



# Cumberland Series™ Faucet

Sensor-Operated Lavatory Faucets for  
Battery or Plug-In Installations.

Installation, Operation, Maintenance,  
and Parts Manual

Patented and Patents Pending



**Z6956-XL  
Cumberland Series™**

**Sensor-Operated Battery-Power or Plug-in  
Lavatory Faucets**

#### LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no costs goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

**NOTICE: READ ENTIRE MANUAL PRIOR TO INSTALLING PRODUCT.**

**⚠ WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

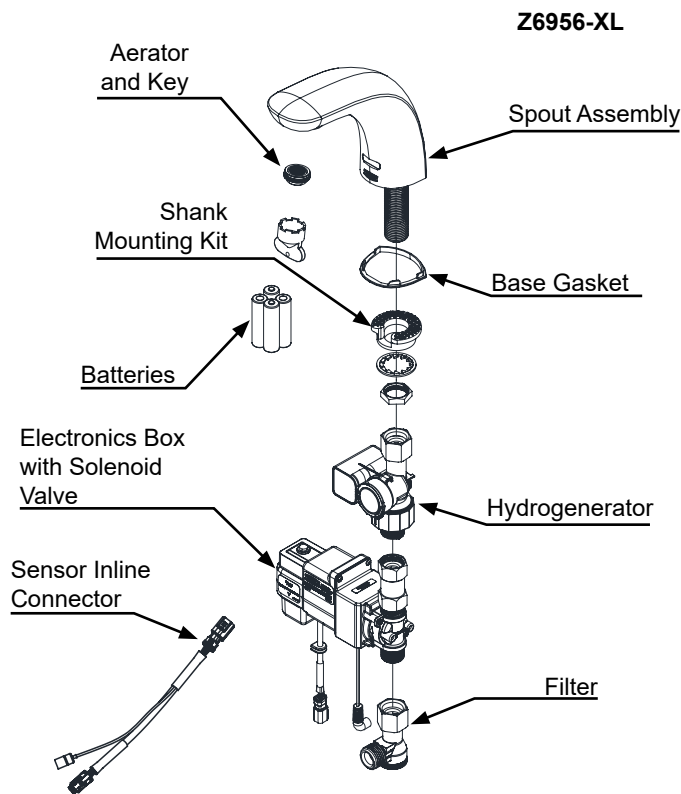
**⚠ ADVERTENCIA:** Cáncer y daño reproductivo - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**⚠ AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

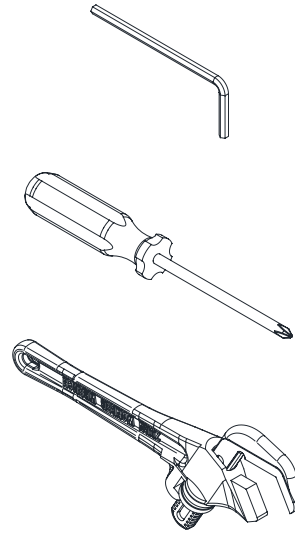
**NOTE:** The information in this manual is subject to change at any time without notice. Installations may be performed at different times of construction by different individuals. For this reason, these instructions should be left on-site with the facility or maintenance manager.

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# Cumberland Series™ Faucet Package Contents



## Required Tools:



Allen Wrench: M3  
(Supplied)

Philips Head  
Screwdriver

Non-toothed  
Wrench

## Optional Accessories:



Magic Magnet  
P6900-AT-MAG

## Overview:


Zurn® Cumberland Series™ Faucets features multiple spout designs in a standard polished chrome finish with one piece heavy duty cast brass spouts and advanced electronic components and feature sets. Sophisticated automatic user detection ensures the user does not need to touch the faucet and helps deliver optimum water savings.

## Specifications:

Voltage:	6 VDC Series [4 "AA" (Alkaline) and/or external power option]
Sensor Range:	Fixed
Operating Water Pressure:	10-125 psi
Operational Water Temperature:	33°F to 140°F (1°C to 60°C)
Aerator:	0.5 GPM (Standard)

## Important Safety Information:

- Installer is responsible for ensuring the product is installed and conforms to all plumbing codes and ordinances.
- Do not convert or modify this Zurn product yourself. All warranties will be voided.
- Water supply lines must be sized according to building designer in order to provide adequate water supply for each fixture.
- Flush all water lines prior to making connections.

