

# **SPEAKMAN®**

## **S-9010 & S-9020 Installation, Maintenance & Operation Instructions**

### **S-9010 DESCRIPTION**

Speakman SENSORFLO faucet. Battery powered 4" centerset lavatory sensor faucet. Faucet body consists of polished chrome plated removable cover and black powder coated chassis. Sensor/electronic module powered by two (2) 3 Volt DC lithium batteries with waterproof connectors housed above counter in the faucet body. Low battery warning light. New two (2) inlet, one (1) outlet Solenoid design housed above counter in the faucet body. Hot and Cold in-line filters housed above counter in the faucet body. Vandal resistant 60 second time out feature. Water conserving vandal resistant recessed aerator reduces water flow to either 0.5 GPM/ 1.9 LPM or 2.2 GPM / 8.3 LPM to meet requirements of ASME A112.18.1/ CSA B125.1 standard for flow rates. California AB1953 low-lead compliant. ADA compliant. Note: 3/8" compression soft cone stainless steel flexible hoses are optional.

### **S-9010 OPTIONS**

<ul style="list-style-type: none"> <li>•<b>GB</b> - Vandal-Resistant 1.5 GPM Aerator Outlet Device</li> </ul>	<ul style="list-style-type: none"> <li>•<b>HS</b> - 2 Stainless Steel Flexible Hoses, 3/8" x 1/2" compression</li> </ul>
<ul style="list-style-type: none"> <li>•<b>LF</b> - Vandal-Resistant 2.2 GPM Laminar Flow Outlet</li> </ul>	<ul style="list-style-type: none"> <li>•<b>HTS</b> - 1 Stainless Steel Flexible Hose for Tempered Water Systems, 3/8" x 1/2" compression</li> </ul>
<ul style="list-style-type: none"> <li>•<b>VRS</b> - Vandal-Resistant Screws with Wrench</li> </ul>	<ul style="list-style-type: none"> <li>•<b>TMV</b> - Under-Counter Thermostatic Mixing Valve with Check Valves</li> </ul>

### **S-9010 SPECIFICATIONS**

INLET SUPPLY: COUPLING OR 1/2" SWEAT CONNECTION  
 FLOW RATE: 0.5 GPM / 1.9 LPM OR 2.2 GPM / 8.3 LPM  
 SHIPPING WEIGHT: 5.64 LBS  
 RECOMMENDED OPERATING PRESSURE: 20-80 PSI

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## S-9020 DESCRIPTION

Speakman SENSORFLO® faucet. AC/Electric powered 4" centerset lavatory sensor faucet. Faucet body consists of polished chrome plated removable cover and black powder coated chassis. Sensor/electronics module with waterproof connectors housed above counter in the faucet body and powered by 120 Volt AC transformer. New two (2) inlet, one (1) outlet Solenoid design housed above counter in faucet body. Hot and Cold in-line filters housed above counter in faucet body. Vandal resistant 60 second time out feature. Water conserving vandal resistant recessed aerator reduces water flow to either 0.5 GPM / 1.9 LPM or 2.2 GPM / 8.3 LPM to meet requirements of ASME A112.18.1/ CSA B125.1 standard for flow rates. ADA compliant. Note: 3/8" compression soft cone stainless steel flexible hoses are optional.

## S-9020 OPTIONS

<ul style="list-style-type: none"> <li>•<b>GB</b> - Vandal-Resistant 1.5 GPM Aerator Outlet Device</li> </ul>	<ul style="list-style-type: none"> <li>•<b>HS</b> - 2 Stainless Steel Flexible Hoses, 3/8" x 1/2" compression</li> </ul>
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<ul style="list-style-type: none"> <li>•<b>VRS</b> - Vandal-Resistant Screws with Wrench</li> </ul>	<ul style="list-style-type: none"> <li>•<b>TMV</b> - Under-Counter Thermostatic Mixing Valve with Check Valves</li> </ul>
<ul style="list-style-type: none"> <li>•<b>CA</b> - Low Lead for CA AB1953 Compliance</li> </ul>	<ul style="list-style-type: none"> <li>•<b>LT</b> - Less Transformer (for use with multi-unit transformers)</li> </ul>

