

SJE RHOMBUS[®]

SJE MicroMaster[®] SPDT Pump Switch Installation Instructions

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

- Water
- Sewage applications

It can be wired to work in either pump down (normally open) or pump up (normally closed) applications. This SJE MicroMaster[®] SPDT pump switch is not sensitive to rotation or turbulence allowing it to be used in both calm and turbulent applications.



FEATURES

- Can be wired to work in either pump down (normally open) or pump up (normally closed) applications (**Single Pole, Double Throw**).
- 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:

- 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: flexible 18 gauge, 3 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: 10 meters (33 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[®].

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**

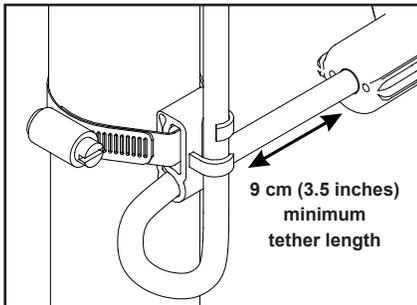
Do not use with flammable liquids. Install in accordance with ANSI/NFPA 70. Suitable for usage with intrinsically safe circuit extensions as defined by UL 698A.

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 Figures A and B.
2. Place the cord into the clamp as shown in Figure A.
3. Secure the clamp to the discharge pipe as shown in Figure A.
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. Wire switch as shown on Application Drawings.
6. Check installation. Allow system to cycle to insure proper operation.

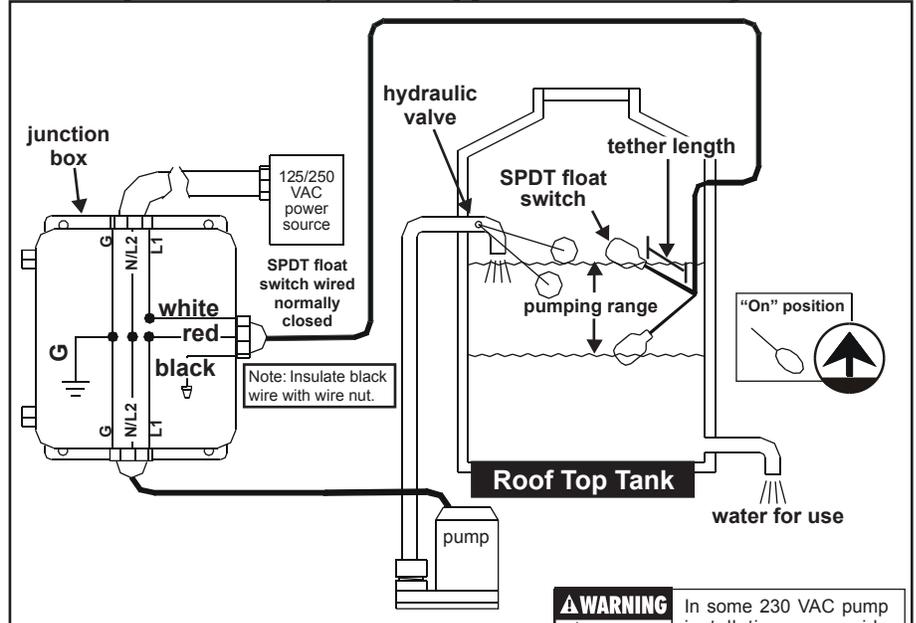
Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus® supplier for replacements.

Figure A**Figure B**

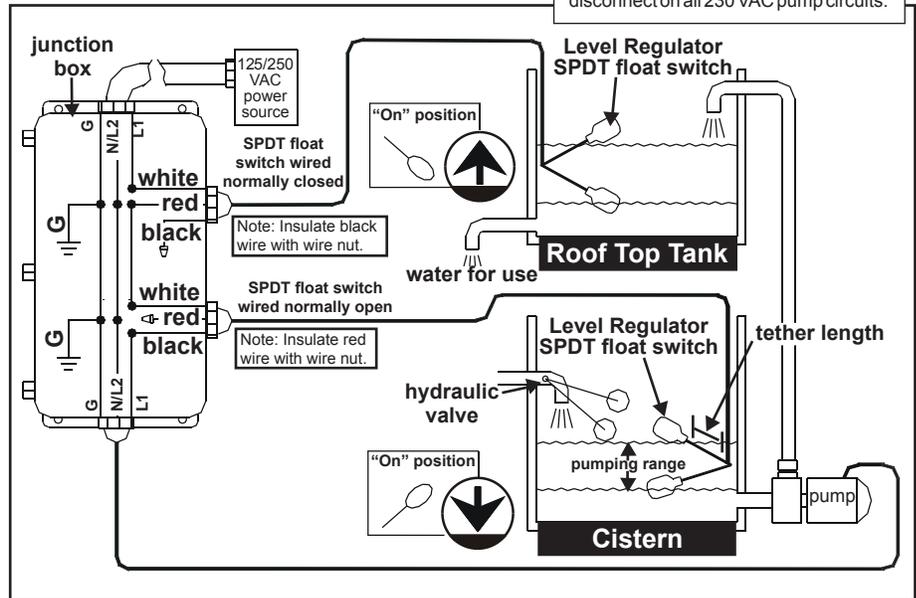
Determining Pumping Range
In Centimeters (1 inch = 2.5 cm)

tether length	9	15	23	30	38	46	56
pumping range	20	28	38	53	71	79	91

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.

Roof Top Tank Gravity Feed Application Drawing**WARNING**

In some 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.

Cistern Rooftop Tank Application Drawing

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