 **Warning:** Do not connect an external power supply to the hydrogenerator's barrel jack connector. Doing so could reduce product performance or pose a fire hazard

## Prior to Installation:

Before installing your Zurn® Cumberland Series™ Faucet: the items listed below should already be installed on site.

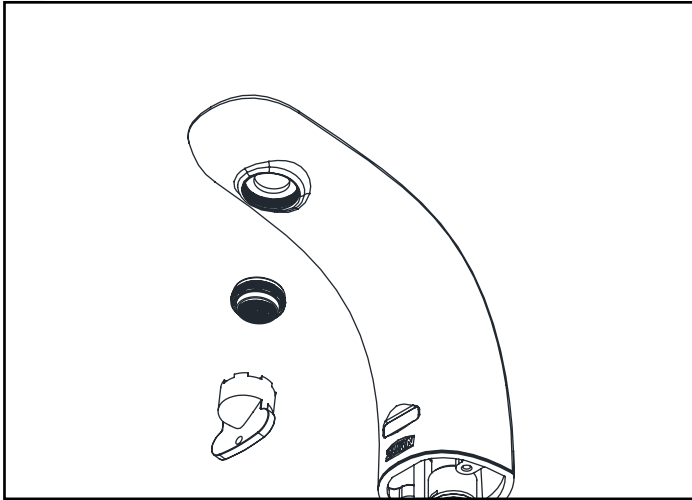
- Lavatory/sink
- Drain Line
- Hot and cold water supply line or pre-tempered water supply line.
- Installer/Serviceur should not use pipe dope or teflon/thread sealant anywhere on this product, most notably threads and connection points.
- Care shall be taken when installing this product to prevent marring of any exposed or decorative surfaces.

**NOTE:** Before installation, turn off water supplies to existing faucet and remove faucet if replacing an existing device. Clean the faucet basin and clear away debris. Flush all supply lines before connecting the faucet. Failure to do so may result in debris clogging the inlets and/or internal control and mixing valve

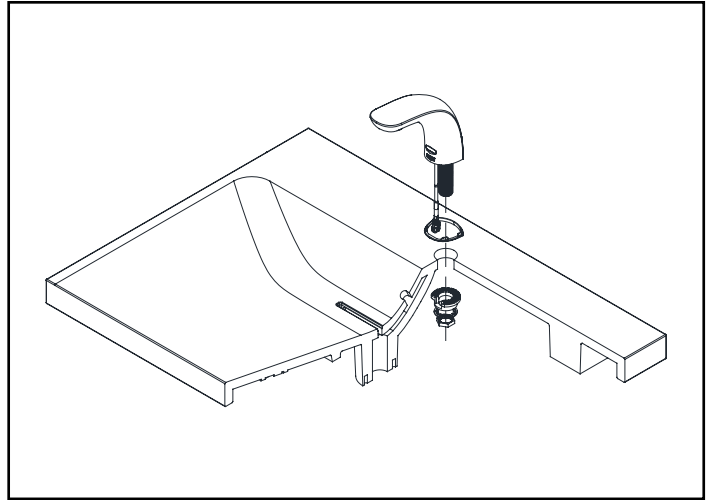
### Spout Installation - Step 1

1.1. Carefully screw aerator into spout using included tool.

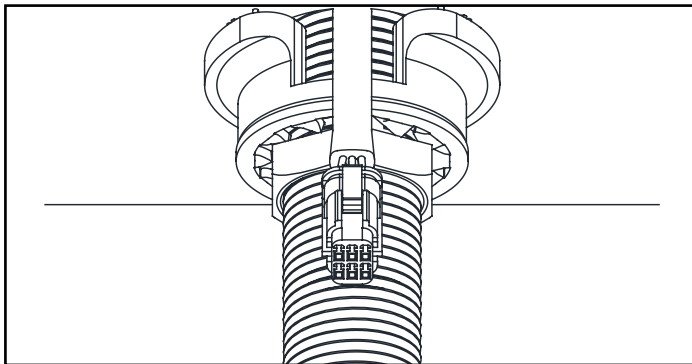
! Take care to not pinch blue o-ring



1.2. Install spout to sink using spout base gasket, plastic mounting washer, star washer and mounting nut (and cover plate for versions that are included).



