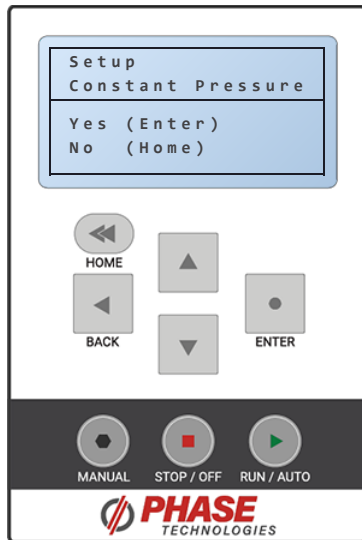


Typical Configuration: Analog Constant Pressure Setup

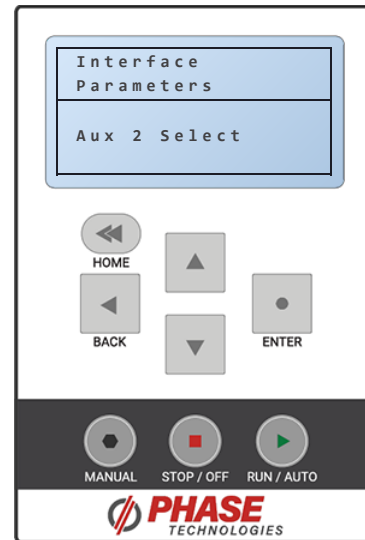


1. "SETUP CONST PRES" - Press the **ENTER** key to proceed on this and each subsequent option.
2. "Measured Input Voltage ???V" - Choose between 240V or 120V dependent on the supply voltage. Use the arrow keys to choose the value for this and each subsequent option.
3. "Motor Type" - Configures the VFD for operation with either a 2 wire or 3 wire motor.
4. "Motor Manufacturer" - Choose between Franklin, Pentek, Grundfos, AY McDonald, or other.
5. "psi SETPOINT" - This value determines the pressure you want to maintain. The factory default is 50 psi.
6. "SUBMERSIBLE PUMP" - Set the ramp profile for a submersible pump. "YES" = Ramp to 30HZ in the first second to prevent excessive wear on the thrust bearing. "NO" = Increase frequency linearly from zero to max.
7. "Disable Manual Mode" - The "Yes" value allows you to disable the **MANUAL** button run mode. "No" allows you to run the VFD manually on/off at max frequency.
8. "OVERCURRENT LIMIT" - Setting for motor overload protection (service factor amp rating for the motor).
9. Press the **RUN/AUTO** button to start the pump.

Additional Notes:

1. If the VFD is not going to sleep, first check for leaks. If there are no leaks present in the system, you may need to increase the "Shutoff Frequency" within "Constant Pressure Parameters."
2. Set pressure tank psi to 70% of VFD psi Setpoint.
3. All settings can be modified after the initial setup completes, refer to the product manual for a complete parameter list.

Alternative Configuration: Float Switch Setup



1. Press the **HOME** button to bypass Perfect Pressure setup.
2. Press the **ENTER** button to enter the main menu.
3. "Change Parameter Values" - Press **ENTER**
4. "Operating Parameters" Press **ENTER**
5. Use the down arrow until the screen says "Overcurrent Limit" and press **ENTER**. Set the motor overload protection (service factor amp rating for the motor) using the arrows to toggle. Press **ENTER** to proceed.
6. Press the **BACK** button, then arrow down to "Interface Parameters" and press **ENTER**.
7. Down arrow to "Aux 2 Select" and press **ENTER**.
8. Arrow up to change the value from "1" to "0" and press the **ENTER** button.
9. Press the **HOME** button at any time to return to the home screen.
10. Press the **RUN/AUTO** button to start the pump.

Additional Notes:

1. Both Aux 1 and Aux 2 must be closed and show "On" for the pump to run.
2. For a full listing of available Parameters, please refer to the product manual.