## S-9020 SPECIFICATIONS

TRANSFORMER: 120 VOLT AC

INLET SUPPLY: 3/8" COMPRESSION COPPER TUBING WITH MALE THREADS

FLOW RATE: 0.5 GPM / 1.9 LPM OR 2.2 GPM / 8.3 LPM

SHIPPING WEIGHT: 6.5 LBS

STATIC PRESSURE: 20-80 PSI

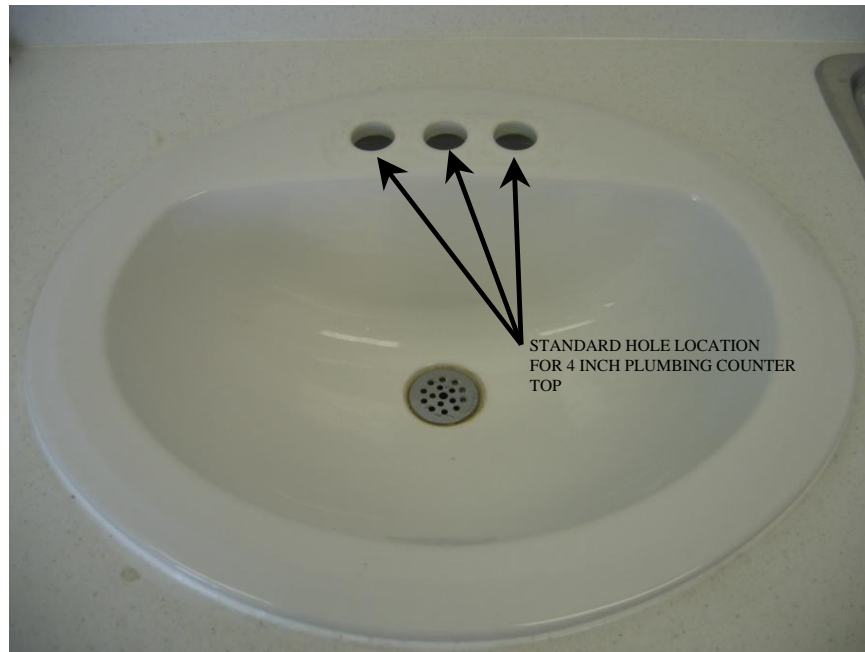
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## INSTALLATION INSTRUCTIONS