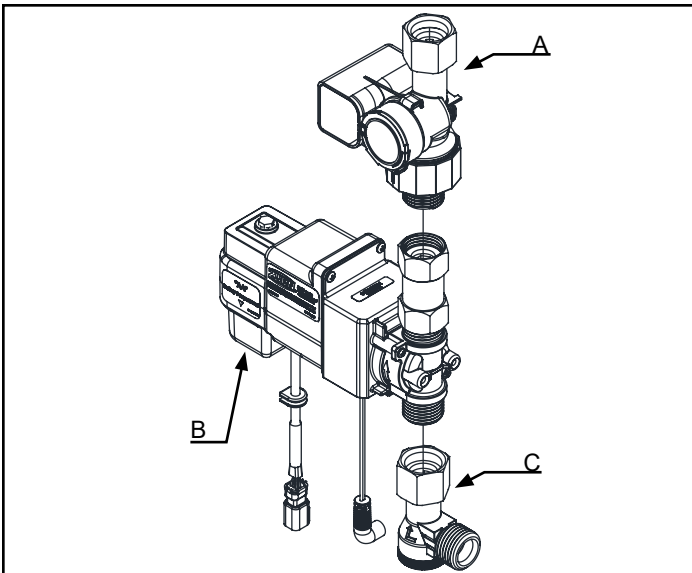
1.3. Ensure that slot in plastic washer is facing forward.



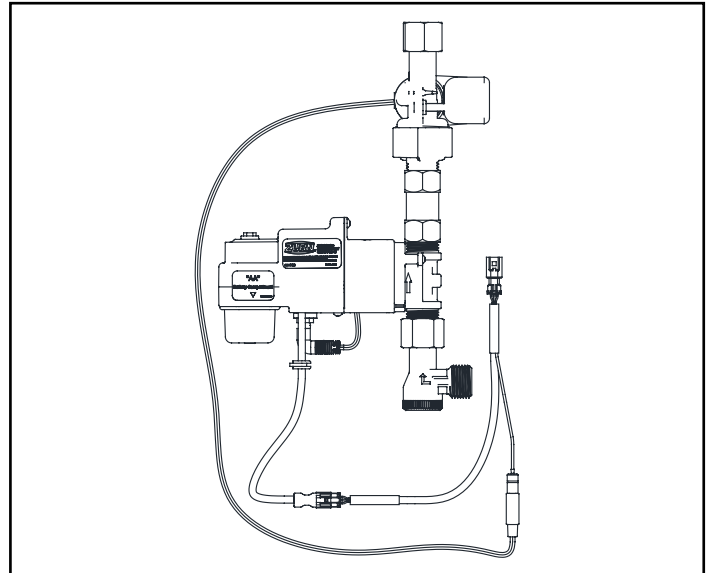
! Take care passing sensor cable through hole. Cable passes through front of plastic mounting washer

### Electronics Module Installation - Step 2

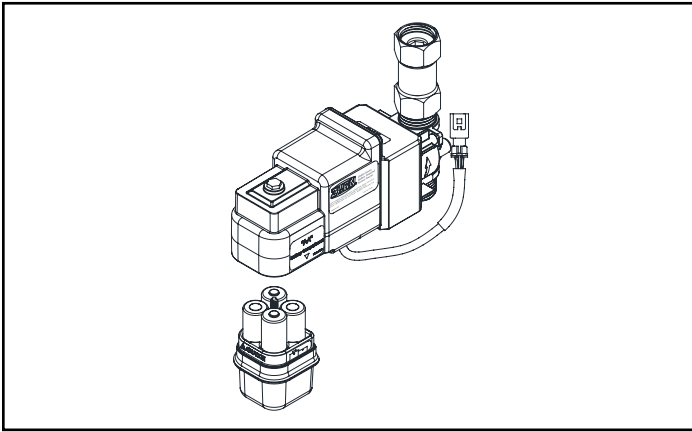
2.1. Connect hydrogenerator(A) downstream of electronics module(B) and filter(C) to bottom of electronics module.



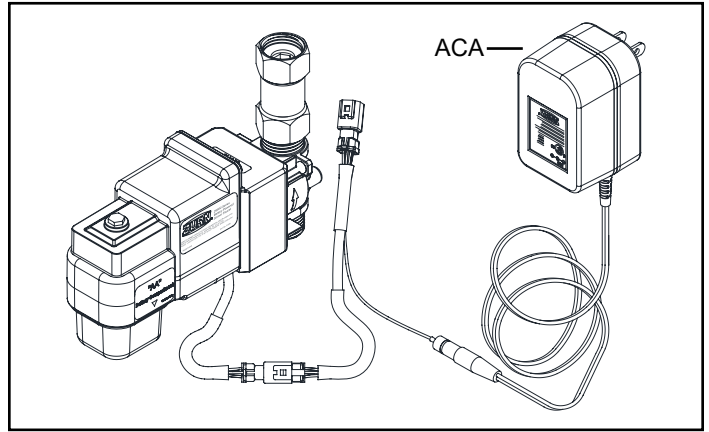
2.2. For battery-powered version, connect sensor inline connector to electronics module and hydrogenerator.



