## SEE WATER, INC.

Three Phase Duplex Control Panel Installation and Operation manual WD3P-4-302X

## **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	
WD3P-4-3021	(1.0-1.6 FLA)	
WD3P-4-3022	(1.6-2.5 FLA)	
WD3P-4-3023	(2.5-4.0 FLA)	
WD3P-4-3024	(4.0-6.3 FLA)	
WD3P-4-3025	(6.0-10.0 FLA)	
WD3P-4-3026	(9.0-14.0 FLA)	
WD3P-4-3027	(13.0-18.0 FLA)	
WD3P-4-3028	(17.0-23.0 FLA)	
WD3P-4-3029	(20.0-25.0 FLA)	
WD3P-4-3030	(24.0-32.0 FLA)	
WD3P-4-3031	(30.0-40.0 FLA)	
WD3P-4-3032	(37.0-50.0 FLA)	
WD3P-4-3033	(48.0-65.0 FLA)	
WD3P-4-3034	(65.0-115.0 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  $1/4''-20 \times 0.5$  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:**

- Caution: To maintain the Type 4X rating, make all wiring connections with seal tight cable grips or conduit connections.
- 2. Three phase panels: wire transformer for incoming voltage per instructions attached to transformer.
- 3. Set motor protectors to FLA of motors.
- Run pump cables and floats cables through conduit. Make field connections as shown on wiring schematic.
- 5. Run power line conductor through conduit. Wire to terminals per enclosed schematic.
- Branch circuit protection to be provided by installer.
- Panel circuit breakers are shipped in the closed position.
- 8. Ensure floats are properly mounted at the correct levels **Note:** Floats shall have free range of motion without touching each other or other equipment

**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.





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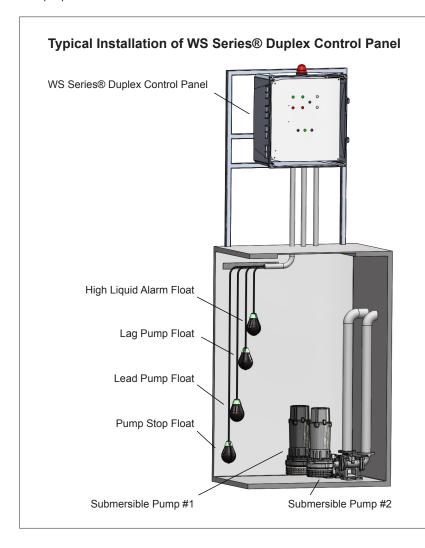
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## **Sequence of Operation:**

- 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.
- 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.
- 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.



### **Additional Panel Options:**

24 = Pump Exerciser

28 = Power On Dry Contact (Normally Open)

3R = Painted Steel Enclosure

AF = Alarm Flasher

AH = Anti Condensation Heater

BB = Battery Backup for control/alarm circuit

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/ = Lightening Secondary Surge Arrestor

LAW (LAD Delta / LAW Wye)

LL = Low Level Alarm

MD = Main Disconnect; Up to 100.0 FLA MD2 = Main Disconnect; 100.0 to 230.0 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 (304 Stainless Steel)

S3 = No Floats Option

\*Additional cord length greater than 20': Specify after C. Example: WD3P-4-3021-C50. Indicates 50' cord lengths for all floats.

# Painted Steel & Stainless Steel Enclosure Mounting:

**Mounting Brackets -** A mounting bracket and bolt back are provided with the enclosure. To assemble, open enclosure door and insert the  $3/8"-16 \times 3/4"$  bolts through the enclosure mounting hole and attach external mounting feet.

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

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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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