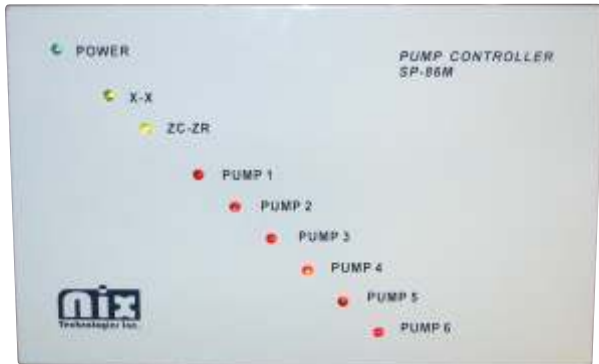


SPEEDPUMP SP-85M/SP-86M SWITCHING RELAYS WITH PRIORITY FOR HYDRONIC HEATING SYSTEMS



General Applications:

The SP-85M/SP-86M pump controller is operated by low voltage thermostats or any other low voltage controllers having an SPST switching action. The SP-85M/SP-86M pump controller provides intermediate switching to permit up to five/six separate line voltage loads such as pumps. SP-85M/SP-86M is expandable up to 10 zones with SP-M1/SP-M2 module.



Product Features and Benefits:

- * High Quality Electronics Circuit Board which Centralizes Wiring and Control Operation
- * Master priority switch for domestic hot water priority control
- * External LED Display provides functional status
- * Plug-in/Removable Relays with Relay Clamps
- * SP-85M model controls up to 5 pump configurations/SP-86M model controls up to 6 pump configuration
- * State-of-the-art modular design by using plug-in communication cable to expand basic module up to 10 zones with SP-M1/SP-M2
- * High Capacity Transformer
- * Designed for cold start or tankless coil applications
- * Easy-Connect Terminals/Screwless Terminals for Thermostat Connections
- * Compatible with Most Digital/Mechanical Thermostats
- * CSA/NRTL (National Recognized Testing Laboratory) Certified
- * 2 Year Guarantee



MODEL	Relay Switching Action	Thermostat Current	Transformer Rating (Nominal)	Single Phase Motor Rating for Each Zone		Dimension LxWxH	Shipping Weight
				120V	240V		
SP-85M	DPST	0.18A	120/24VAC 60Hz 15VA	1/3hp	1/2hp	10"x6"x3" (25.4CMx15.2CMx7.6CM)	5.0lbs. (2.28kg.)
SP-86M				(10A)	(10A)		

** Please note that the boiler output and zone control loops for the SP-85M and SP-86M are all the same. The only difference is the number of zones that can be controlled by each model.

