

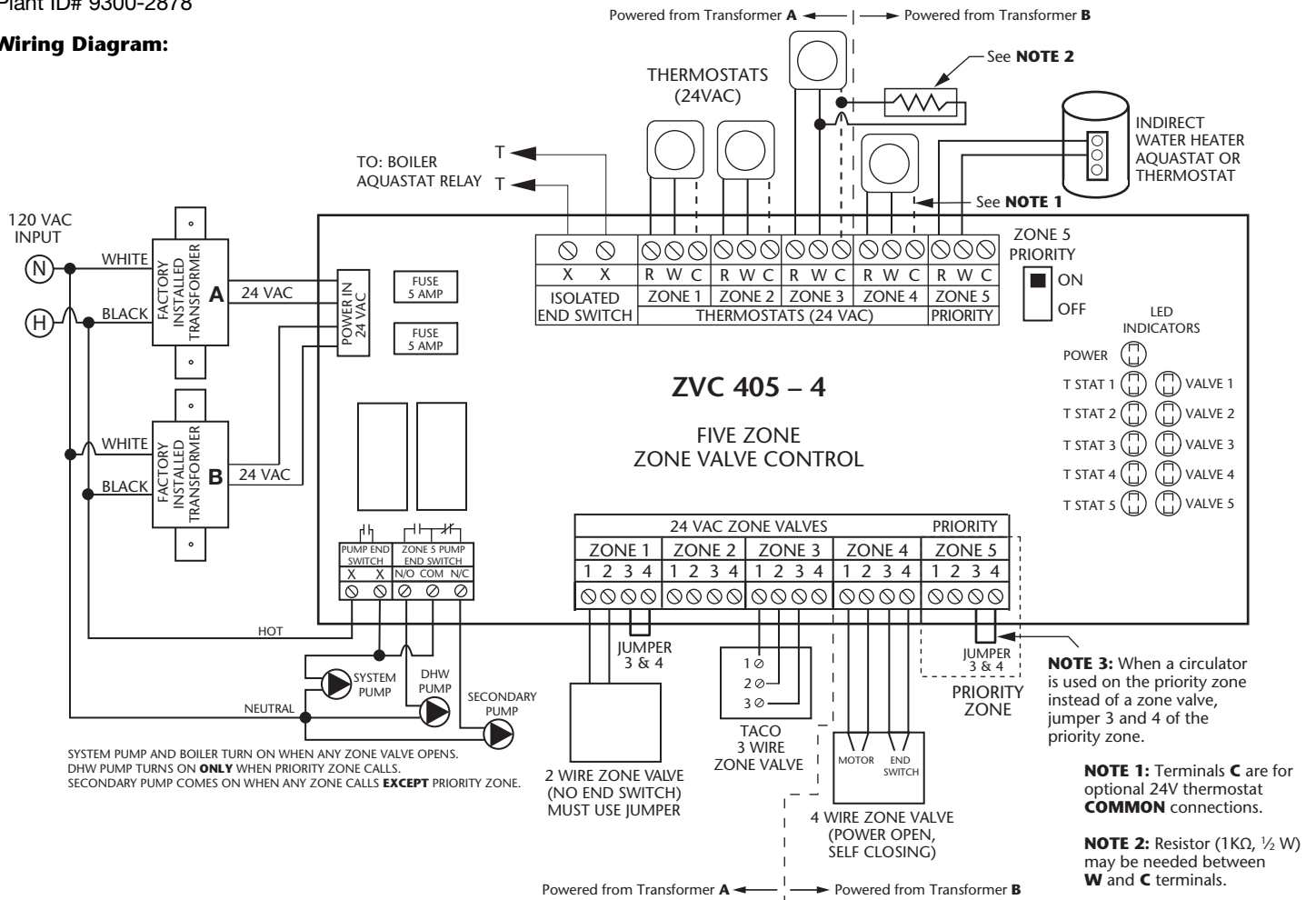
## ZVC405 Zone Valve Control

SUPERSEDES: February 1, 2013

EFFECTIVE: December 20, 2013

Plant ID# 9300-2878

### Wiring Diagram:



**Operation/External Diagnostics:** When any thermostat calls for heat, the appropriate zone valve is energized and the yellow light goes on. When the zone valve is fully open, the red light goes on and energizes the end switch relay. The green light should always be on, indicating that power is connected.

