

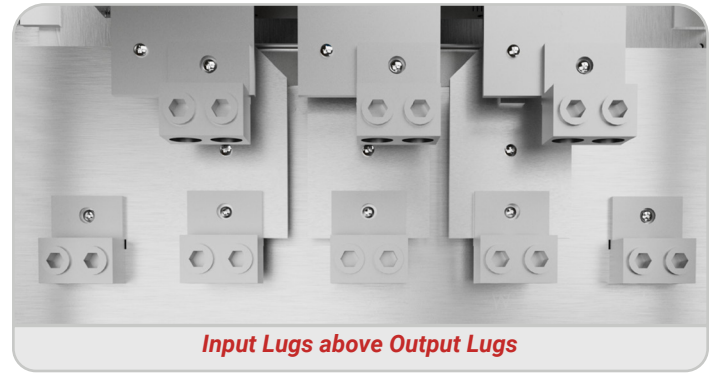
1LH - Quick Start Guide

(Single-Phase Input)

Installation



LHX Chassis



Input Lugs above Output Lugs

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.

Mounting the VFD

1. Mount the enclosure using provided brackets in such a way that it is fully supported.

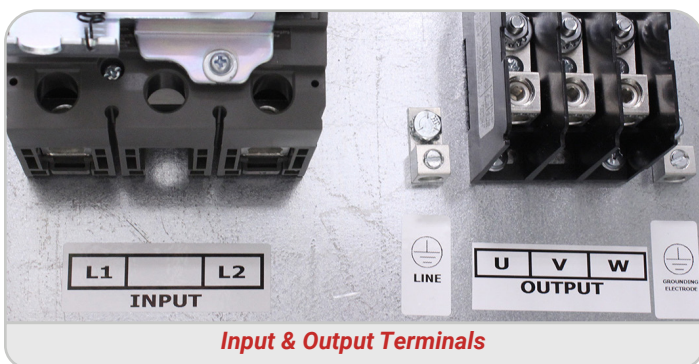
Note: 16" (400mm) clearance above, 12" (300mm) below, and 3" (35mm) around required for ventilation. Less clearance maybe required for smaller frames. See manual for details.

Connect Wiring

1. Remove screws necessary to remove cover.
2. Secure the appropriate ground wires into the lugs marked with the ground symbol.
3. Connect motor leads to terminal block labeled output. (U, V, W)
4. Connect power leads to terminals labeled input. (L1, L2)



ground symbol



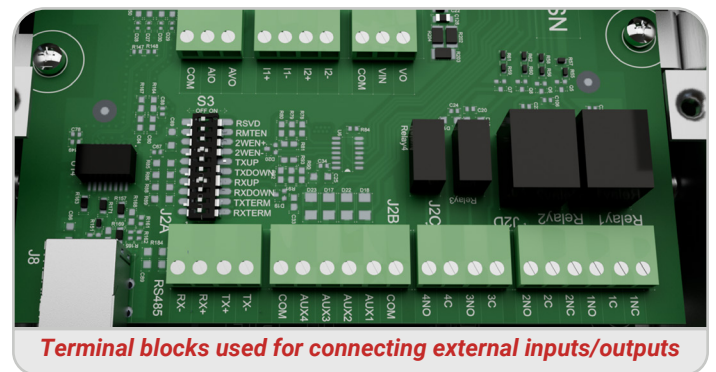
Input & Output Terminals

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.

Note: 4ohms or less to earth ground recommended.

5. If using transducer, install 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.

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 external inputs/outputs

Powering up the VFD

1. Replace the cover and reinstall previously removed screws.
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, float switch, or similar, remove the orange jumper wire and make those connections to AUX2 and COM.

Caution: No voltage may be introduced on these terminals.

VISIT OUR WEBSITE FOR MORE INFO

1LH - Support Docs.

