



LHX Series



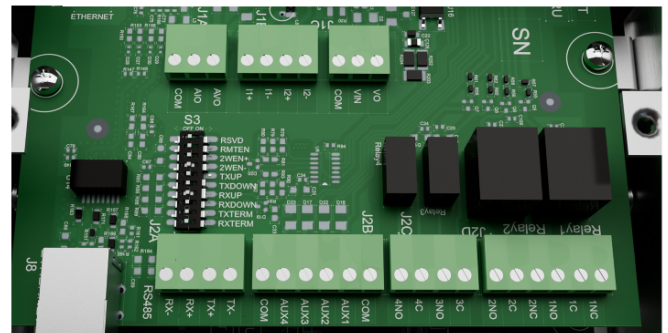
Input lugs above output lugs

**Note:** For single-phase input, connect incoming power to L1 and L2. See derate chart in manual for current ratings.

- If using the 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.

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

- 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

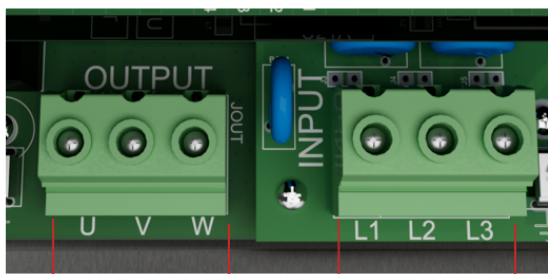
## Mounting the VFD

- 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" (75mm) around required for ventilation. Less clearance may be required for smaller frames. See manual for details.*

## Connect Wiring

- Remove screws necessary to remove front lower cover.
- Connect motor leads to the terminal block labeled output.
- Connect power leads to the terminals labeled input.

**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 motor and VFD.



Output Terminals Input Terminals

Input and output terminals

- Secure the appropriate ground wires into the lugs marked with the ground symbol.  
*Note: 4 ohms or less to earth ground recommended*



## Powering up the VFD

- Replace the cover and reinstall previously removed screws.
- 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.



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### Analog Constant Pressure Setup



1. On start, use the arrows to toggle to "Run Constant Pressure Wizard?" - Press the **ENTER** key to proceed.
2. "Max Analog Sensor Range" - Set the psi range of the 4-20mA sensor. Default is 150psi. 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 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.

### HVAC Setup



1. On start, use the up arrow to toggle to "Run HVAC Setup Wizard?" - Press the **ENTER** key to proceed.
2. "Speed Reference" - Select how fan speed 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** button run mode. The "NO" value allows you to run the VFD manually on/off at max frequency. Press **ENTER** to proceed.
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. "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 between manual, dynamic or disabled. Press **ENTER** to proceed.
9. Press the **RUN/AUTO** button to start the HVAC system.

#### Additional Notes:

1. Typical connections: Start/Stop to AUX1 and COM, 4-20 mA 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 most control board 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.**



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