**Priority Operation:** When zone 5 is switched to the priority setting and is actuated, all other zones will stop operation until zone 5 is satisfied. When zone 5 is not switched to priority, all zones will operate independently. **Note:** When a circulator is used on the priority zone instead of a zone valve, jumper 3 and 4 of the priority zone.

**Priority Protection Operation:** When the priority zone calls continuously for more than one hour, power is returned to all the other zones, allowing each zone to function independently. Once the priority zone is satisfied, the control's auto-reset is activated and the priority zone is again allowed to have priority for up to one hour starting from when it calls next.

#### Specifications:

PRODUCT NUMBER	NUMBER OF ZONES	INPUT VOLTAGE	MAX 24 VAC OUTPUT @ 25°C	TYPE 1 ENCLOSURE WIDTH	HEIGHT	DEPTH
ZVC405-4	5 with Priority	120/60/1 VAC, 3A	24 VA per Zone 40 VA per Transformer	12¼"	8"	3"

The pump end switches are rated ¼ hp, 5 amps at 120 VAC. The main and priority end switch connections are rated 24 VAC, 1 amp. All thermostat and zone valve connections supply a 24 VAC class 2 output.

**WARNING:** Wiring connections must be made in accordance with all applicable electrical codes. Use copper wire only. 120 VAC wiring must have a minimum temperature rating of 75°C. Failure to follow this instruction can result in personal injury or death and/or property damage. 12-18 gauge wire recommended for 120 VAC connections, 14-22 gauge wire for thermostat connections, and 14-22 gauge wire for 24 VAC source connections.

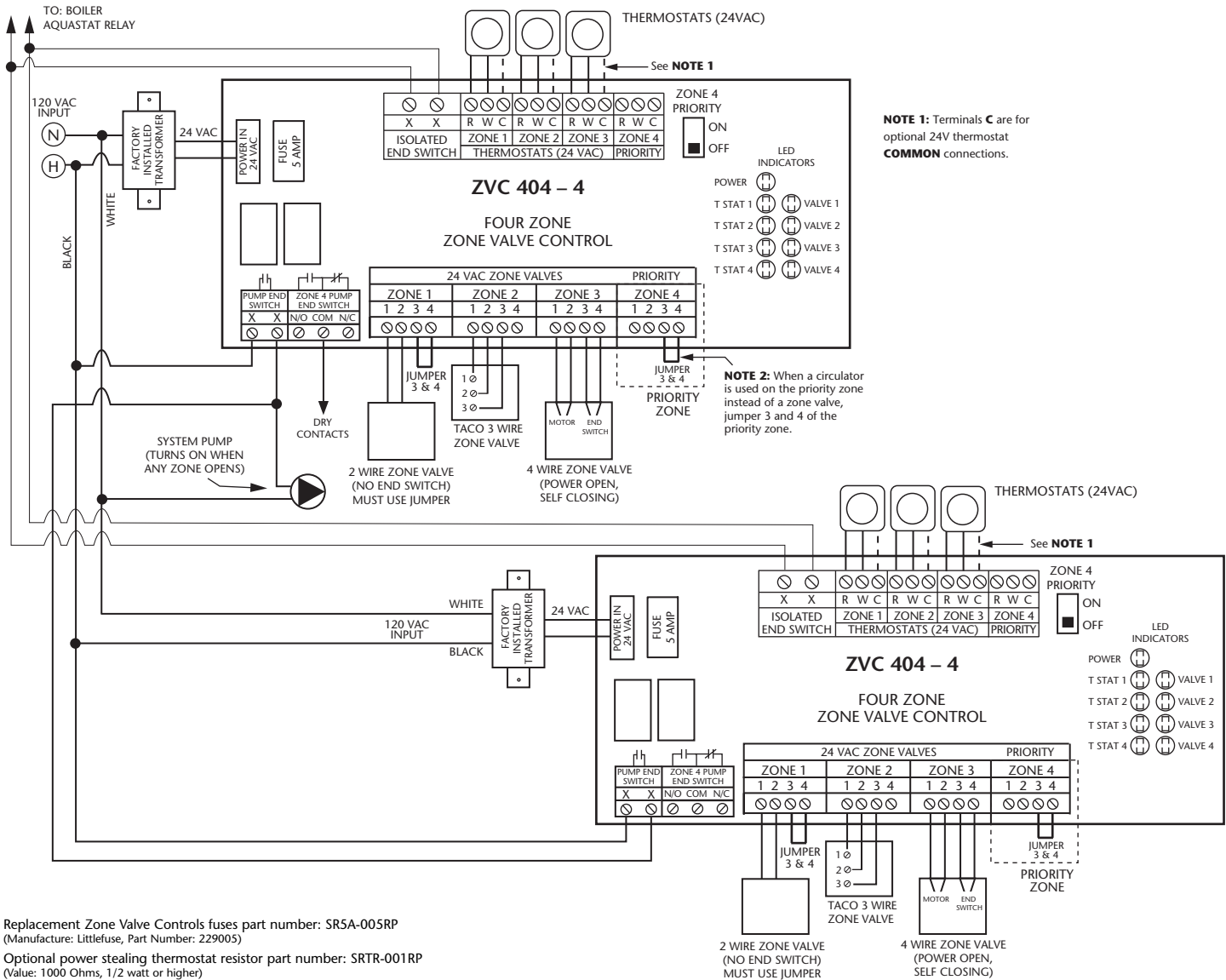
#### Troubleshooting:

