



## SJE MicroMaster® Pump Switch Installation Instructions

This mechanically-activated, wide-angle pump switch provides automatic control of pumps in:

- Water
- Sewage applications

This SJE MicroMaster® pump switch is not sensitive to rotation or turbulence allowing it to be used in both calm and turbulent applications.



### FEATURES

- Mechanically-activated, snap action contacts.
- High impact, corrosion resistant, polypropylene float housing.
- Adjustable pump range of 20 to 91 cm (8 to 36 inches).
- Five-year limited warranty.

### OPTIONS

This switch is available:

- for pump down or pump up applications.
- with a 125 VAC or 250 VAC piggy-back plug.
- without a plug for direct wiring in 125 VAC or 250 VAC applications.
- in standard cable lengths of 3, 5, 6, or 10 meters and 10, 15, 20, or 30 feet (longer lengths available).
- with adjustable mounting clamp or cable weight.

### SPECIFICATIONS

#### CABLE:

**125 VAC Piggy-back Plug:** flexible 18 gauge, 2 conductor (UL, CSA) SJOW, water-resistant, (CPE)

**250 VAC Piggy-back Plug:** flexible 16 gauge, 2 conductor (UL, CSA) SJOW, water-resistant, (CPE)

**FLOAT:** 7.0 cm diameter x 12.3 cm long (2.74 inch x 4.83 inch), high impact, corrosion resistant, polypropylene housing for use in water up to 140°F (60°C)

**MAXIMUM WATER DEPTH:** 9 meters (30 feet) or 90 kPa (13 psi)

#### ELECTRICAL:

**125 VAC 50/60Hz Single Phase:**

**Maximum Pump Running Current:**  
10 amps

**Maximum Pump Starting Current:**  
60 amps

**250 VAC 50/60Hz Single Phase:**

**Maximum Pump Running Current:**  
8 amps

**Maximum Pump Starting Current:**  
60 amps

**Note:** This switch is not recommended for controlling:

- electric loads less than 100 milliamps, 12 VAC
- non-arcing electric loads

Switch must be used with pumps that provide integral thermal overload protection.

### SJE-RHOMBUS® FIVE-YEAR LIMITED WARRANTY

**SJE-RHOMBUS®** warrants to the original consumer that this product shall be free of manufacturing defects for five years after the date of consumer purchase. During that time period and subject to the conditions set forth below, **SJE-RHOMBUS®** will repair or replace, for the original consumer, any component which proves to be defective due to defective materials or workmanship of **SJE-RHOMBUS®**.

**THIS EXPRESS WARRANTY DOES NOT APPLY TO THE MOTOR START KIT COMPONENT. SJE-RHOMBUS® MAKES NO WARRANTIES OF ANY TYPE WITH RESPECT TO THE MOTOR START KIT.**

**ELECTRICAL WIRING AND SERVICING OF THIS PRODUCT MUST BE PERFORMED BY A LICENSED ELECTRICIAN.**

**THIS WARRANTY DOES NOT APPLY:** (A) to damage due to lightning or conditions beyond the control of **SJE-RHOMBUS®**; (B) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with printed instructions provided; (C) to failures resulting from abuse, misuse, accident, or negligence; (D) to units which are not installed in accordance with applicable local codes, ordinances,

or accepted trade practices, and (E) to units repaired and/or modified without prior authorization from **SJE-RHOMBUS®**.

*Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.*

**TO OBTAIN WARRANTY SERVICE:** The consumer shall assume all responsibility and expense for removal, reinstallation, and freight. Any item to be repaired or replaced under this warranty must be returned to **SJE-RHOMBUS®**, or such place as designated by **SJE-RHOMBUS®**.

**ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. SJE-RHOMBUS® SHALL NOT, IN ANY MANNER, BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AS A RESULT OF A BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.**

### NOTICE!

Products returned must be cleaned, sanitized, or decontaminated as necessary prior to shipment to ensure that employees will not be exposed to health hazards in handling said material. All applicable laws and regulations shall apply.

