



# SPD Quick Start Up Guide

- Step 1:** Mount drive on secure wall or support beam using 4 screws. Ensure drive is well ventilated. Leave at least 8" of free space around the controller for cooling. Plug conduit holes not used.
- Step 2:** Measure site voltage phase to phase and phase to ground; verify if the incoming voltage is single or three phase 230 or 460 volt supply. Models SPD2XXXXF require 230V input voltage. Models SPD4XXXXF require 460V input voltage.
- Step 3:** Provide a dedicated fused disconnect (item #2 above) or circuit breaker rated for drives input amps. No other equipment should be used for this disconnect. Use fast acting class T fuses.
- Step 4:** Connect wire from input power supply to L1, L2, L3 and GND. NOTE: For single phase supply power, wire to L1 and L3 and adjust overload switches for 50% of drive current rating. Ensure you have a solid ground from the building or site. Ensure the ground is continuous between the service entrance and the controller. Ensure there is at least 8" between the input wires and any other wires.
- Step 5:** Ensure you have a three phase motor. Connect motor leads to T1/U, T2/V, T3/W and GND. Ensure the ground is continuous between the controller and the motor. For CentriPro motors, connecting T1/U to Red, T2/V to Black and T3/W to Yellow will give the correct rotation. To change rotation, swap any two motor leads T1/U, T2/V or T3/W. Ensure there is at least 8" between the output wires and any other wires.

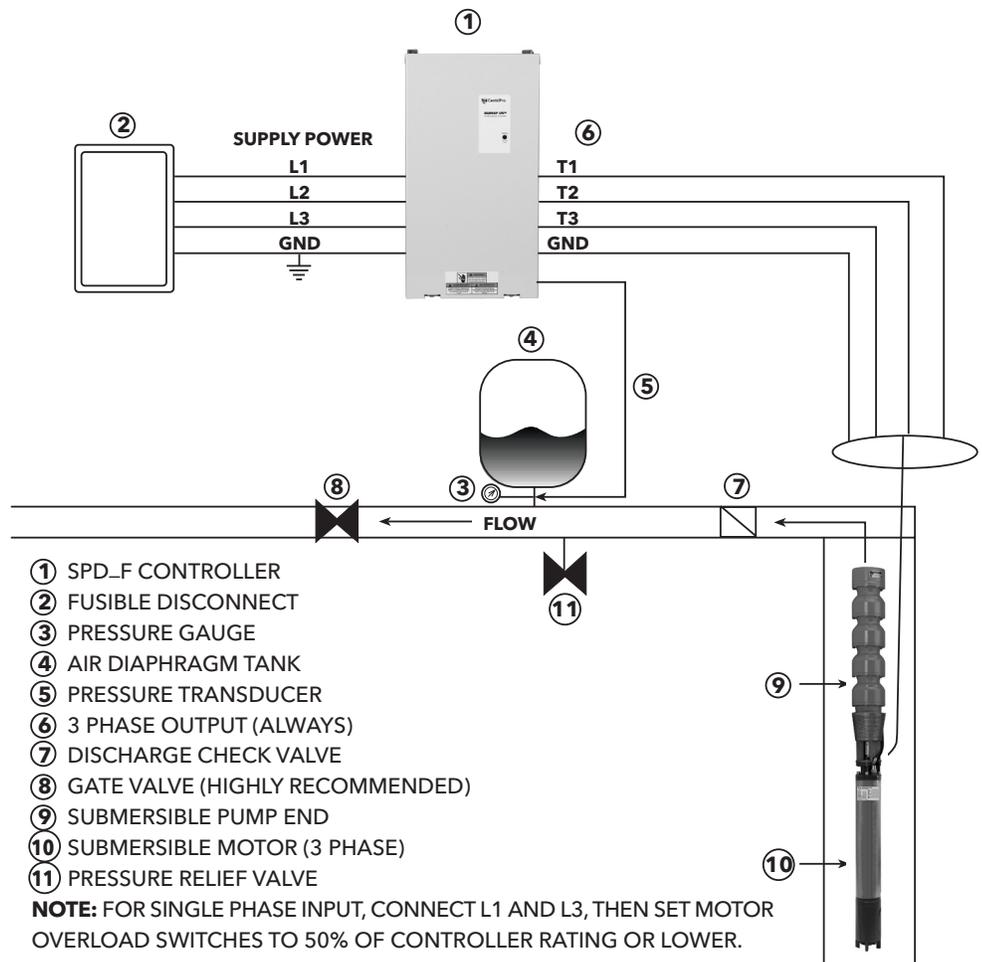
**Step 6:** Plumb pressure transducer in straight piece of pipe downstream of last check valve in system. Do not install the pressure transducer or pressure tank where freezing can occur. If pressure transducer is placed in grounded metal piping, disconnect the drain wire in the pressure transducer cable from the controller chassis.

**Step 7:** Pre-charge bladder tank to 20 psi below your system pressure. Tank capacity should be at least 20% volume of max pump GPM.

**Step 8:** Set the Motor Overload Setting Switches. Choose a setting that is equal to or less than the motor's SFA rating.

**Step 9:** Factory pressure setting is 50psi when used with a 300psi transducer. Press and hold INC or DEC button to adjust pressure while pump is running. Ensure drive goes into standby mode (solid green light/pump off) to save pressure setting.