- Problem:** Digital thermostats do not work correctly when connected to a zone valve control.
- Solution:** Some thermostats are a "Power Stealing" type which means they are powered by the zone control with just 2 wires (R & W). A resistor may be needed in order to have the thermostat work properly. This resistor should be placed between the W & C (common) terminals of the zone control. If the thermostat manufacturer does not supply a resistor, a 1000 ohm ½ watt resistor has proven to work with most models and is readily available at electronic supply outlets (e.g. Radio Shack). If the thermostat is battery powered, then check that the batteries are fresh and installed correctly.
- Problem:** No heat in a zone or room of building.
- Solution:** LED diagnostic lights will help find a component that is not working properly. The green LED should always be on, indicating that power is connected and the fuse is good. When there is a call for heat, the yellow LED will come on indicating power to the zone valve. This indicates the thermostat is working correctly. When the zone valve fully opens and its end switch makes contact, the red LED will come on, the boiler turns on and a circulator will start if connected to the zone control.

For information on Taco's Zone Valve Controls (ZVC) including catalog sheet, instruction sheets, Visio stencils and our highly praised Zone Controls Wiring Guide, scan the QR code to the right or go to our website: <http://www.taco-hvac.com>.



## 2 ZVC403–ZVC406 Zone Controls Connected Together with System Pump



## LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any product or part which is proven defective under normal use within three (3) years from the date of start-up or three (3) years and six (6) months from date of shipment (whichever occurs first).

In order to obtain service under this warranty, it is the responsibility of the purchaser to promptly notify the local Taco stocking distributor or Taco in writing and promptly deliver the subject product or part, delivery prepaid, to the stocking distributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject product or part contains no defect as covered in this warranty, the purchaser will be billed for parts and labor charges in effect at time of factory examination and repair.

Any Taco product or part not installed or operated in conformity with Taco instructions or which

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Taco, Inc., 1160 Cranston Street, Cranston, RI 02920 | Tel: (401) 942-8000 | FAX: (401) 942-2360

Taco (Canada), Ltd., 8450 Lawson Road, Suite #3, Milton, Ontario L9T 0J8 | Tel: (905) 564-9422 | FAX: (905) 564-9436

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