

SEQUENCE OF OPERATION

PM5 will be scheduled to start based on an occupied start time. Pump with lowest run-time will start. If flow is detected, pump will remain enabled until change-over timer (adjustable) is met, at which point secondary pump will be enabled. If flow is not detected when a pump is enabled, alarm will be generated at Pelican EMS and standby-pump will be enabled. If standby-pump does not generate flow a second alarm will be generated at Pelican EMS.

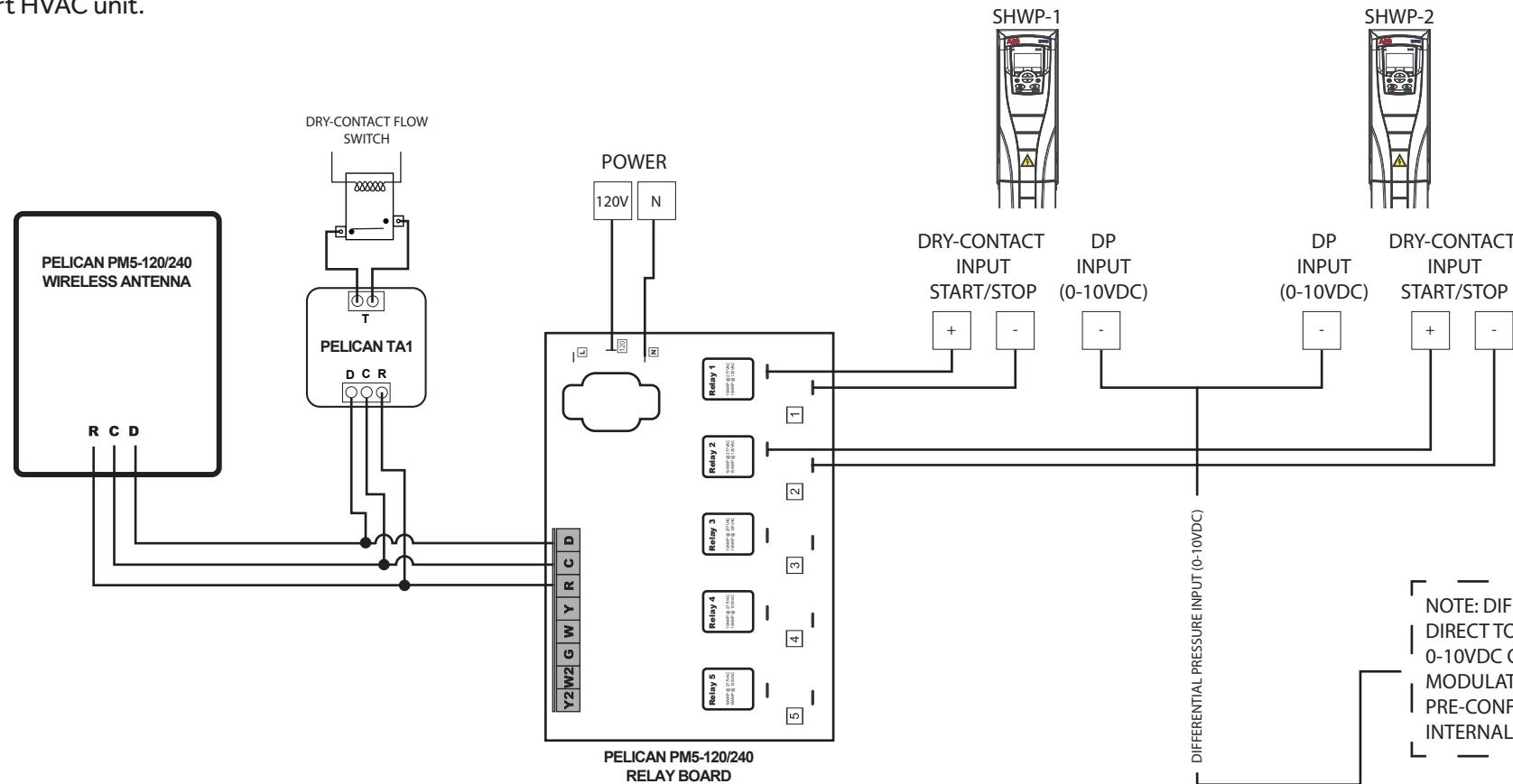
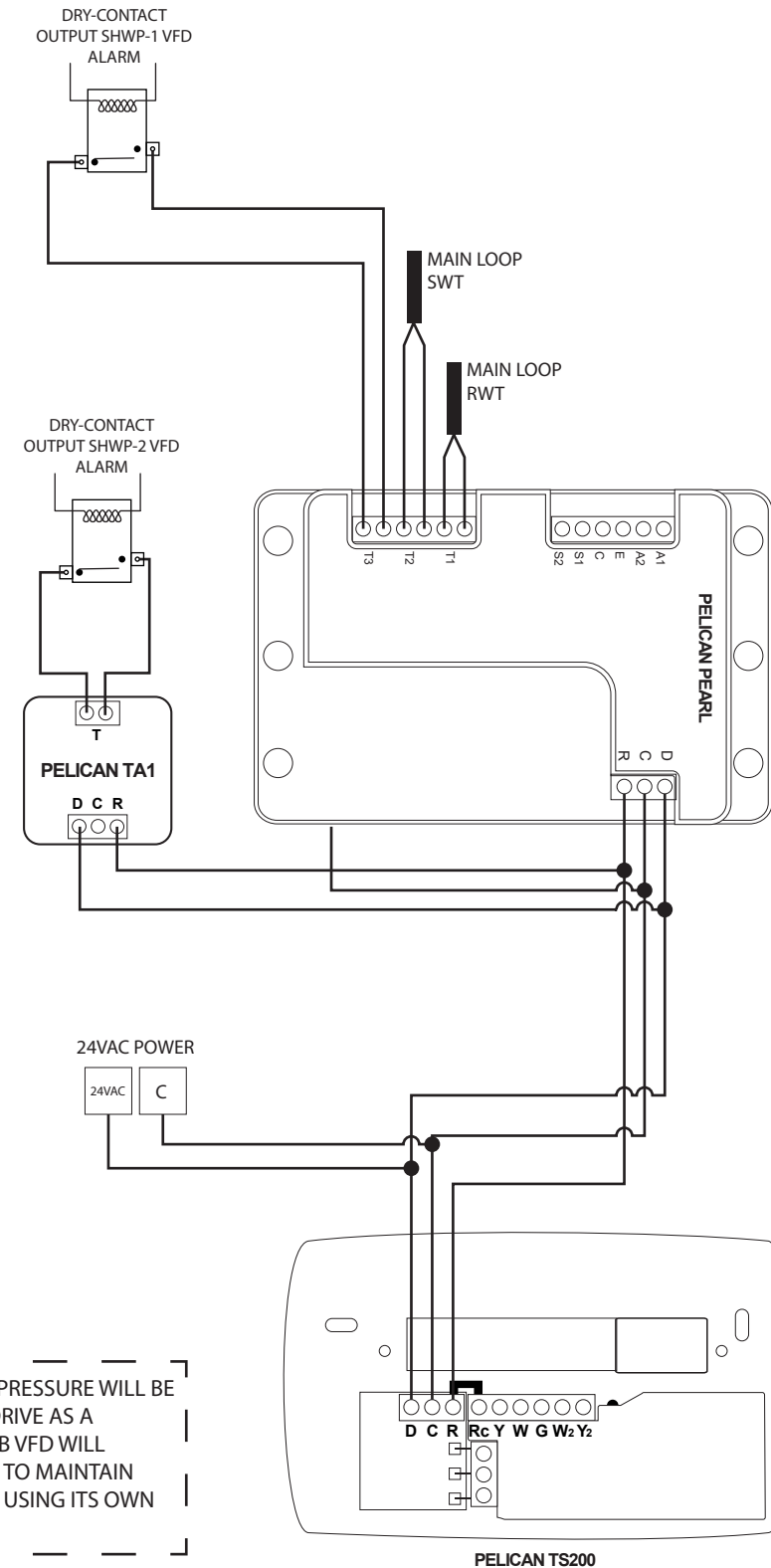
When SHWP-1 is enabled, SHWP-1 VFD will adjust the pump's speed based on stand-alone differential pressure input to meet GPH as defined in specifications (not managed by Pelican). If pump's VFD goes into alarm/error, a dry-contact closure shall occur at PEARL (T3) terminal and an alarm will be generated at Pelican EMS indicating Main Water Pump 1 Fault.