1. To successfully install this faucet, a standard 4" 3-hole on center fixture is required.



2. Place the two **(2)** ½" threaded inlet shanks through the outer holes of the fixture.

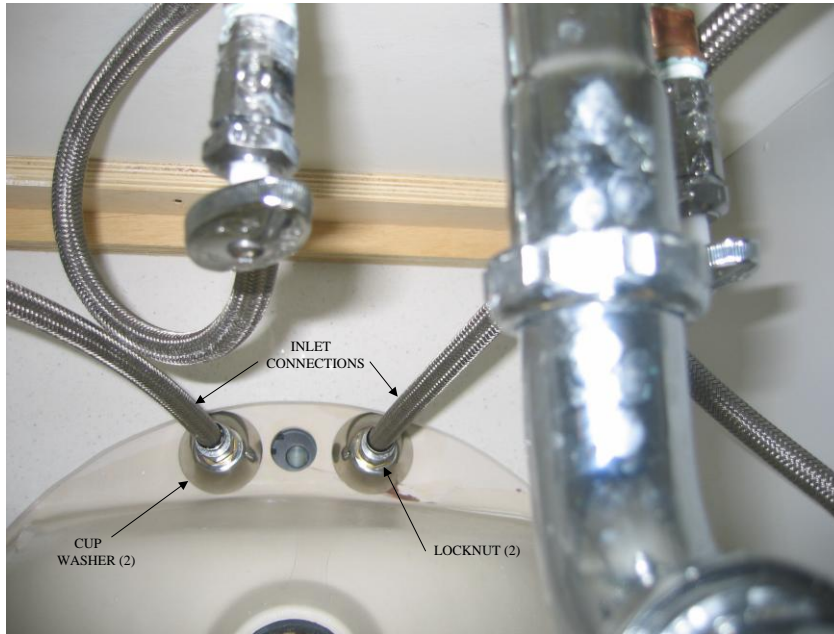


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3. Secure the faucet to the counter top by assembling the cup washers (2) and locknuts (2) to the ½" inlet shanks. Connect the hot and cold water supply lines to their respective shanks. If supplying tempered water to this faucet, connect either the cold or hot water supply to the faucet and close off the other inlet shank with the closed hex nut provided. Order the thermostatic mixer repair kit and follow the instructions located inside to properly install the mixer.



4. When installing the battery operated version (**S-9010**), un-screw the two (2) allen head screws with the 5/32" hex allen wrench provided and remove the top cover from the Chassis, exposing the internal components of the faucet.



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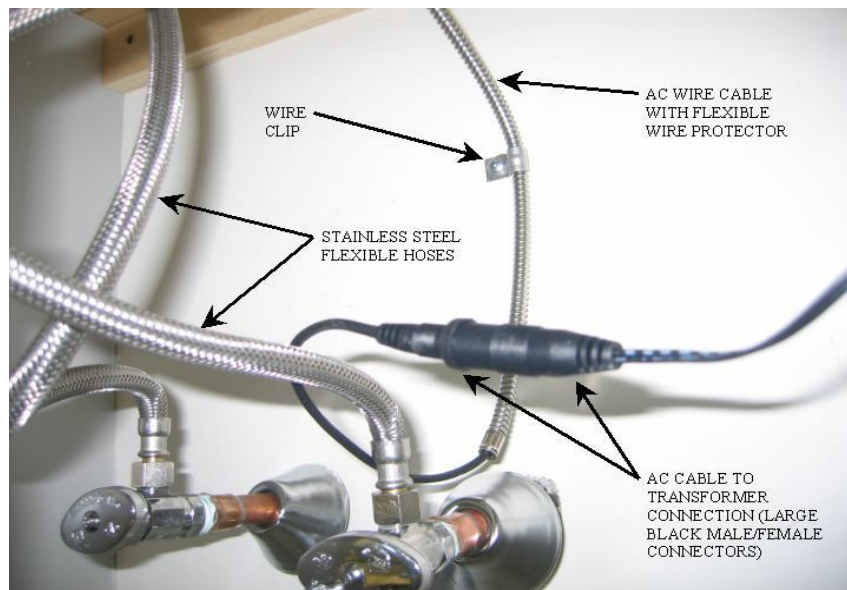
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5a. Remove the battery cap and battery cap screw shipped inside of the module. Without removing the module, insert the two **(2)** 3-volt Lithium batteries, close and reassemble the module cap. Make the connection between electronic module and solenoid cable (**Yellow connector**). The battery operated electronic module is now ready to activate the unit.



5b. When installing the AC powered version (**S-9020**), connect the AC cable assembly to the cable attached to the transformer (**Black connectors**) and plug the Transformer into a standard 120 VAC outlet. The AC operated electronic module is now ready to activate the unit. Attach AC cable to wall with the wire clip provided for a more secure installation. The transformer can be located behind the wall out of the reach of vandals. Multi-unit transformers are also available, see Section IV.



