Variable Speed Control (VSC)

When using electrical equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

1. Read and follow all instructions before using the equipment
2. Keep the cord out of heavy traffic area. To avoid fire hazard NEVER put the cord under rugs, near heat generating devices
3. Always unplug power before servicing
4. Do not drop or insert any object into any openings
5. Do not operate any equipment with a damaged part
6. Any other use not recommended by the manufacturer may result in electrical shock or injury to persons
7. Never use outdoors
8. Do not attempt to repair or adjust any electrical or mechanical functions on this unit. Doing so will void the warranty.

After reading this owner’s guide, if you have any questions or comments, please call +1-817-633-1080 or contact our technical support department at support@luraco.com or visit our website at www.luraco.com for more information

PLEASE READ AND SAVE THESE IMPORTANT SAFETY INSTRUCTIONS
LURACO Variable Speed Control (VSC) - This system allows the bather to adjust the pump speed or jet pressure to any desired level electronically.

Other features:
- Control speed of AC motor with current up to 13.5A
- One extra outlet for LED light
- Built in 30 minute timer
- Water level detection. If the water sensor is installed, motor will not be turned on until water level is above the sensor electrodes (Note: There is a 10 second turn-off delay when water level goes below sensor)

Operations:

Control Button Actions

On/Off:
- 1st press: Jet and light turn on
- 2nd press: Jet turns off
- 3rd press: Light turns off

Speed Changing: +/-
(+) button: Increases motor speed
(-) button: Decreases motor speed

Pulsating Mode: \( \bigwedge \bigwedge \bigwedge \)
- Press both (+) and (-) at the same time to enter pulsating mode
- Press any Key (+) or (-) to exit pulsating mode

Note: VSC stores the last operation speed/mode. Memory will be cleared if there is a power reset

INSTALLATION GUIDE

I) Overall System Integration

Fig. 1a/ Recommended wiring diagram for small tubs with single pump

Fig. 1b/ Recommended wiring diagram for large tubs with multiple pumps*

* Some tubs or whirlpools may use multiple pumps. To control all pumps with only one Button, the slave port is used.
## Installation Guide for the Water Level Sensor

Two conductive electrodes with advanced electronics and firmware are used to detect the water level. This is the same water level sensing technology that has been widely used in tubs and whirlpools. This technology can work with any non-metallic tub materials, such as fiber glass, clear fiber glass, acrylic and even glass. A sensor proper installation is required. **Important Note: if your tub is painted with metallic particles filled paint, you must remove the paint surrounding the electrodes in order for the sensor to operate properly.**

### Troubleshooting

<table>
<thead>
<tr>
<th>Fault</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VSC does not turn on</td>
<td>1. Check the control keypad connection and motor current rating</td>
</tr>
<tr>
<td>2. Motor runs for a few seconds then stops</td>
<td>2. Check water level sensor connection. If water sensor is not installed, a jumper must be inserted into the water level sensor connector to bypass the sensor</td>
</tr>
</tbody>
</table>

### Setup

#### a)
![Electrode mounting behind the tub](image1.png)

#### b)
![Electrode Configurations](image2.png)

**Fig. 2:** a) Electrode mounting behind the tub  

b) Electrode Configurations
Follow the steps below for the water level sensor installation

Locate the location for the sensor electrodes to be installed. **Note:** The electrodes can be installed in vertical or horizontal configuration (Fig. 2b)

a) Drill two holes (3.5mm diameter) on the tub with approximate distance as shown in Fig. 2b above. Insert the electrodes and tighten the nuts to secure the ring connectors as shown in Fig. 2a above.
b) Connect the other end of sensor cable to the VSC port named “Level Sensor”
c) Connect the control button to the VSC port named “Control Button”.
d) Connect the Light transformer to the VSC port named “Light” Note: The maximum current this port can provide is 1A.
e) Connect the Pump to the VSC port named “Motor”

**WARRANTY INFORMATION**

One (1) YEAR LIMITED WARRANTY

1. This Warranty applies only to the original purchaser of this product.
2. This Warranty applies ONLY to repair or replacement of any supplied or manufactured parts of this product. The warranty does not cover normal wear, coating, dropped or abused unit.
3. Unless otherwise proscribed by law, The LURACO technologies, Inc. shall not be liable for any personal injury, property or any incidental or consequential damages of any kind resulting from malfunctions, defects, misuse, by improper installation or alteration of this product.

Attention: Any modification to the product will void the warranty

**Important Instructions**

If you need to send a unit to us for repair, please follow the steps below.
1. Carefully pack the item in its original carton or other suitable box to avoid damage in shipping.
2. Before packing your unit; be sure to enclose:
   • Your name with full shipping address and telephone number
   • A dated receipt as PROOF OF PURCHASE
   • Attach a paper detailing the problem you are having

**VSC SPECIFICATIONS**

- Ratings (Max): Motor (up to 13.5 Amp), Light (1 Amp)
- Voltage: 120VAC
- Frequency: 60Hz
- Dimensions: L: 150mm, W: 80mm, H: 135mm
- Weight: 3Lbs
- This controller is not compatible with capacitor start motors

**THANK YOU FOR BUYING LURACO TECHNOLOGIES’ PRODUCTS**

[Contact Information]