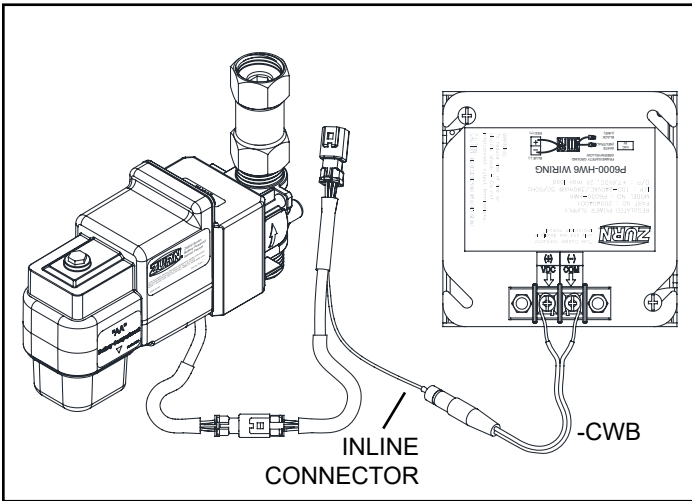
2.3. Open battery module using supplied Allen wrench and install supplied batteries in the electronics module.



2.3a. Optional ACA version: Connect supplied inline connector and AC adapter.

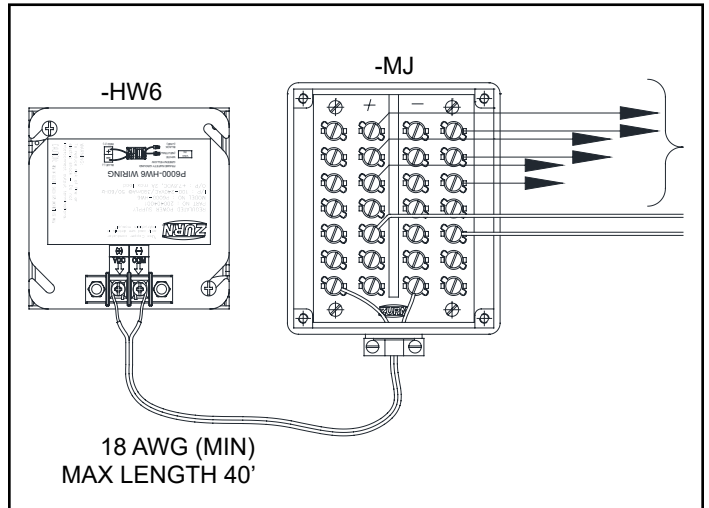


2.3b. Optional HW6 (Hardwired 6V) version: Connect supplied inline connector and hardwire adapter. When securing the CWB wires to the screw terminals on HW6 unit, the BLACK WITH DASHED MARKINGS should be connected to the Positive (+) terminal, and the SOLID BLACK wire should be connected to the Negative (-) terminal.

