

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)

Enclosure Mounting: NEMA 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.

Panel Installation:

1. Caution: To maintain the NEMA 4X 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 closed.
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.



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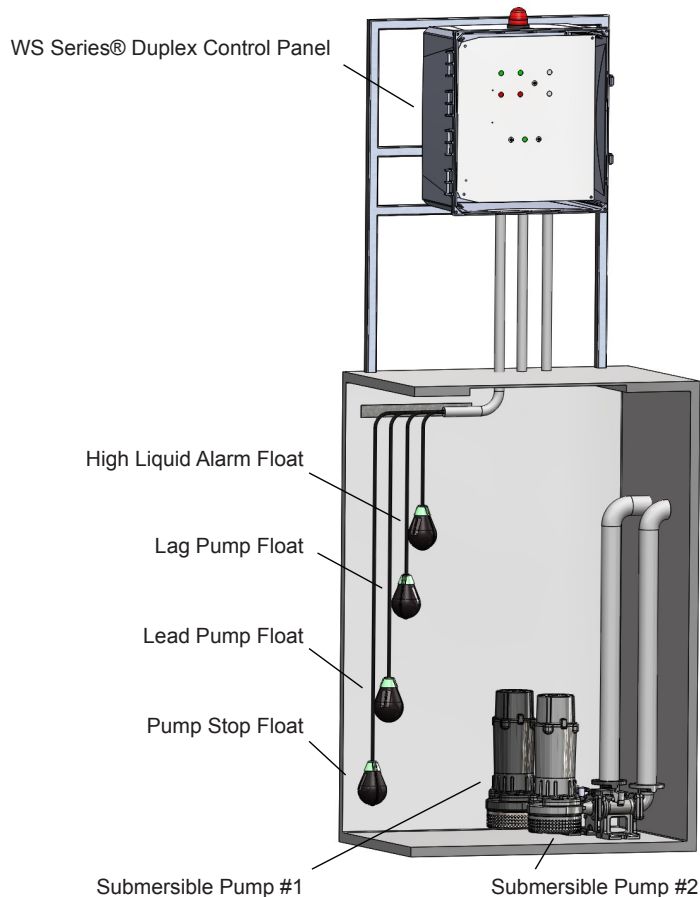
Sequence of Operation:

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



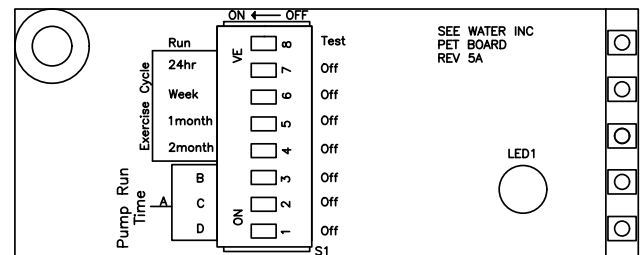
Additional Panel Options:

24 = Pump Exerciser

- Auto cycles pumps daily, weekly or monthly.

Run Time Options:

- Position A: 50ms (DIP Switch 1,2, and 3)
- Position B: 100ms
- Position C: 4s
- Position D: 8s



- 28 = Power On Dry Contact (Normally Open)
- 3R = Painted Steel Enclosure
- 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)
- D1 = 120V Dry Contacts
- 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
- ST = Upgraded Enclosure (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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Notes:

Troubleshooting:

Caution: Before checking electrical connections within the control or attempting to replace any components, turn off all branch circuits supplying power to the main control panel.

Alarm Circuit:

- To test the alarm light and buzzer, press the test button on the front panel. If either the light or buzzer do not indicate, replace the light bulb or buzzer with the same type.

Control Board and Fuse:

- If the power on light is not illuminating on the front panel, check the voltage at TS1-1 and TS1-2 with a voltage meter. The voltage should read 120VAC. If voltage is present, check the fuse in the fuse box. If the fuse is blown, replace fuse with same type. The dry contacts are rated for 0-60 VAC or VDC, 1 amp max.

Floats:

- The control board has individual float status indicators that will illuminate when the floats are in the closed position. Check floats for entanglement, full range of motion. Replace damaged floats.

Warranty:

See Water, Inc. warrants that products of its manufacture are free from defects in material and workmanship for a period of 5 years from the date of purchase. This date shall be determined by the date on the invoice and the serial number on the product.

Replacement of the product is at the discretion of See Water, Inc. This warranty is valid when the product is installed in compliance with the manufacturer’s installation instructions. The manufacturer’s obligation under this warranty shall be limited to the repair or replacement of any parts found by the manufacturer to be defective, provided that the product is returned to See Water, Inc.’s factory, postage prepaid with proof of original purchase included.

The manufacturer of this warranty shall not be liable under this warranty if the product has not been properly installed; any alterations/additions/changes to the product will result in a void warranty. Failure to properly install and test this product can result in personal injury or equipment malfunction.

See Water, Inc. shall not be liable for any loss, damage or expenses from installation or use of its products.



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