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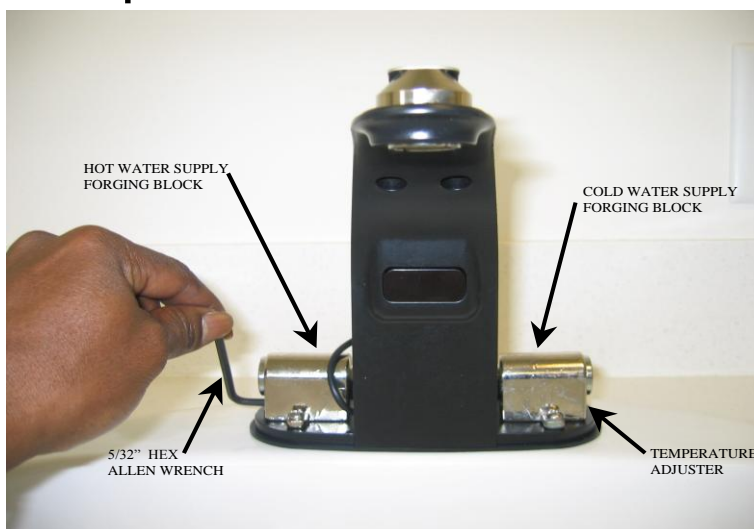
6. 0.5 GPM outlet comes installed in each faucet. If a flow higher than 0.5 GPM is desired, replace the 0.5 GPM outlet with the 2.2 GPM aerator located in the hardware bag group using the outlet wrench provided.



## OPERATION INSTRUCTIONS

1. Make sure the 4" faucet is correctly installed and the stops are open. **See Installation Instructions.**

2. To set the water temperature while the top cover is still off of the unit, completely screw in (clockwise direction) the temperature adjusters for both the hot and cold water supply lines. Once done, slowly back out the adjusters until the desired water temperature is reached. At each setting allow the water to run for up to 10 seconds to ensure the temperature has stabilized before readjusting. **Note: You do not need to replace the cover for the faucet to operate during the adjustment process.**



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3. After placing the top cover back onto the chassis and fastening the two (2) allen head screws, position your hands directly underneath the outlet of the faucet and in direct line of the sensor. Test the unit to ensure it is operating properly. If not, please consult the trouble shooting sections of this manual.



There are some situations, such as school bathrooms, rest areas, etc. where multiple units will be needed to handle a large volume of users. In order to operate the AC powered (S-9020) 4" sensor faucet in this situation, a multi-unit transformer is an option. Order faucets, less transformer (LT) option, and also order the proper multi-unit transformer assembly, SU or SUH, separately. The

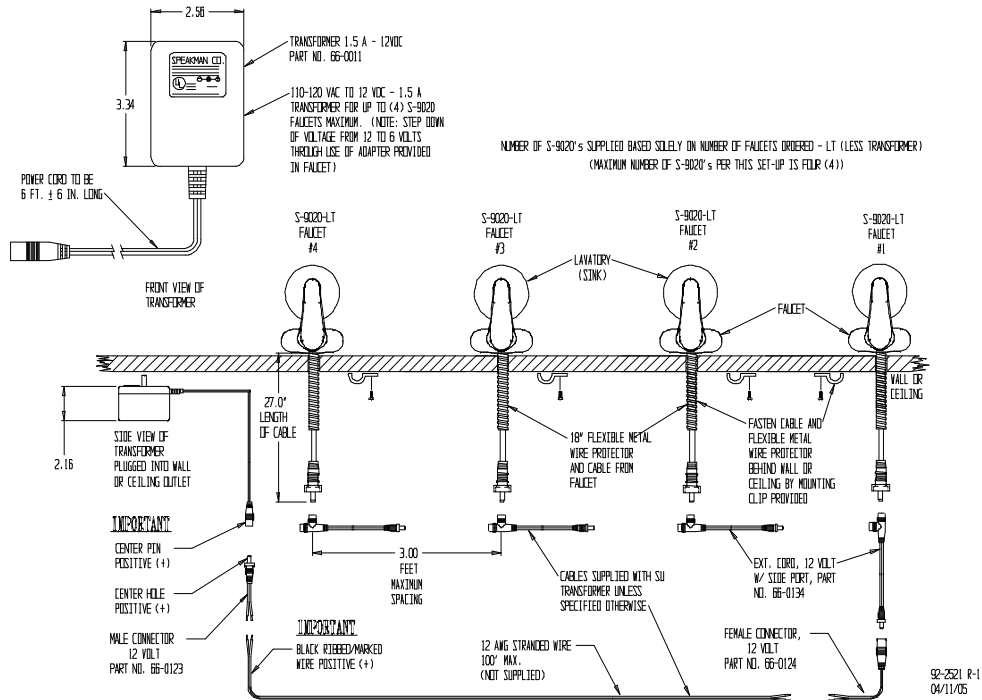
SU assembly powers up to four (4) faucets. The SUH assembly powers up to eight (8) faucets. See schematics on next page for additional details and instructions.

