

WHY YOU CAN THROW YOUR PLC & UL508 PANELS IN THE TRASH

Networked Yaskawa VFD's eliminate need for PLC & UL508 Panel

PLC (PROGRAMMABLE LOGIC CONTROLLER)

The PLC is a throwback to the ole constant speed systems (pressure switches, timers, relays, alternator switches, pressure reducing valve / ACV), which required a “smart” control for the pumps. Simply, a VFD is a smart and powerful computer, complete with **PROGRAMMABLE** parameters, ladder **LOGIC**, and designed to **CONTROL** the pump. By definition, the modern Yaskawa VFD is a Programmable Logic Controller that provides a sophisticated **PID** loop that controls the pumps.

FACTORS

Yaskawa VFDs further eliminate the need for the PLC:

- Designed to network together and communicate with each other.
- Alternate the lead pump (every 24 hours, etc.).
- Programmed to Lead / Lag.
- BMS (BAS) compatible (BACnet, Modbus, etc.).
- HOA capable



REDUNDANCY

The concept is simple: multiplex systems typically are designed to incorporate redundancy: if one pump/VFD fails, the second pump can carry the load. The key to improving redundancy is keeping the components as separate as possible, i.e., as few common parts as possible. If you place a single PLC between two separate and independent VFD's, the VFD's are no longer independent or separate. If the PLC fails, then the system fails. The Towle Whitney Method relies on only two common electrical parts: the network cable and the circuit breaker panel.

ELIMATE THE PLC, AND THEN ELIMNATE THE UL508 SINGLE POINT CONNECTION

Now that the PLC's can be eliminated, we can further improve the system redundancy by eliminating the expensive UL508 Panel. Like the PLC, the UL508 panel is another single component that ties everything together and reduces redundancy. Instead, the VFD's can be protected by running independent and separate circuits to an existing breaker panel, which also simplifies use of a back-up power supply.

CONCLUSION

The Towle Whitney Method delivers great benefits to our clients:

- High level of redundancy.
- Great value, at a fraction of the cost of a PLC/UL508 system.
- Exceptional performance.