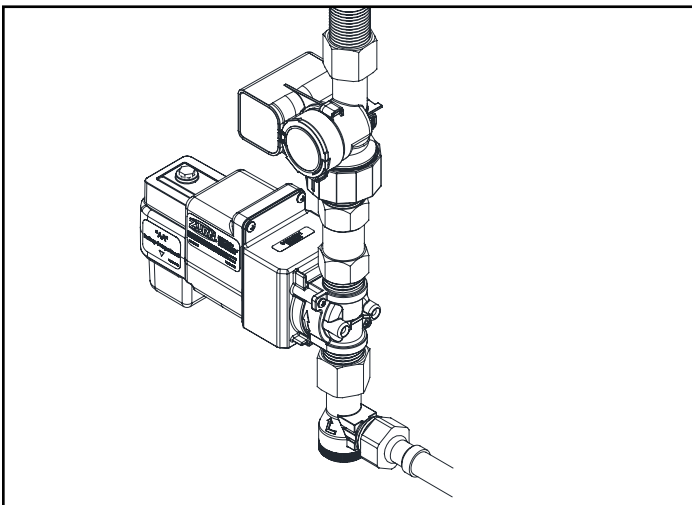


**MJ unit (sold separately)**

*Note: Do not connect more than 8 solenoids to a single transformer*

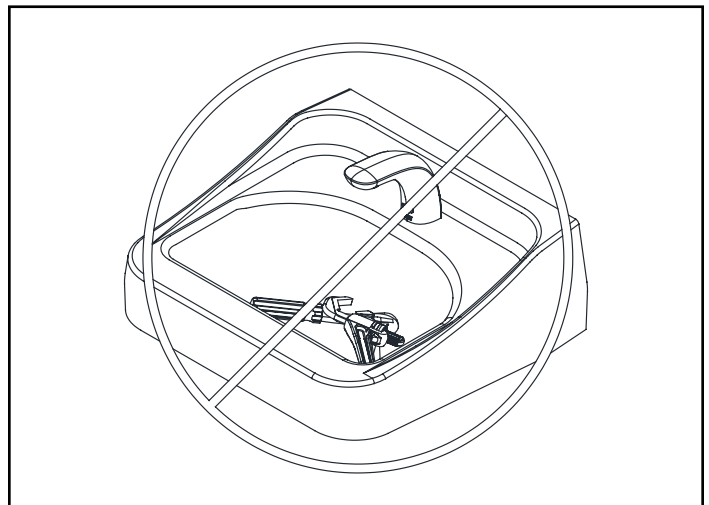


2.4. Tighten electronics module assembly with hydrogenerator to shank and connect water line(s).

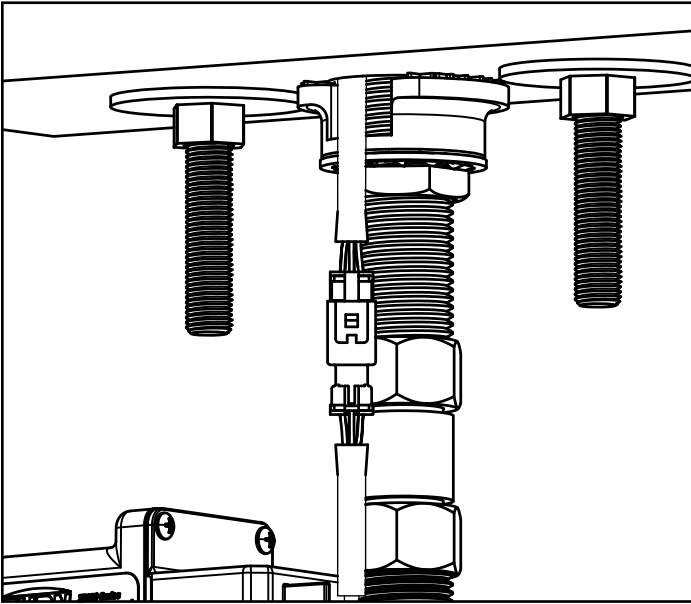


2.5. Ensure that sink is clear of tools/debris and is in normal operating condition.

2.6. Turn on water supply(ies).



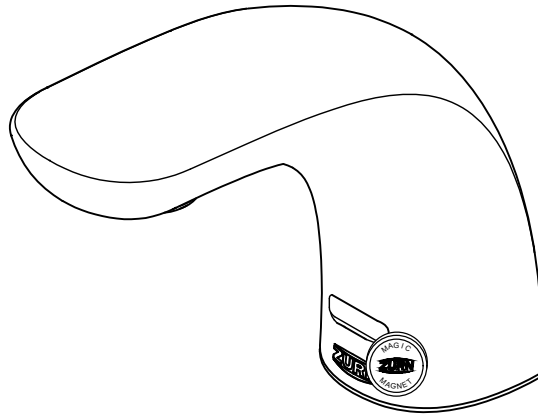
2.7. Connect sensor inline connector to sensor cable from spout.