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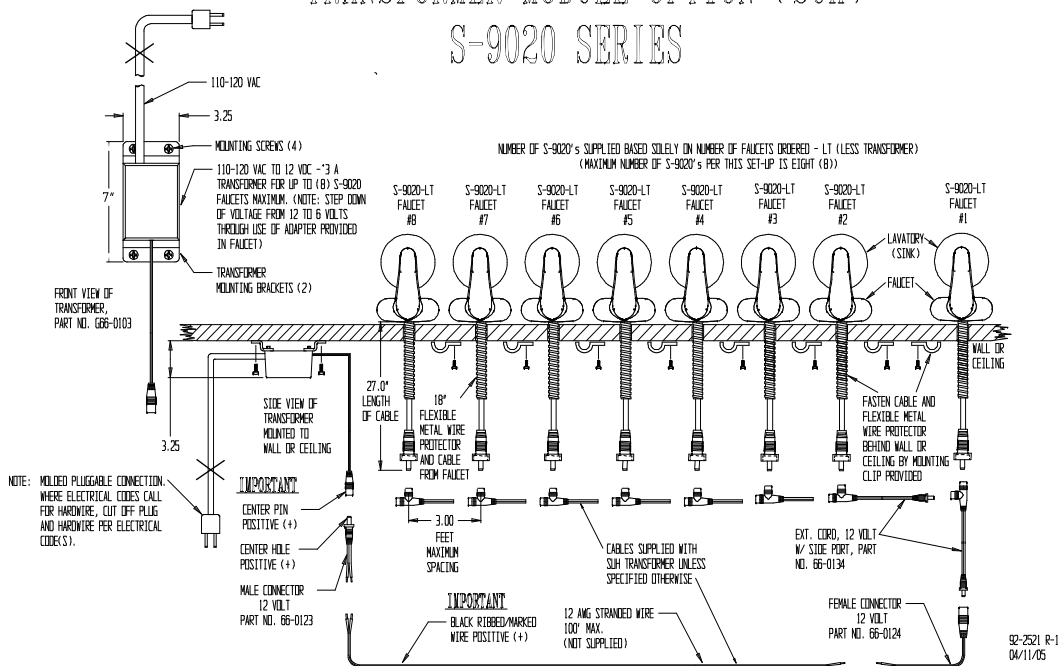
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# SPEAKMAN SENSORFLO AND SENSORFLO SECURE SYSTEM TRANSFORMER MODULE OPTION (SU) S-9020 SERIES



# SPEAKMAN SENSORFLO AND SENSORFLO SECURE SYSTEM TRANSFORMER MODULE OPTION (SUH) S-9020 SERIES



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## CARE AND CLEANING

Your 4" sensor faucet is designed and engineered in accordance with the highest quality and performance standards. With proper care, it will provide years of trouble free service. The gleaming finish of your Speakman faucet demands special attention in cleaning. They require handling with care and pride.

NEVER use abrasive cleaners, chemicals, alcohol or other solvents. They may damage the surfaces of the non-chrome plated finishes. Mild soap and warm water will help keep your faucet's appearance in its original condition. Dry immediately with a soft clean cloth for best results. Speakman Company has researched products that will help protect and clean the faucet's surfaces. These products are recommended:

- Flitz Metal Polish and Cleaner
- Polier Hard Surface Protector

These cleaners are good for chrome and non-chrome finishes and will protect against tarnish and water stains. Follow the directions for application as outlined on the particular cleaner chosen.

