

LH Series - Quick Start Guide

Installation

1LH, 3LH, and DX - Signature and Performance Chassis



1LH/3LH/DX, Performance and Signature Chassis

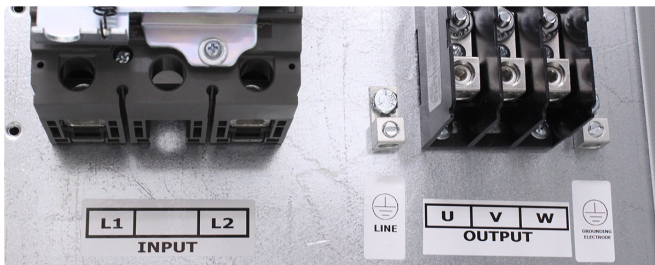
Mounting the VFD

1. Mount the enclosure in such a way that it is fully supported.
Note: 18" (450mm) clearance below and 6" (150mm) around required for ventilation.

Connect Wiring

1. Open door after turning door latches 1/4 turn counter-clockwise.
2. Connect motor leads to the terminal block labeled output.
3. **Optional:** If your VFD is equipped with AuxPower®, make the connection to your pivot on the output terminals located in the upper right-hand area of the chassis.
4. Connect power leads to the terminals labeled input.
Note: This may be on the optional disconnect.

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.

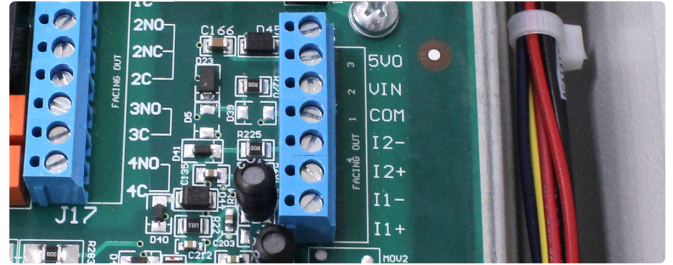


Input, output, and ground terminals

4. Secure the appropriate ground wires into the lugs 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, 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.
6. Install the Black wire into the I1- terminal and the remaining White or Red wire into the I1+ terminal on the control board.



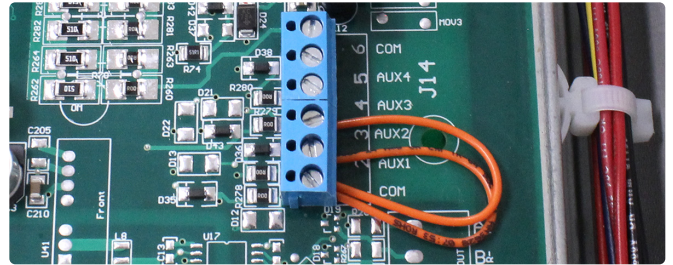
Terminal blocks used for connecting analog transducer

Powering up the VFD

1. Close the door and secure by turning door latches 1/4 turn clockwise.
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 a run/stop from a PLC, pivot control, or float switch remove the orange jumper wire and make those connections to AUX2 and COM.

Caution: No voltage may be introduced on these terminals.



AUX and COM connections on terminal block



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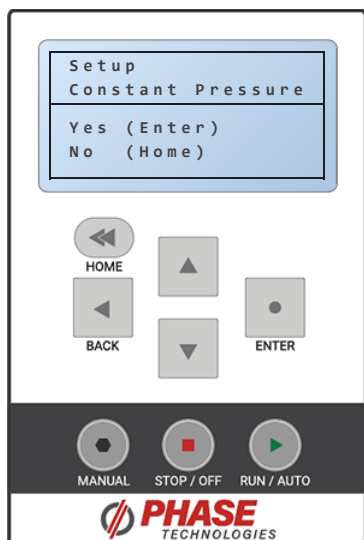
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Configuration

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Typical Configuration: Analog Constant Pressure Setup

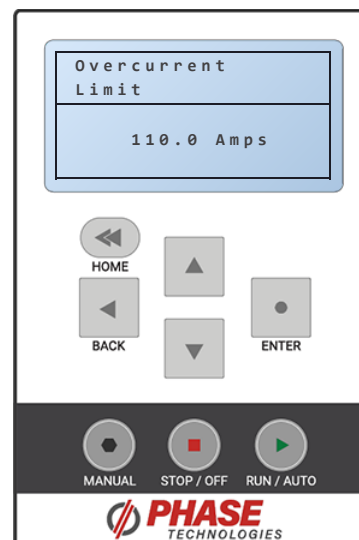


1. "SETUP CONST PRES" - Press the **ENTER** key to proceed.
2. "4-20mA psi RANGE" - Set the psi range of the 4-20mA sensor. Default is 150psi. Press **ENTER** to proceed.
3. "psi SETPOINT" - Determines the pressure you want to maintain. The factory default is 50 psi. Use the arrow keys to change if desired. Press **ENTER** to proceed.
4. "SUBMERSIBLE PUMP" - This parameter sets the ramp profile for a submersible pump. "YES" = ramps to 30HZ in the first second to prevent excessive wear on the thrust bearing. "NO" = The frequency will increase in a linear fashion from zero to max frequency. Use the arrow keys to toggle between the two settings. Press **ENTER** to proceed.
5. "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.
6. "OVERCURRENT LIMIT" – Setting for motor overload protection (service factor amp rating for the motor) using the arrows to toggle. Press **ENTER** to proceed.
7. Press the **RUN/AUTO** button to start the pump.

Additional Notes:

1. Motor rotation must be verified upon completion of setup.
2. 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."
3. Set pressure tank psi to 70% of VFD psi Setpoint.
4. Any of these settings can be modified if needed after the initial setup completes. For a full listing of available parameters, please refer to the product manual.

Alternative Configuration: Simple On/Off 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 screens 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 **HOME** button at any time to return to the home screen.
7. 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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