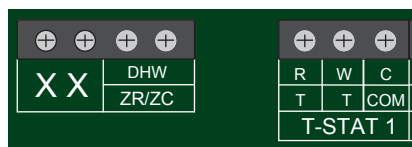
Master / Slave: allows for unlimited expansion to additional ZSR or ZVR series relays.

Priority OFF / Priority ON: When priority mode is ON, upon demand, zone 1 will operate as priority and all other zones are temporarily switched off (with 1 hour time-out). When priority mode is OFF, all zones remain active.

Primary OFF / Primary ON: When primary mode is ON, the primary pump will continue to operate during priority.

Exercise OFF / Exercise ON: When exercise mode is ON, each circulator is switched on for 30 seconds following 72 hours of inactivity.

Post Purge OFF / Post Purge ON: When post purge is ON, the priority pump continues operating for 2 minutes after the priority zone is switched off.

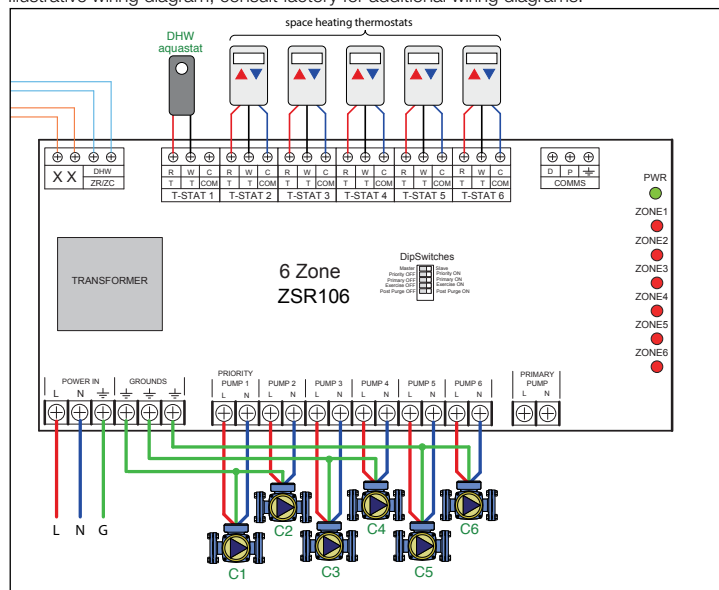


When a zone has a demand from a thermostat (T T or R W) the relay will close sending 120 VAC to the corresponding zone pump, primary pump and closes (X X) dry contacts signaling the boiler of a heating demand. Zone 1 can be used for priority by positioning the Priority dip switch to ON, a demand from T-Stat 1 will activate priority pump 1 and all other zones will be switched OFF, plus DHW (ZR/ZC) dry contact rated to switch max 120 VAC, 2A) will close during priority. Depending on Primary pump dip switch position, the primary pump will remain either ON or OFF.

Z-oneLink unlimited expansion allows adding ZSR series or ZVR series controls to a Master ZSR. Communication is accomplished by connecting three wires (thermostat wire) to the communication terminals located in the upper right hand corner. The dip switch is positioned to Master / Slave. A demand for heat from any zone will fire the boiler and start the pump.



Illustrative wiring diagram, consult factory for additional wiring diagrams.



REFERENCE TECHNICAL BROCHURES: 01285 & 01286

ZVR SERIES SWITCHING VALVE CONTROLS

CODE	DESCRIPTION
ZVR103	3 zone valve control
ZVR104	4 zone valve control
ZVR106	6 zone valve control

ZVR SERIES OPERATING PRINCIPLE

The jumpers on the ZVR series can be positioned for the following operations.

Priority ON / Priority OFF: When priority jumper is ON, upon demand, zone 1 will operate as priority and all other zones are temporarily switched off (with 1 hour time-out). When priority mode is OFF, any zones that were active when zone 1 was switched on will remain on.

Status During Priority ON / Status During Priority OFF: When status jumper is ON, the system pump will continue to operate during priority.

Master / Slave: allows for unlimited expansion to additional ZVR or ZSR series relays.

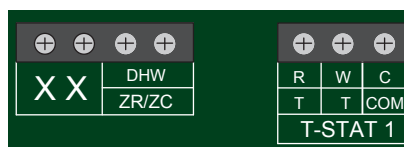
PRIORITY



STATUS DURING PRIORITY



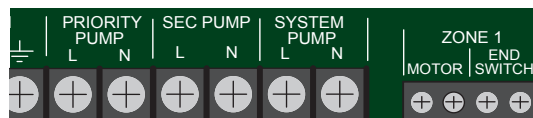
MASTER SLAVE



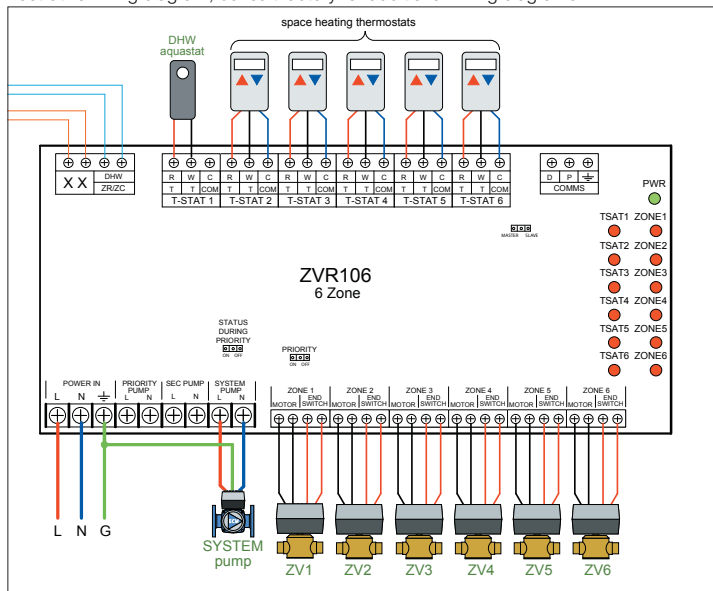
When a zone has a demand from a thermostat (T T or R W) the control will send 24 VAC to the corresponding zone valve. When the zone valve end switch closes, the primary pump will

switch on and the (X X) dry contacts will close to signal the boiler of a heating demand. Zone 1 can be used for priority (either a priority pump or valve). When the priority jumper is ON, a demand from T-Stat1 will activate 24VAC to valve 1 and the priority pump will switch on after the end switch closes (requires a jumper if a valve is not used). The DHW (ZR/ZC) dry contact will also close. Depending upon "Status During Priority" jumper, the system pump will either be ON or OFF.

Pump terminals connection have 120 VAC outputs for simplified pump connections. Zone valve connections can be 2, 3 or 4 wire.



Illustrative wiring diagram, consult factory for additional wiring diagrams.



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03560-14NA



INNOVATIVE ZONING

Z-one[™] Relay

MULTI-ZONING RELAYS



- Single zone switching relay
- Multi-zone 3, 4, 5 and 6 pump switching relays
- Multi-zone 3, 4, 5 and 6 zone valve switching
- Z-oneLink unlimited zone expansion standard
- Selectable priority, post purge and exercise
- Dry contacts for DHW (ZR/ZC), capable of switching line voltage
- Large screw terminals with extra ground screw terminals
- Front bright LED function lights
- Heavy duty sealed relays, fuse protected
- 100% Factory tested with 3 year warranty
- Conforms to UL873 listed by ETL



Watch
our
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