

# SJE RHOMBUS<sup>®</sup>

## Installation and Operating Instructions

### SJE MICROMASTER<sup>®</sup> PUMP SWITCH

### SJE MICROMASTER<sup>®</sup> SPDT PUMP SWITCH

### SJE MICROMASTER<sup>®</sup> PLUS PUMP SWITCH

### SJE MICROMASTER<sup>®</sup> EP PUMP SWITCH (Earth Plate)

### SJE MICROMASTER<sup>®</sup> PLUS EP PUMP SWITCH (Earth Plate)

SJE Rhombus<sup>®</sup> pump switches provide automatic control of pumps in sump, sewage, and non-potable water applications.

## SPECIFICATIONS

This equipment is suitable for Category II installations, rated to 60°C, and protected by double insulation.

Approved for use in non-potable water and sewage.



#### SJE MICROMASTER<sup>®</sup>

#### SJE MICROMASTER<sup>®</sup> SPDT

#### SJE MICROMASTER<sup>®</sup> EP (Earth Plate)

##### CABLE:

**SJE MicroMaster<sup>®</sup>:** Flexible 18 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

**SJE MicroMaster<sup>®</sup> SPDT:** Flexible 18 gauge, 3 conductor (UL, CSA) SJOW, water-resistant (CPE)

**SJE MicroMaster<sup>®</sup> EP:** Flexible 18 gauge, 3 conductor (UL, CSA) SJOW, water-resistant (CPE)

**FLOAT HOUSING:** All models, 7.0 cm x 12.3 cm, high impact, corrosion resistant polypropylene, has IPX8 protection to a maximum water depth of 10 meters.

##### ELECTRICAL:

###### 125 VAC Rated Voltage:

**Maximum Pump Running Current:** 10 amps  
**Maximum Pump Starting Current:** 60 amps  
**Frequency:** 50/60 Hz

###### 250 VAC Rated Voltage:

**Maximum Pump Running Current:** 8 amps  
**Maximum Pump Starting Current:** 60 amps  
**Frequency:** 50/60 Hz

Switch must be used with pumps that provide integral thermal overload protection. Switch is not recommended for controlling electric loads less than 100 millamps, 12 VAC or non-arcng electric loads.

#### SJE MICROMASTER<sup>®</sup> PLUS

#### SJE MICROMASTER<sup>®</sup> PLUS EP (Earth Plate)

##### CABLE:

**SJE MicroMaster<sup>®</sup> Plus:** Flexible 16 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

**SJE MicroMaster<sup>®</sup> Plus EP:** Flexible 16 gauge, 3 conductor (UL, CSA) SJOW, water-resistant (CPE)

**FLOAT HOUSING:** All models, 7.0 cm x 12.3 cm, high impact, corrosion resistant polypropylene, has IPX8 protection to a maximum water depth of 10 meters.

##### ELECTRICAL:

###### 125 VAC Rated Voltage:

**Maximum Pump Running Current:** 13 amps  
**Maximum Pump Starting Current:** 78 amps  
**Frequency:** 50/60 Hz

###### 250 VAC Rated Voltage:

**Maximum Pump Running Current:** 12 amps  
**Maximum Pump Starting Current:** 72 amps  
**Frequency:** 50/60 Hz

Switch must be used with pumps that provide integral thermal overload protection. Switch is not recommended for controlling electric loads less than 100 millamps, 12 VAC or non-arcng electric loads.

## SJE RHOMBUS<sup>®</sup> FIVE-YEAR LIMITED WARRANTY

Five-Year Limited Warranty.

For complete terms and conditions, please visit [www.sjerhombus.com](http://www.sjerhombus.com).

**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.

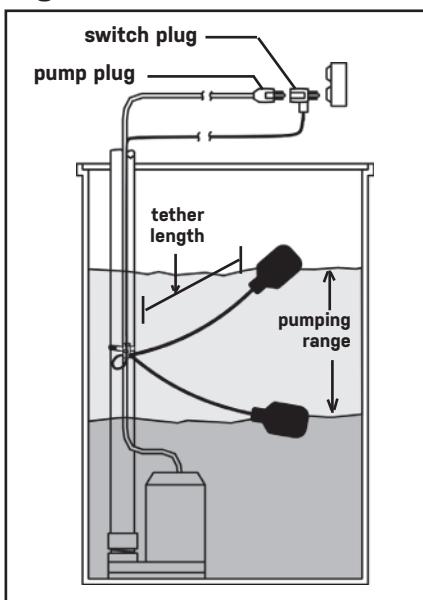
**For detailed specifications on this product, or for the complete line of SJE Rhombus® panel, alarm, and switch products, visit our web site at [www.sjerhombus.com](http://www.sjerhombus.com).**

**MOUNTING THE SWITCH**

**WARNING:** Do not install switch in direct line of incoming liquid.

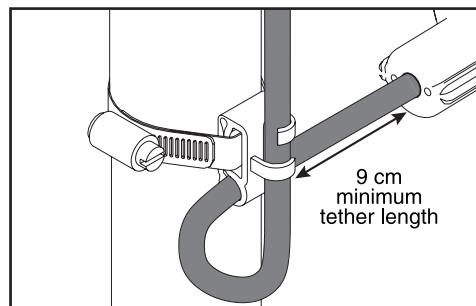
1. Place the cord into the clamp as shown in Figure B.
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figures A and B. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Wire switch as shown in Figure C.
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**

Determining Pumping Range in Centimeters						
tether length	9	15	23	30	38	46
pumping range	20	28	38	53	71	79
9	15	23	30	38	46	56

*Due to weight of cable, pumping range above horizontal is NOT equal to pumping range below horizontal. Use values published 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 B****Figure C**

SJE MICROMASTER® SPDT ONLY 125/250 VAC NORMALLY OPEN/PUMP DOWN		125/250 VAC NORMALLY CLOSED/PUMP UP		SJE MICROMASTER® EP & SJE MICROMASTER® PLUS EP 125/250 VAC	SJE MICROMASTER® & SJE MICROMASTER® PLUS NORMALLY OPEN/NORMALLY CLOSED
	CONNECTIONS MADE IN DRY JUNCTION BOX		CONNECTIONS MADE IN DRY JUNCTION BOX		
<b>WARNING</b>	In 230 VAC installations, one side of the line going to the load is always <b>HOT</b> . This condition exists if the switch is on or off. Install double pole disconnect on all 230 VAC circuits.				
	On SPDT models, insulate unused red or black wires with wire nut. Wire can become electrically hot.				

**PREVENTATIVE MAINTENANCE**

- Periodically inspect the product. Check that the cable has not become worn or that the housing has not been damaged so as to impair the protection of the product. Replace the product immediately if any damage is found or suspected.
- Periodically check to see that the float is free to move and operate the switch.
- Use only SJE Rhombus® replacement parts.



**SJE RHOMBUS®**

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