IMPORTANT INFORMATION

- Applications: sewage and effluent lift stations, stormwater pump stations, non-potable water systems, tanks, wet wells, and reservoirs.
- SJE Rhombus® recommends the use of a desiccant filter or bellows to protect against moisture entering the vent tube.
- Do not bend cable radius smaller than 1.5 inches (38 mm) to avoid kinking the vent tube.
- When installing, lower the transmitter slowly and avoid impact with objects in the wet well.
- Do not press against the transmitter diaphragm with a sharp object.

STABILIZING WEIGHT

Each SUB-X™ is provided with a removable stabilizing weight. The stabilizing weight must be attached to the transmitter housing prior to installation. Hand tightening is adequate.
The SUB-X™ Transmitter is supplied with a stainless steel mounting bracket and a strain relief cord grip.
1. **Anchoring:** Install the SUB-X™ in a stilling well when possible, to prevent damage from impact. It is acceptable to suspend the transmitter without a protective stilling well provided extra care is taken to prevent damage to the transmitter and cable. Do not mount the transmitter to a pump or piping.

2. **Submersion:** Damage to the cable will lead to failure of the transmitter. The SUB-X™ cable has a rugged jacket material to minimize the risk of cuts and abrasions. Carefully lower your transmitter into the well, make sure the cable does not contact sharp edges. Do not drop the transmitter.

3. **Condensation Protection:** The size of the vent tube is designed to minimize the intrusion of water vapor when the cable is terminated inside a clean and dry control panel. In areas of high humidity, use a drying tube (desiccant) or bellows to prevent water vapor from entering the vent tube. Contact SJE Rhombus® for ordering information. Never terminate the transmitter cable in a junction box in the wet well.

4. **Cable:** The SUB-X™ cable is flexible; however, the vent tube inside the cable must not be kinked during installation. Do not bend cable to a radius smaller than 1.5 inches (38 mm). If a liquid tight cord grip is used with the transmitter cable, do not over tighten. This may cause damage to the cable and restrict the vent tube.

5. **Mounting position:** The SUB-X™ must be installed in a vertical position with cable on top.

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**ELECTRICAL CONNECTION**

The SUB-X™ is a loop transmitter (2-wire) designed to operate within a specific voltage range.

- **SHIELD:** Connect to signal ground (low impedance)
- **BLACK WIRE:** +8 to 32 VDC
- **WHITE WIRE:** 4 - 20 mA
- **VENT TUBE**

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**MAINTENANCE**

1. Periodically check the cable and housing for damage.
2. Carefully remove excessive buildup on sensor.
3. Periodically check the operation and output signal of the transmitter.
4. Replace the product immediately if any damage is found or suspected.
5. Use only SJE Rhombus’ replacement parts.
WARNING:
Keep floats and transmitter clear of pumps, pipes, and motor cables.
Ensure floats and transmitter cannot reach pump suction.
Do not run pump and level sensor cables in the same conduit.
**SPECIFICATIONS**

- Measuring Ranges: 7.25 PSI (16.7 ftWC) and 14.50 PSI (33.4 ftWC)
- Accuracy: 1% full scale
- Operating Temp: 32-122°F (0-50°C)
- Output: 4-20 mA, loop powered
- Excitation Voltage: 8-32 VDC reverse polarity protection
- Overpressure Protection: 58 PSI (133.6 ftWC)
- IP Rating: IP 68 for permanent submersion
- Wetted Materials:
  - Sensor Housing: PVC, 2.00" diameter x 5.62" length (51mm x 143mm)
  - Cable Seal: EPDM
  - Diaphragm: VITON®, 1.25" diameter (32mm)
  - Cable: TPE, 18 AWG - 2 wire shielded with vent tube, 0.3" diameter (8mm)
  - Stabilizing Weight: Epoxy coated cast iron, 1.0 lb. (0.45 kg), 2.6" diameter x 2.5" length (66mm x 64mm)

## PART NUMBER DESCRIPTION DATE INSTALLED

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>DATE INSTALLED</th>
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</thead>
<tbody>
<tr>
<td>1051995</td>
<td>SUB-X™ 16.7ftWC with 25ft cable</td>
<td></td>
</tr>
<tr>
<td>1051993</td>
<td>SUB-X™ 16.7ftWC with 50ft cable</td>
<td></td>
</tr>
<tr>
<td>1051992</td>
<td>SUB-X™ 16.7ftWC with 75ft cable</td>
<td></td>
</tr>
<tr>
<td>1051991</td>
<td>SUB-X™ 16.7ftWC with 100ft cable</td>
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<tr>
<td>1051996</td>
<td>SUB-X™ 33.4ftWC with 25ft cable</td>
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<tr>
<td>1051989</td>
<td>SUB-X™ 33.4ftWC with 50ft cable</td>
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<tr>
<td>1051990</td>
<td>SUB-X™ 33.4ftWC with 75ft cable</td>
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<tr>
<td>1051994</td>
<td>SUB-X™ 33.4ftWC with 100ft cable</td>
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*Backed by a 2-year limited warranty.

## SUB-X™ Analog Input Scaling Table

<table>
<thead>
<tr>
<th>mA</th>
<th>%</th>
<th>TRANSMITTER 0-16.7FTWC</th>
<th>TRANSMITTER 0-33.4FTWC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ft (cm)</td>
<td>In (mm)</td>
</tr>
<tr>
<td>20</td>
<td>100</td>
<td>16.7 (509)</td>
<td>200 (5,090)</td>
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<tr>
<td>16</td>
<td>75</td>
<td>12.5 (382)</td>
<td>150 (3,820)</td>
</tr>
<tr>
<td>12</td>
<td>50</td>
<td>8.4 (254)</td>
<td>100 (2,540)</td>
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<tr>
<td>8</td>
<td>25</td>
<td>4.2 (127)</td>
<td>50 (1,270)</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

SJE RHOMBUS.

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techsupport@sjeinc.com
www.sjerhombus.com
Technical Support Hours: Monday - Friday, 7 A.M. to 6 P.M. Central Time

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