**⚠ WARNING****ELECTRICAL SHOCK HAZARD**

Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

**⚠ WARNING****EXPLOSION OR FIRE HAZARD**

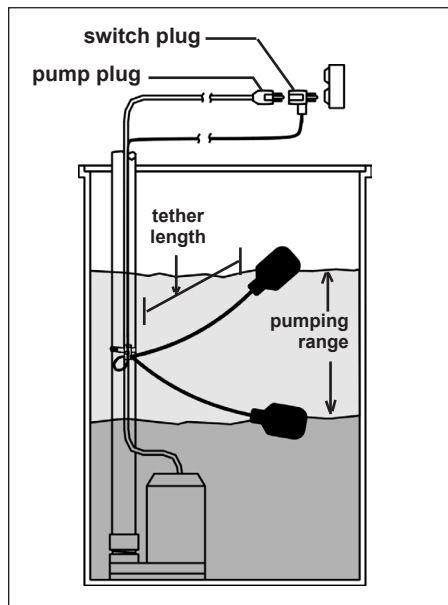
Do not use with flammable liquids. Install in accordance with ANSI/NFPA 70. Suitable for usage with intrinsically safe circuit extensions as defined by UL 698A.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

**MOUNTING THE SWITCH**

1. Determine the required cord tether length as shown in Figure A and B.
2. Place the cord into the clamp as shown as shown in Figure C.
3. Secure the clamp to the discharge pipe as shown in Figure C.  
**Note:** Do not install cord under hose clamp.
4. Tighten the hose clamp using screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
5. Check installation. Allow system to cycle to insure proper operation.

**Note:** All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus® supplier for replacements.

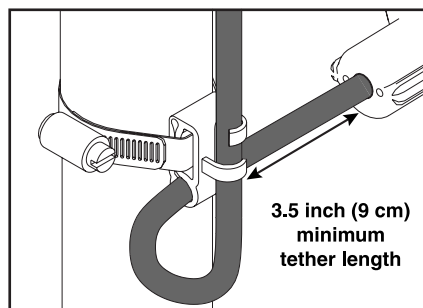
**Figure A****PIGGY-BACK PLUG INSTALL**

- Electrical outlet must not be located in pump chamber.
  - Electrical outlet voltage, piggyback plug voltage, and pump voltage must match.
1. Follow steps 1 through 4 of "Mounting The Switch."
  2. Insert switch's piggyback plug into outlet as shown in Figure A.
  3. Plug pump into piggyback plug as shown in Figure C.
  4. Check installation. Allow system to cycle to insure proper operation.

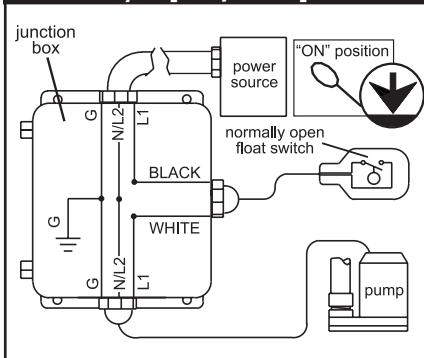
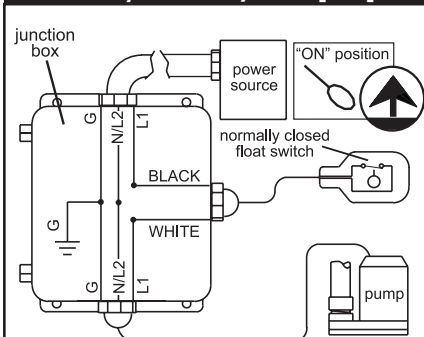
**Figure B**
**Determining Pumping Range  
In Inches (1 inch = 2.5 cm)**

tether length	3.5	6	9	12	15	18	22
pumping range	8	11	15	21	28	31	36

Use only as a guide. Pumping ranges are based on testing in non-turbulent conditions. Range may vary due to water temperature and cord shape. **Note:** As the tether length increases, so does the variance of the pumping range.

**Figure C****DIRECT WIRE INSTALL**

1. Follow steps 1 through 4 of "Mounting The Switch."
2. Wire switch as shown below.
3. Check installation. Allow system to cycle to insure proper operation.

**125/250 VAC****Normally Open/Pump Down****125/250 VAC****Normally Closed/Pump Up****⚠ WARNING**

In 230 VAC pump installations, one side of the line going to the pump is always **HOT**. This condition exists if the switch is on or off. Install double pole disconnect on all 230 VAC pump circuits.



# SJE RHOMBUS™

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