## Sensor Range Adjustment (All configurations when necessary)

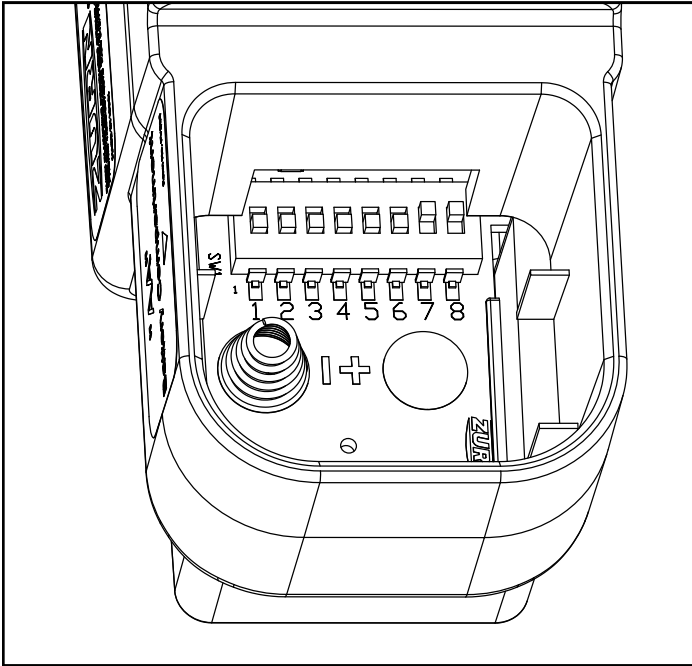
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1. Ensure that the faucet is installed and powered has been applied.
2. Place and hold the Magic Magnet (optional accessory: P6900-AT-MAG) in the right hand corner of the sensor as shown. An indicating light will activate when the magnet is correctly positioned.
3. Wait until the light starts to blink, then remove the magnet. (Faucet has entered the calibration mode.)
4. Place a target at the desired activation range in front of the faucet sensor. (Cardboard, hand, etc.)
5. Wait approximately 10 seconds during the calibration cycle. Do not move the target during this period.
6. Calibration is complete when the light stops blinking.
7. Confirm calibration distance by moving the target back, then slowly forward until the faucet activates at the desired calibration distance.



## Adjustable modes and features selection:

To adjust features from default configuration, you must remove the battery tray. Once battery tray is removed you will see the switches.



All switches shown in default mode.



Switch Position:	1	2	3	4	5	6	7	8
<b>Purge (Hours)</b>								
Disable:	Off	Off						
12:	On	Off						
24:	Off	On						
48:	On	On						
<b>Time (Seconds)</b>								
30:			Off	Off	Off			
5:			On	Off	Off			
10:			Off	On	Off			
15:			On	On	Off			
60:			Off	Off	On			
Less Time-out:			On	Off	On			
<b>Mode Select</b>								
Sensing Mode:						Off		
Metering Mode:						On		
<b>Sensor Sensitivity</b>								
Low:							Off	Off
Normal:							On	Off
Mode A:							Off	On
Mode B:							On	On

### **Purge Features:**

The purge switches can be configured for 4 modes of operation: Disabled (standard configuration), 12 hour, 24 hours, or 48 hours. Purge water flow duration is 2 minutes. Note: Purge activation occurs every switch selected time (0, 12, 24, or 48 hours) after last activation.

### **Flow Time:**

There are 6 optional time configurations: 30 seconds (standard), 5s, 10s, 15s, 60s, & "Less Time-out". The "Less Time-out" option actually ceases water flow (turns off) after 20 minutes to limit chance of water damage in the event a sink drain becomes blocked.

### **Sensing Mode (DEFAULT):**

During this mode the valve will shut off after hands are removed. If hands are not removed the time out delay will turn off the faucet (ex: standard configuration is 30 seconds) (See Switch Position Diagram shown above)

### **Metering Mode:**

When hands are detected by the sensor, water will run for 'X' seconds (standard configuration is 30 seconds) before turning off. (See Switch Position Diagram shown above)

### **Sensor Sensitivity:** (Default setting: Low):

The 4 sensor sensitivity options are used for varied sink and environmental conditions. The factory default setting should be ideal for most general applications. However, sensor performance can be optimized to adjust for unusual sink finish, material, shape, or unusually bright or dark lighting conditions.

Switch 7 controls the sensitivity

- On (default) is normal sensitivity for most sinks providing max range.
- Off set the sensor to a lower sensitivity level for sinks that cause false activation. The detection range maybe less for all hands.

Switch 8 controls sensor mode

- On (default) enables the mode that filters the effects of flowing in the bottom of problematic sinks. Detection maybe less for some hands.
- Off disable the filter mode, so detection is expanded deeper into the sink for max detection range for all hands. Some sinks may only be able to operate in this mode.

NOTE: After a configuration switch change has been made, disconnect sensor cable from electronics box, wait 30 seconds, then reconnect sensor cable and wait 30 seconds to allow the sensor to tune-in the sink characteristics.

