



ISO 9001 Certified



## **OPERATION & MAINTENANCE MANUAL**

### **4100-LR Series Faucet**

[www.hydrotekintl.com](http://www.hydrotekintl.com)

5055 Forsyth Commerce Rd, Ste 124, Orlando, FL 32807  
Phone (800) 922-9883 | Fax (866) 670-5580



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# 4100-LR Series

U.S. Patent 8474481B2

AC or Battery Powered Sensor Operated Faucet

The 4100-LR Series faucet is a single-hole deck mounted, piston operated sensory faucet that provides a vandal resistant, low lead, no touch solution with integral hot/cold ceramic mixing and manual on/off adjustment that promotes better hygiene and energy savings.

Designed to be easy to install and maintain, all major faucet components are encased above deck, making for easier access. The sensor included in this faucet is self adapting, meaning manual adjustments are not necessary.

- **ADA Compliant.** Meets all barrier free codes
- Conserves water and energy
- Easily installed in new or retrofit applications
- Competitively priced for today's commercial market
- Promotes cleanliness & hygiene
- Proven Hydrotek craftsmanship and reliability
- Temperature adjusting handle with manual on/off
- Low Lead

### Available in:

- ✓ Low Lead, AC Powered (H-4100-LR)
- ✓ Low Lead, Battery Powered (HB-4100-LR)

## Features:

- Vandal-resistant faucet body with chrome plated, solid brass construction.
- Faucet design allows quick "above the deck" access to all major faucet component parts.
- 30 second time-out feature prevents accidental sink overflow.
- Integrated ceramic faucet mixing valve (with built-in checks) allows for precise hot/cold mixing.
- "Above the deck" external or internal temperature adjustment variation.
- Standard 2.2 GPM flow control for water conservation and annual savings.
- "Self-adapting" sensor distance adjustment eliminates need for manual sensor adjustments.
- Low battery indicator light (battery powered models)
- Single-hole deck mounting with optional 4" and 8" cover plate for vandal resistant, three point anchoring.
- Manual override provides continuous water flow for special applications or in case of power failure.
- Manually controlled temperature adjustment.
- Patented electronics and slow closing solenoid valves provide reliable and smooth operation without water hammer.
- Includes in-line filter adapter for easier cleaning.
- Superior VSI silicone elastomer piston seals are unaffected by chlorine, chloramines, or ammonia.



# Hydrotek Automatic Faucets

## 4100-LR Series

### Deck Mounted / Mixing

Meets ANSI/ASME A112.18.1 M-1989

#### Operation:

1. A continuous, invisible beam is emitted from the sensor.
2. The faucet is activated by placing hands under the spout within the effective range of the beam. Water starts to flow immediately for as long as the user's hands remain in the sensor range.
3. When hands are removed, the water flow stops. The sensor will automatically reset and be ready for the next user.
4. Water temperature adjustment can be easily accessed with external adjuster.

#### Specifications:

Faucet Construction: . . . . . Solid brass, chrome plated

Control Circuit:

Auto. Time-out: . . . . . 30 seconds

Sensor Range: . . . . . Self adapting

Shut-off Delay: . . . . . 1 second

Solenoid Valve: . . . . . 6V DC, normally closed

Wattage: . . . . . 0.2W (idle), 3W (in use)

Operating Pressure: . . . . . 5 psi to 125 psi

Flow Control: . . . . . 2.2 GPM, Laminar, Vandal Resistant

#### AC Mode

Power Adapter (UL/CSA)

Standard Plug-in: . . . . . Input AC 120V 60 Hz or 220V

Output DC 7.5V, 0.8A/Class 2

Power Cable: . . . . . Armored, vandal resistant

Optional Multi-Unit Adapter: . . Serves up to 6 faucets

(UL/CSA) Input AC 120V, Output DC 7.5V, 3A

#### Battery Mode

Battery Powered Models: . . . . . (4) AA Alkaline Batteries

Battery Service Life: . . . . . 400,000 on/off cycles, up to 4 years

Warranty: . . . . . 3 years

#### Package Includes:

- (1) Faucet with sensor/solenoid
- (1) 6" Gooseneck spout
- (1) Armored S.S. supply tube with filter
- (1) Mounting hardware
- (1) 2.2 GPM Laminar Flow Control
- (1) 7.5V DC plug-in power adapter (*H-4100-LR only*)
- (4) AA Alkaline batteries (*HB-4100-LR only*)

#### Dimensions:

Base Width (Outside Measurement) . . . . . 4-7/16"

Base Depth . . . . . 2-1/16"

