

### WS Series® Duplex Control Panel

The WS Series® Duplex control panels will control two pumps in sewage, wastewater, and dewatering applications. All panels are UL Listed for the United States and Canada and come with a five-year warranty.

Model	FLA Range
WD1P-4-1021	(0.0-7.0 FLA)
WD1P-4-1022	(7.0-15.0 FLA)
WD1P-4-1023	(15.0-22.0 FLA)
WD1P-4-1024	(22.0-28.0 FLA)
WD1P-4-1025	(28.0-36.0 FLA)
WD1P-4-1026	(37.0-50.0 FLA)
WD1P-4-1027	(48.0-65.0 FLA)

### Enclosure Mounting: TYPE 4X RATED

**Mounting Brackets** - A mounting bracket and screw pack are provided with the premium enclosures. To assemble, turn the enclosure upside down on a flat surface, place the mounting bracket over the square boss either horizontally or vertically, and fasten the mounting bracket with the 1/4"-20 x 0.5 SS, countersunk phillips drive screws or vertically, with the mounting brackets in any config., using any acceptable fastening technique.

**Covers/Doors** - Covers/doors have a gasket pre-assembled to seal against the base.

**Note:** The control panel should not be mounted in a location that may be subject to submersion.



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### Panel Installation:

1. Caution: To maintain the environmental rating, make all wiring connections with seal tight cable grips or conduit connections.
2. Run pump cables and floats cables through conduit. Make field connections as shown on wiring schematic.
3. Run power line conductor through conduit. Wire to terminals per enclosed schematic.
4. Branch circuit protection to be provided by installer.
5. Panel circuit breakers are shipped in the closed position.
6. Floats are properly mounted at the correct levels.  
**Note:** Floats shall have free range of motion without touching each other or other equipment.
7. Connect service conductors 120/208/240VAC to proper location.

**Note for Intrinsically Safe Panels:** cable grips or conduit connections from hazardous locations must be installed directly below the respective field wiring terminals to ensure intrinsically safe rating. Equipment from hazardous locations must be ran in separate conduit from other equipment.



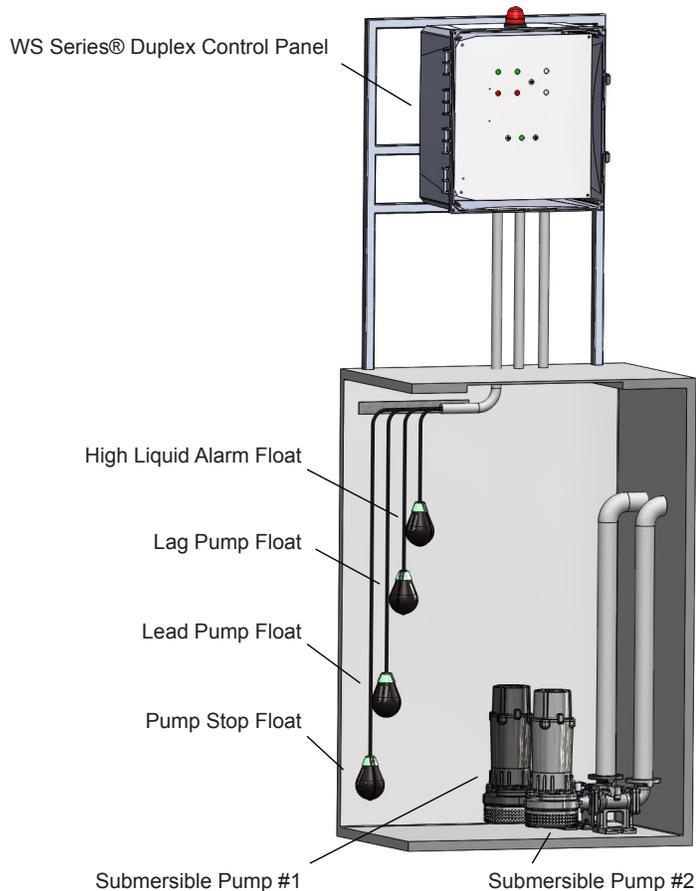
### Sequence of Operation:

1. When the 'Stop' and 'Lead' float contact closes, pump #1 will energize and the pump #1 run light will illuminate. Pump #1 will remain operational until the 'Stop' float opens.
2. The next time the 'Stop' and 'Lead' floats are closed the automatic pump alternation circuit will energize pump #2 and the pump #2 run light will illuminate. Pump #2 will remain operational until the 'Stop' float opens.
3. If the fluid level continues to rise after the first pump has been energized, the 'Lag' float will close. When the 'Lag' float has been closed, the second pump will turn on. Both pumps will remain operational until the 'Stop' float opens.
4. If the level continues to rise, the 'High' float will alarm. This will illuminate the 360 degree visible beacon and sound an 85 decibel at 10' buzzer.

### Remote Monitoring Dry Contacts:

- Normally Open dry contacts for high level, pump #1 run, pump #2 run, pump #1 fault, and pump #2 fault. **Note:** refer to wiring schematic for proper termination.

### Typical Installation of WS Series® Duplex Control Panel



### Additional Panel Options:

- 24 = Pump Exerciser
- 28 = Power On Dry Contact (Normally Open)
- 3R = Painted Steel Enclosure
- A1 = Pre-wire power to circuit board
- A2 = Install motor protectors and contactors outside of listed FLA range
- AF = Alarm Flasher
- AH = Anti Condensation Heater
- C = Additional Cord Length Per Foot Per Component\*
- CCD = Cycle Counter w/ LCD Display & Reset
- CO = Convenience Outlet (User to supply 120 VAC)
- ETD = Elapsed Time Meter w/ LCD Display & Reset
- GR = Generator Receptacle, Includes Transfer Switch
- ISD = Intrinsically Safe
- LAD/ = Lightning Secondary Surge Arrestor
- LAW (LAD Delta / LAW Wye)
- LL = Low Level Alarm
- MD = Main Disconnect; Up to 100.0 FLA
- PM = Phase Monitoring
- PX = Pump Portal® Wireless Remote Communication
- SFD = Seal Failure Circuit w/ Indicator Lights
- SS4 = Upgraded Enclosure (304 Stainless Steel)
- SS6 = Upgraded Enclosure (316 Stainless Steel)
- S3 = No Floats Option

\*Additional cord length greater than 20': Specify after C.  
Example: WD1P-4-1021-C50. Indicates 50' cord lengths for all floats.



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