When SHWP-2 is enabled, SHWP-2 VFD will adjust the pump's speed based on stand-alone differential pressure input to meet GPH as defined in specifications (not managed by Pelican). If pump's VFD goes into alarm/error, a dry-contact closure shall occur at TA1 (T) terminal and an alarm will be generated at Pelican EMS indicating Main Water Pump 2 Fault.

During unoccupied hours, if a WSHP's thermostat is set to run for cooling or heating, pump with lowest run-time will start. WSHP thermostat will be set in a "non-start" position until PM5 is able to detect water flow. Once water flow is detected, WSHP thermostat will be allowed to start HVAC unit.

SEQUENCE OF OPERATION

Main Loop RWT will be detected by PEARL on (T1) terminal and will be used by thermostat to either wirelessly start/stop the Boiler's Z8 or the Fluid Cooler's Z8. If the RWT is above 76 deg. F. the Pelican thermostat will enable the Fluid Cooler's Z8. If the RWT is below 72 deg F. the Pelican thermostat will enable the Boiler's Z8.



NOTE: DIFFERENTIAL PRESSURE WILL BE DIRECT TO ABB VFD DRIVE AS A 0-10VDC OUTPUT. ABB VFD WILL MODULATE ITS PUMP TO MAINTAIN PRE-CONFIGURED DP USING ITS OWN INTERNAL PID LOOP.



No.	Revision/Issue	Date

Project Number
P-190614-3

Drawing Title
MAIN WATER LOOP CONTROLLERS

Project Title
Haight Elementary
Drawing Number
-
Architect
-
Mechanical Engineer
-
Mechanical Contractor
-
Drawn By
Date
06/17/2019
Page
6 of 7