## TROUBLESHOOTING

Before calling Speakman Company for service, please run through the following checklist of troubleshooting steps. **It may be necessary to turn off the hot and cold water supply stops before proceeding to work on the 4" Sensor Faucet.** This list is compatible with the battery operated (S-9010) and AC powered (S-9020) faucets.

### Faucet Operation

#### **1. If water flow from the faucet decreases**

- Make sure the supply stops are open.
- Ensure both the hot and cold water Temperature Adjusters are not in the closed position **(to open, screw out the hot and cold water Temperature Adjusters (counter-clockwise direction))**
- Check that the hot and cold water In-line Filters are not blocked with debris. Remove slotted filter screw from the hot and cold water Forging Blocks and rinse filter screen with clean water. Reassemble the filters, open stops, and check water flow. **Stops must be off when filters are removed.**
- Remove the outlet device (**Aerator**) from the spout using the outlet wrench. Operate the faucet with outlet device removed. If water flow is acceptable, disassemble the outlet device and rinse components with clean water.

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- E. If none of these options solve your problem, call Speakman Company Customer Service for assistance.

## **2. If no water flows from the faucet**

- A. If you can hear clicking sound of solenoid opening, but no water flows
  - 1. Check to see that the hot and cold water wall stops are completely open.
  - 2. Check that the connectors are correctly connected to the solenoid **(Yellow)** and the transformer **(Black)**
  - 3. Activation light blinks continuously, even when faucet is not in use
    - I. This continuous blinking of the activation light indicates that the batteries inside of the sensor module have low voltages and need to be replaced.
- B. If you do not hear a clicking sound from the solenoid and water does not flow, disconnect the existing sensor module and connect a new module directly to the solenoid and transformer. Activate the new sensor module and check for water flow.
  - 1. If the water flows, disconnect the new module and reconnect the old module and activate. If the old module still does not work, obtain a replacement module through Speakman Customer Service.

## **3. If Batteries have been replaced but unit still fails to operate**

- A. Check battery polarity and electrical connection. Make sure wire plugs are fully inserted into sockets.
- B. If faucet does not operate, replace existing sensor module with one you know to be functioning.
- C. If faucet operates, contact Speakman Company at 800-537-2107 for a replacement sensor module.
- D. If faucet still does not operate, call Speakman Company at 800-537-2107 and ask for the Solenoid Repair Kit, Part No. RPG76-0039, to be shipped to you. Once the kit is received, shut off the hot and cold water supplies to the faucet. Remove sensor module bracket and sensor module. Next, remove the four (4) screws that hold the coil plastic case to the solenoid body and follow the instructions supplied with the kit. After replacing all parts supplied in the kit, reassemble the faucet, open stops, and test the faucet.

## **4. If the faucet activates but will not shut-off**

- A. Follow the instructions from 3D above

## **Questions and Answers**

### **Q. How does the Sensorflo faucet work?**

- A. It uses infrared technology. Simply place your hands or an object under the faucet spout at the level of the fixture. The sensor emits a non-visible beam of light. When an object enters the detection area, the sensor signals the solenoid valve to open for water to flow. When an object leaves the detection area, the sensor signals the valve to close.

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**Q. *Is the Speakman Sensorflo faucet sensor beam adjustable?***

A. No, the Speakman Sensorflo faucet sensor beam is not adjustable. It has been factory set to Speakman's specifications for these faucets.

**Q. *What about water conservation?***

A. The Sensorflo design directly addresses water conservation. Water savings of up to 85% are not unusual. Additional energy savings are realized by conserving hot water.

**Q. *Can the water temperature of the Sensorflo faucet be adjusted?***

A. Yes, this faucet has hot and cold water mechanical mixing valves. If you need to meet ASSE 1070, you must use our TMV option.