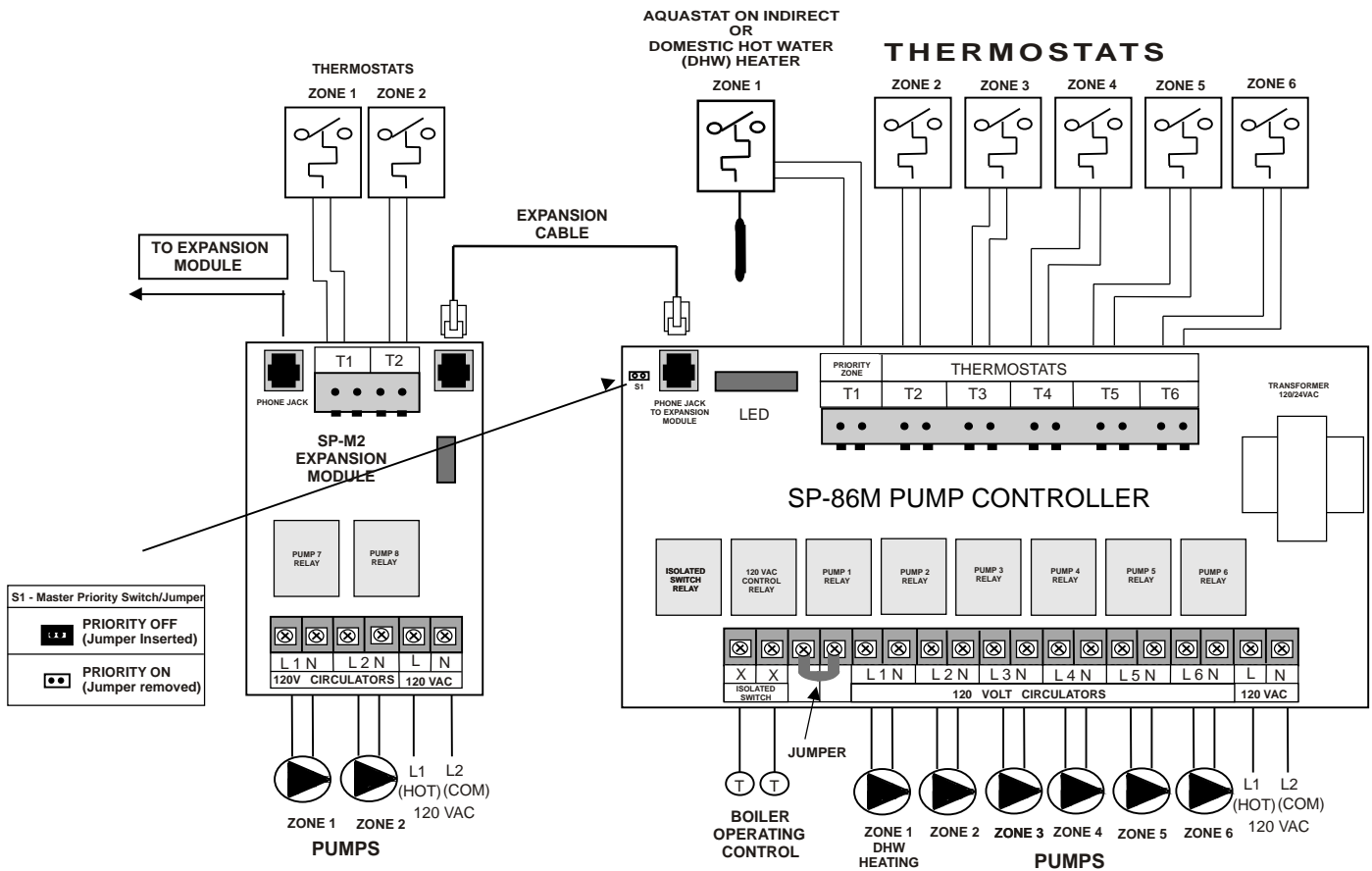
LEDS

LED cable should be disconnected while removing the cover. Simply unplug the cable from the main board. After completing the wiring, just plug back the LED cable to the board.

PRIORITY OPERATION

When the master priority jumper (S1) is set to ON position and the priority pump 1 is actuated, pumps for zone 2 to 6 will not operate. When priority jumper switch is set to OFF position (factory setting), all zones operate independently.

WIRING INSTRUCTIONS



WIRING INSTRUCTIONS

COLD START BOILER APPLICATION OPERATION

When zone thermostat calls for heat, the appropriate pump is actuated and the isolated end switch (X-X) will start the boiler.

JUMPER PLACEMENT

The jumper (factory installed) should be placed between terminal ZC and ZR. Connect isolated switch (X-X) to T-T terminals on boiler control.

TANKLESS COIL BOILER APPLICATION OPERATION

When zone thermostat calls for heat, the appropriate pump is actuated and the boiler is started. If the boiler temperature drops below the low limit setting, all pumps will cease until the boiler temperature is increased above the low limit. Remove the factory installed jumper between terminals ZC and ZR.

JUMPER PLACEMENT

Remove the factory installed jumper between terminals ZC and ZR. Connect ZC and ZR terminals to corresponding ZC and ZR terminals on boiler control.

CAUTION!

- To prevent electrical shock hazard, disconnect power supply before installing.
- All wiring must comply with national and local electrical codes, ordinances, and regulations. Never connect the load terminals to a load that takes more current than the amount listed for the relay in the electrical ratings.
- A line voltage is present between terminal ZC and ZR. Connection of these terminals to low voltage equipment may damage the equipment.
- NIX Technologies is not responsible for damages resulting from misuse of its products.
- This literature is provided for informational purposes only.

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