Quick Start - 1LH v1.0_05292025



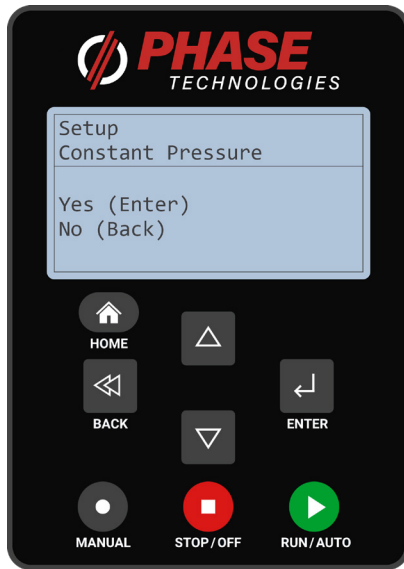
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Analog Constant Pressure Setup



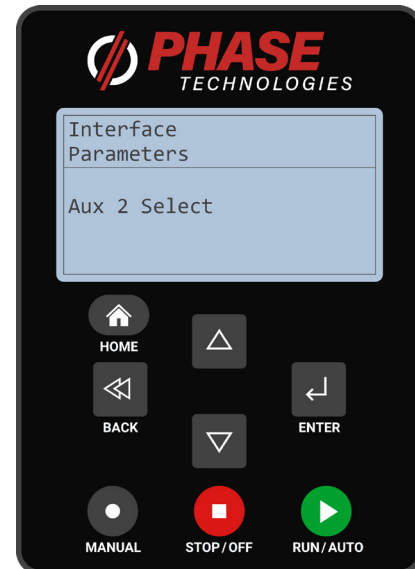
9.1

1. On start, use the arrows to toggle to **"RUN CONSTANT PRESSURE WIZARD?"**. Press **ENTER** key to proceed.
2. **"MAX ANALOG SENSOR RANGE"** - Set the psi range of the 4-20mA psi sensor. Default is 150 psi. Press **ENTER** to proceed.
3. **"ANALOG 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 30 HZ 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 run mode. **"No"** allows you to run the VFD manually on/off max frequency.
6. **"OVERCURRENT LIMIT"** - Setting for motor overload protection (full load or 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 no leaks are present, increase the "Shutoff Frequency" under "Constant Pressure Parameters."
3. Set pressure tank psi to 70% of VFD psi Setpoint.
4. Any settings can be modified after the initial setup completes. For full listing of available parameters, please refer to the product manual.

Speed Reference



9.6

1. On start, use the arrows to toggle to **"SPEED REFERENCE?"**. Press **ENTER** key to proceed.
2. **"SPEED REFERENCE"** - Select how speed reference is controlled between Start/Stop, 4-20mA, and 0-10 VDC using arrows to toggle. Press **ENTER** to proceed.
3. **"MIN FREQUENCY"** - Set minimum output frequency allowed during start up. Press **ENTER** to proceed.
4. **"MAX FREQUENCY"** - Set maximum frequency/ the target of start-up ramp. Press **ENTER** to proceed.
5. **"DISABLE MANUAL MODE"** - The **"Yes"** value allows you to disable the MANUAL run mode. **"No"** allows you to run the VFD manually on/off max frequency. Press **ENTER** to proceed.
6. **"OVERCURRENT LIMIT"** - Setting for motor overload protection (full load or service factor amp rating for the motor) using the arrows to toggle. Press **ENTER** to proceed.
7. **"MOTOR RPM"** - Use the arrows to adjust the RPM rating of the motor. Use the enter key to move from left to right. Press **ENTER** to proceed.
8. **"UNDER CURRENT"** - Minimum current allowed before unit trips. Toggle over to set the value—typically 70% of the motor's full load amps. For best results, consult the motor manufacturer. Press **ENTER** to proceed.
9. Press the **RUN/AUTO** button to start the system.

Additional Notes:

1. Typical connections: Start/ Stop to AUX1 and COM, 4-20mA analog input to I1+ and I1- or I2+ and I2-, 10 VDC input to 10 V, V IN and COM.
2. **Caution: Introducing voltage to AUX connections will damage the control board. Any such damage is not covered by the product warranty. Refer to the manual to confirm proper input connections.**