**NOTE: Do not connect power to CONTROL TERMINALS. Connect only non-powered switch contacts to these terminals.**



- ① SPD-F CONTROLLER
- ② FUSIBLE DISCONNECT
- ③ PRESSURE GAUGE
- ④ AIR DIAPHRAGM TANK
- ⑤ PRESSURE TRANSDUCER
- ⑥ 3 PHASE OUTPUT (ALWAYS)
- ⑦ DISCHARGE CHECK VALVE
- ⑧ GATE VALVE (HIGHLY RECOMMENDED)
- ⑨ SUBMERSIBLE PUMP END
- ⑩ SUBMERSIBLE MOTOR (3 PHASE)
- ⑪ PRESSURE RELIEF VALVE

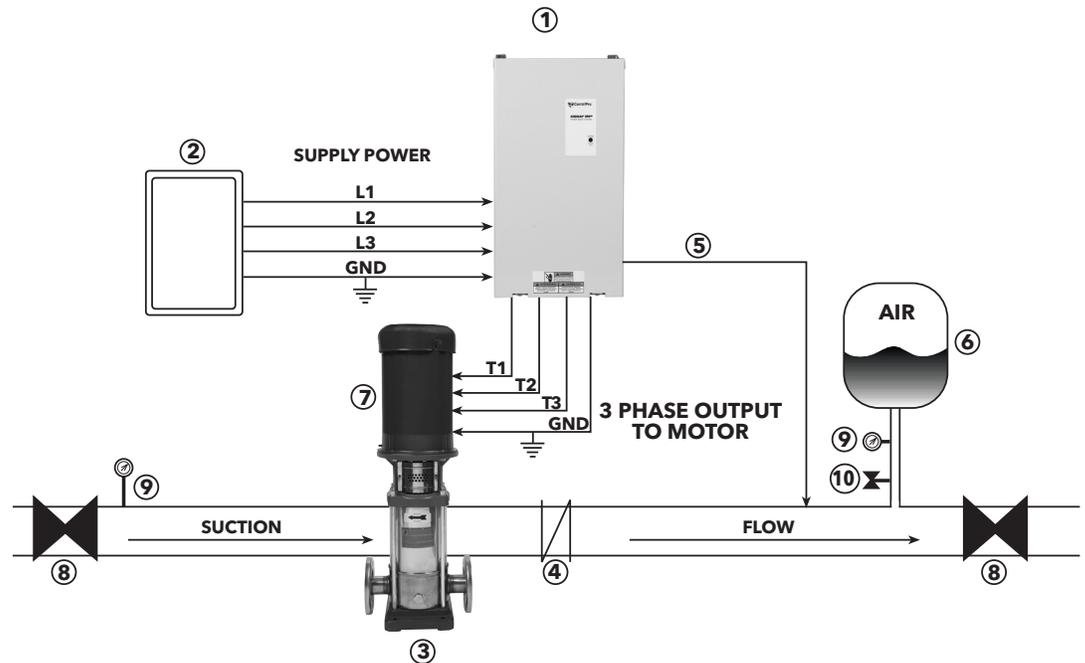
**NOTE: FOR SINGLE PHASE INPUT, CONNECT L1 AND L3, THEN SET MOTOR OVERLOAD SWITCHES TO 50% OF CONTROLLER RATING OR LOWER.**



This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Aquavar SPD Quick Start Up Guide

- Step 1:** Mount drive on secure wall or support beam using 4 screws. Ensure drive is well ventilated. Leave at least 8" of free space around the controller for cooling. Plug conduit holes not used.
- Step 2:** Measure site voltage phase to phase and phase to ground; verify if the incoming voltage is single or three phase 230 or 460 volt supply. Models SPD2XXXX require 230V input voltage. Models SPD4XXXX require 460V input voltage.
- Step 3:** Provide a dedicated fused disconnect (item #2 above) or circuit breaker rated for drives input amps. No other equipment should be used for this disconnect. Use fast acting class T fuses.
- Step 4:** Connect wire from input power supply to L1, L2, L3 and GND. NOTE: For single phase supply power, wire to L1 and L3 and adjust overload switches for 50% of drive current rating. Ensure you have a solid ground from the building or site. Ensure the ground is continuous between the service entrance and the controller. Ensure there is at least 8" between the input wires and any other wires.
- Step 5:** Ensure you have a three phase motor. Connect motor leads to T1/U, T2/V, T3/W and GND. Ensure the ground is continuous between the controller and the motor. To change rotation, swap any two motor leads T1/U, T2/V or T3/W. Ensure there is at least 8" between the output wires and any other wires.
- Step 6:** Plumb pressure transducer in straight piece of pipe downstream of last check valve in system. Do not install the pressure transducer or pressure tank where freezing can occur. If pressure transducer is placed in grounded metal piping, disconnect the drain wire in the pressure transducer cable from the controller chassis.
- Step 7:** Pre-charge bladder tank to 20 psi below your system pressure. Tank capacity should be at least 20% volume of max pump GPM.
- Step 8:** Set the Motor Overload Setting Switches. Choose a setting that is equal to or less than the motor's SFA rating.
- Step 9:** Factory pressure setting is 50psi when used with a 300psi transducer. Press and hold INC or DEC button to adjust pressure while pump is running. Ensure drive goes into stand-by mode (solid green light/ pump off) to save pressure setting.



**NOTE: Do not connect power to CONTROL TERMINALS. Connect only non-powered switch contacts to these terminals.**

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|--|---------------------------|
| ① SPD CONTROLLER                       | ⑥ AIR DIAPHRAGM TANK      |
| ② FUSIBLE DISCONNECT                   | ⑦ 3 PHASE MOTOR           |
| ③ CENTRIFUGAL PUMP                     | ⑧ GATE VALVE (BALL VALVE) |
| ④ CHECK VALVE                          | ⑨ PRESSURE GAUGE          |
| ⑤ PRESSURE TRANSDUCER (CABLE ASSEMBLY) | ⑩ PRESSURE RELIEF VALVE   |

**NOTES:** For single phase input power, use L1 and L3 terminals and adjust motor overload switches to 50% of controller rating or lower.

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