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ES Series Manual

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What is included

			
ES Series VFD	Transducer	Cord Grip	Mounting Tabs

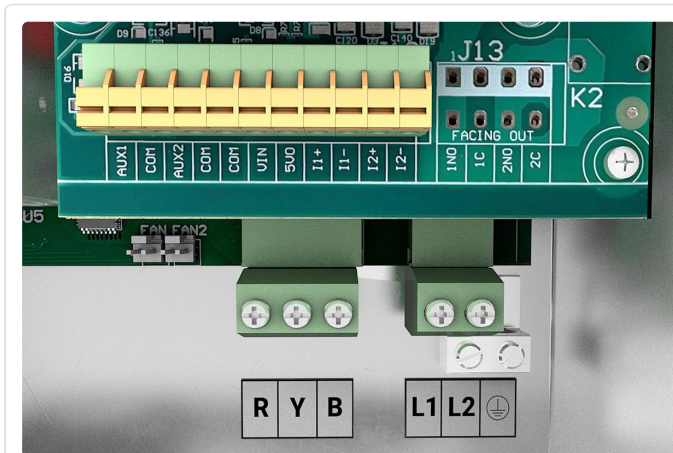
Mounting the VFD

1. Fasten mounting brackets to back of enclosure with supplied screws.
2. Install fasteners to wall 7.5" (190mm) center to center. Max fastener size 1/4".
Note: 18" (450mm) clearance below and 6" (150mm) around required for ventilation.

Connect Wiring

1. Remove (3) front screws and remove cover.
2. Connect motor leads to the J2 terminal block.
Note: Connector is removable for easier access
3. Connect power leads to the J1 terminal block.

Caution: Crimp or solder (NO WIRE NUTS) any connections when splicing motor leads. Inadequate/high-resistance connections can cause nuisance faults or damage to the pump and VFD.



Start winding terminal "R" for 3-wire motors only.

4. Secure the ground wire into the lug marked with the ground symbol.
Note: 4ohms or less to earth ground recommended

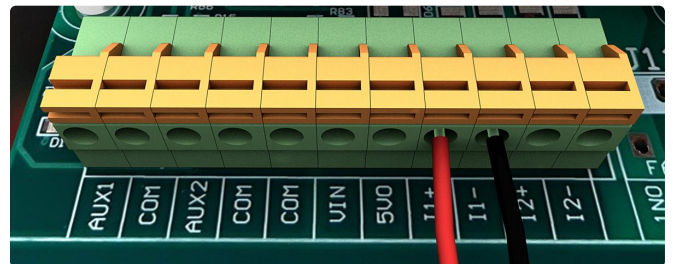


5. Install transducer into a 1/4" NPT **non-metallic** fitting and run the wire back to the VFD, through the cord grip up to the terminal area and cut to length.

Note: Cut transducer leads to length, DO NOT coil extra wire or connect shielding ground wire. DO NOT run transducer leads next to motor leads. If necessary, only cross transducer and motor leads at a 90 degree angle.

Caution: Do not over tighten cord grip

6. Install the Black wire into the spring loaded I1- terminal and the remaining White or Red wire into the I1+ terminal.



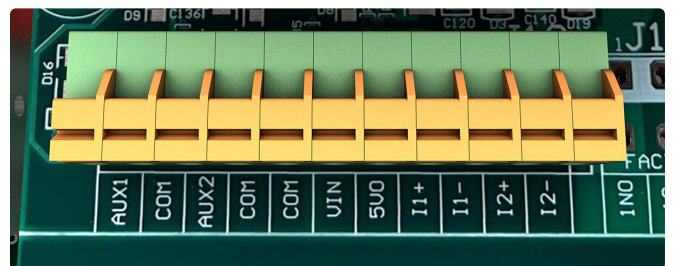
Tool-free terminal blocks with transducer connected

Powering up the VFD

1. Replace the cover securely and then enable power to the VFD.
2. To bypass initial setup, press the HOME button, **or**, to use the Perfect Pressure wizard, choose Yes (ENTER) when prompted.
Note: Hold the BACK and ENTER buttons for 3 seconds to reset the VFD to default configuration

Optional: To add an overpressure switch or float switch, make those connections to AUX2 and COM.

Caution: No voltage may be introduced on these terminals.



AUX2 and COM connections on tool-free terminal blocks



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