**Q. *Does skin color affect the performance of the Sensorflo faucet?***

A. The Sensorflo faucets are not affected by differences in skin color and skin texture.

**Q. *Does Sensorflo reduce maintenance?***

A. By elimination of on/off handles, control components are reduced and fittings stay cleaner longer. Only a light rinsing and wiping is required to restore the beauty of the Sensorflo faucets. Drip stains are eliminated. Fingerprints and soap spots on sinks and fittings are avoided. Finishes last longer and wash areas stay cleaner. Germs and bacteria are not transferred as easily making for a healthier environment. See your Care & Cleaning section for additional information.

**Q. *The chrome finish on my faucet seems to be deteriorating. What can I do to prevent this from happening?***

A. Many commercial cleaning products contain harsh chemicals and abrasives. These products should not be used on any chrome plated plumbing products. Please refer to the Care & Cleaning section of this manual for Speakman Company's recommendations.

**Q. *Do I require an electrical outlet under the sink for a S-9020 faucet?***

A. No, but you will need a source of electricity, 110 VAC. For other optional installations, such as remote or hard wired installations required by state and code regulations, a multi-unit transformer can be located elsewhere and wired to each unit. See Hardwire/Multiple Unit Installation Section or consult with Speakman Customer Service.

**Q. *Does the Sensorflo system shut off immediately when an object leaves the sensing area?***

A. A very short delay of approximately 0 to 1 second occurs before water is shut off.

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**Q. Is there a way to adjust the flow of water?**

A. Yes, a 0.5 GPM flow control and a 2.2 GPM Aerator are supplied with each faucet and the temperature adjusters can also be used to control the flow of water.