## TROUBLESHOOTING GUIDE:

POTENTIAL SITUATIONS	POSSIBLE CAUSES	SUGGESTED SOLUTION TIPS
Faucet is non-responsive	Battery voltage low or no power.	Change out batteries or verify power provided by HW6 or ACA
	Sensor and electronic connector cable has bent or broken pins.	Check to see if pins are missing, bent, or broken. If yes, then the electronic box needs replaced
	Sensor lens could have surface damage, scratches, or deposit build ups.	"Inspect the sensor lens underneath the spout tip. May require cleaning with a damp cloth or sensor replacement"
Faucet does not activate after initial installation	Sensor may not have had enough time to calibrate prior to a user or target trying to initiate activation.	Disconnect the sensor and electronic box cables and wait for 30 seconds. Reconnect the cables, but allow for another 30 seconds before placing hands or a target within the sensor range. You should hear a click of the solenoid once calibration is complete.
	Check if protective film was removed from lens.	
Water does not stop	Electronics box cable connector has bent pins that are shorted	Check to see if pins are missing, bent, or broken. If yes, then the electronic box needs replaced.
Ghost Activation	Sensor lens could be obstructed or environmental factors such as high reflective surfaces and/or bright sunlight conditions.	Check/clean sensor lens of any debris or buildup If sunlight or IR interference is a factor.
"Sensor faucet is leaking underneath the sink or counter"	Mounting hardware is not tightened sufficiently (faucet shank, electronic box, supply hoses, etc)	Check and ensure the nuts and joints are tight and secure from the supply stop all the way to the faucet shank.
	Missing the washer located in the solenoid box nut where it assembles to the faucet shank.	Make sure the water supply stops are shut off. Check to ensure the washer is installed or damaged. If not, install washer. If a washer is damaged, replace with new.