**Q. Is my faucet protected for power surges?**

A. Yes, Sensorflo has been designed to have built-in power surge protection.

**Q. If we lose power, do I have to do something to get the faucet to operate again?**

A. After a power outage, the faucet is automatically ready for operation as soon as the power comes back on.

**Q. If I call a plumber to come and install this faucet, will they know enough to hook it up?**

A. Our installation diagrams are very easy to follow.

## REPLACEMENT PARTS

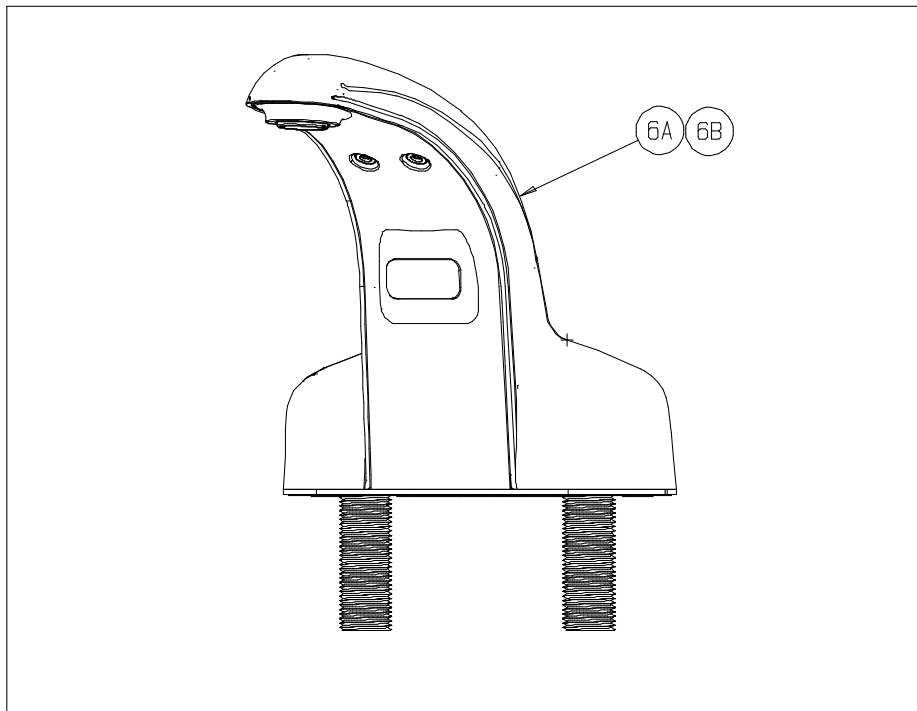
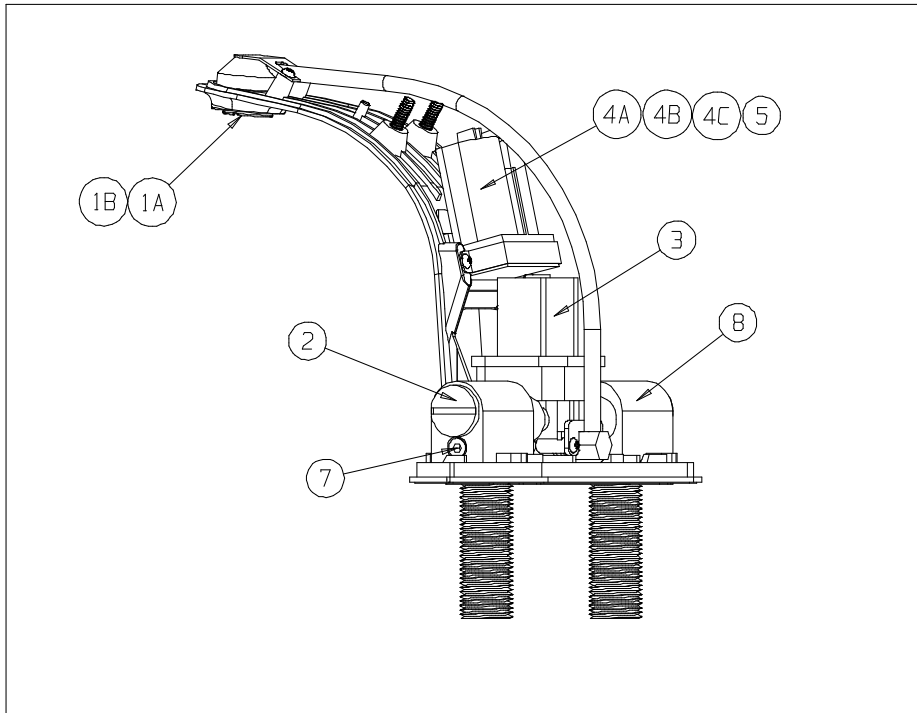
PART NUMBER	DESCRIPTION	NUMBER SHOWN IN DIAGRAM	AVAILABLE FOR S-9010	AVAILABLE FOR S-9020
<b>RPG05-0674-PC</b>	2.2 GPM Aerator	1A	X	X
<b>RPG38-0128-PC</b>	0.5 GPM Aerator	1B	X	X
<b>RPG66-0044</b>	Solenoid Filter Nut & Screen	2	X	X
<b>RPG76-0039</b>	Solenoid Diaphragm & O-Ring	3	X	X
<b>RPG76-0041</b>	3 V Lithium Batteries (2)	4A	X	
<b>RPG76-0041-20</b>	3 V Lithium Batteries (20)	4B	X	
<b>RPG76-0041-100</b>	3 V Lithium Batteries (100)	4C	X	
<b>RPG66-0164</b>	Module with Batteries	5	X	
<b>RPG10-0076</b>	Top Cover with Screws (Chrome)	6A	X	X
<b>RPG10-0076-PVD</b>	Cover with Screws (PVD)	6B	X	X
<b>RPG05-0791</b>	Temperature Adjusting Spindles	7	X	X
<b>G05-0627</b>	Check Valves	8	X	X
<b>G20-1968</b>	Thermostatic Mixer	NOT SHOWN	X	X
<b>RPG66-0165</b>	Module with AC Adapter	NOT SHOWN		X
<b>RPG66-0010</b>	Transformer	NOT SHOWN		X
<b>RPG07-0015</b>	AC to Battery Conversion	NOT SHOWN		X

## REPLACEMENT PARTS DIAGRAMS

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