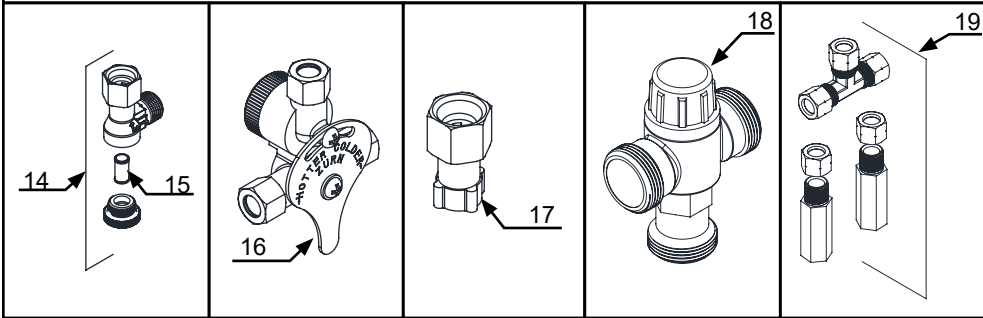
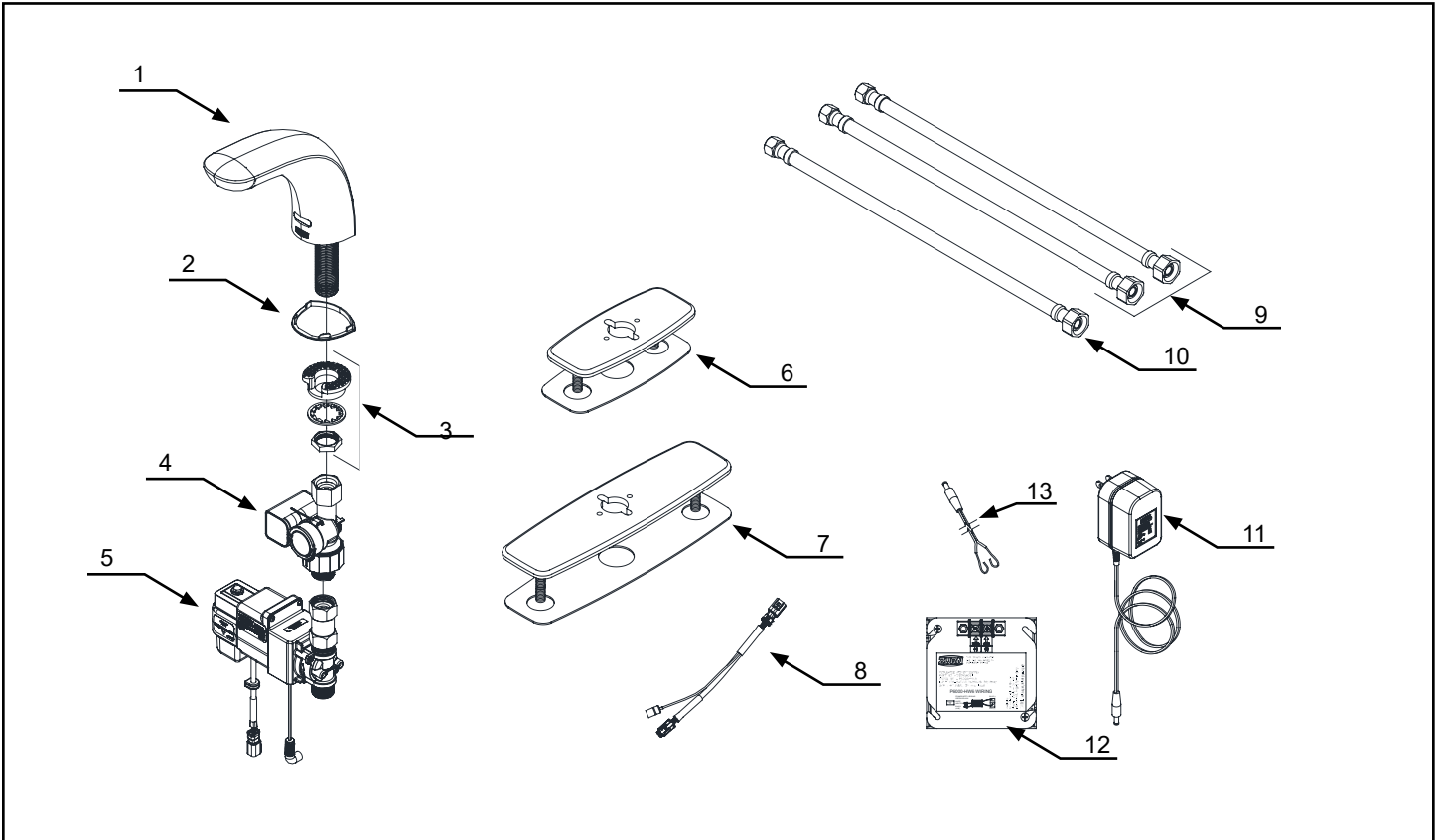
For further assistance with troubleshooting visit <http://www.zurn.com>

### Care and Cleaning Instructions:

- Do not use any abrasive or chemical cleaners to clean the faucets.
- If abrasives or chemicals are used it can lead to dulling of luster, attacking of chrome plating or decorative finishes.
- ONLY use mildly warm soapy water, and then wipe the device dry with a clean/soft towel or cloth.
- Upon cleaning other areas of the restroom be sure the sensor lenses are protected from other cleaning chemicals/solvents to prevent potential damages to the sensor and/or electronics.



# Z6956-XL Parts List



Description	Product No.	Description	Product No.
Z6956 Spout Assembly with Sensor, Item 1	P6956-XL-CV-1	-HW6 Power Supply, Item 12	P6900-HW6
Z6956 Spout Base Gasket, Item 2	P6956-XL-42	-CWB Pigtail, Item 13	P6900-CWB
Mounting Kit, Item 3	P6900-43	Filter Kit, Item 14	P6900-120
Hydrogenerator Assembly, Item 4	P6900-HYD	Filter Screen, Item 15	P6900-MV-7
Electronics Box with Solenoid, Item 5	P6950-XL-B-L-V2	Mixing Valve with Filter, Item 16	P6900-XL-MV
4" Cast Cover Plate w/Gasket, Item 6	P6900-CP4	Composite Mixing Valve Adapter, Item 17	P6900-MV-ADAP
8" Cast Cover Plate w/Gasket, Item 7	P6900-CP8	Thermostatic Mixing Valve, Item 18	P6900-TMV
Sensor Inline Connector, Item 8	P6950-XL-DC	Mixing Tee w/Filters and Back Checks, Item 19	P6900-XL-MT
Stainless Supply Hoses (XL), Item 9	P6900-SSH-2		
Single Stainless Steel Hose (XL), Item 10	P6900-SSH		
Optional Plug-in Power Converter, Item 11	P6900-ACA		

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