Faucet Height (Aerator to Base) . . . . . 6-7/8"

Faucet Height Overall . . . . . 10-1/2"

Depth (Aerator to Base) . . . . . 5-5/8"

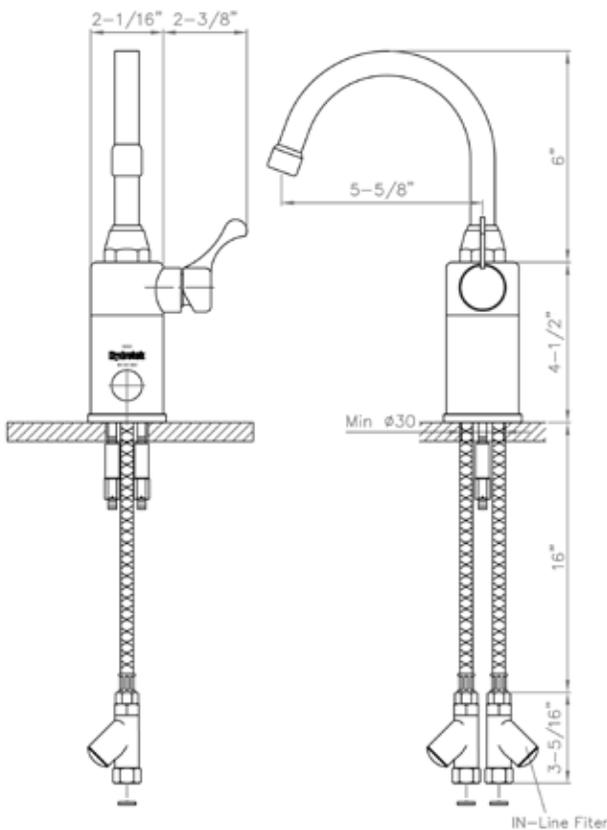
Mounting Bolt Length . . . . . 2"

Mounting Bolt Pattern . . . . . Single-hole mount

#### Optional Variations and Accessories

- 0.35, 0.5, 1.5, 2.0 GPM Laminar Flow Control
- HC-010E Multi-Unit Voltage Adapter (AC Powered Only)
- Different spout styles and sizes available upon request
- 4" or 8" Centerset Cover Plate
- HBL-04 Thermostatic Mixing Valve with Check

#### 4100-LR



**HYDROTEK INTERNATIONAL, INC.**  
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Orlando, FL 32807  
800.922.9883 (Phone)  
866.670.5580 (Fax)  
www.hydrotekintl.com



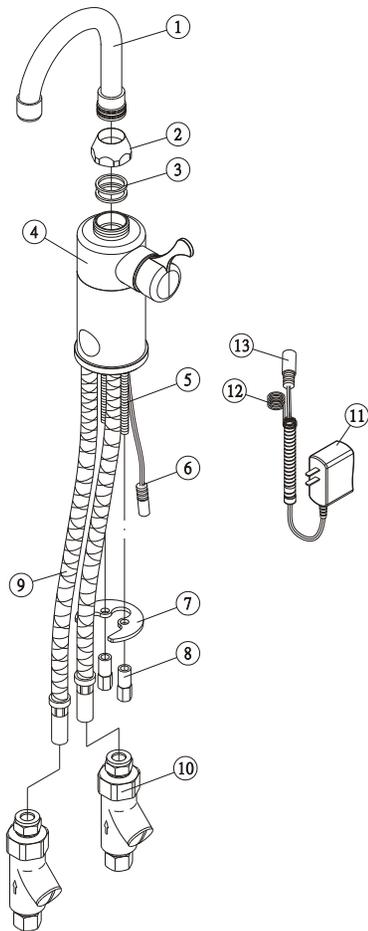
# HYDROTEK INSTALLATION INSTRUCTIONS

## H-4100CLR Mixing Automatic Faucet (AC Powered)

### Parts Table

No.	Description	No.	Description
1.	Gooseneck Spout	10.	Filter / Check Valve (2)
2.	Spout Nut	11.	Power Adaptor
3.	Split Washers (2)	12.	Nut
4.	Body	13.	Power Adaptor Connector
5.	Mounting Bolt		
6.	Control Cable		
7.	Mounting Washer		
8.	Mounting Nut		
9.	Supply Tube (2)		

### Installation Instructions



- Prior to installing this faucet, thoroughly flush all water lines.
- USE TEFLON TAPE, NOT PIPE DOPE FOR ALL CONNECTIONS.**
- Attach the hot and cold water Supply Tubes (9) by screwing threaded ends into bottom of Faucet body (4).
- Position faucet by lowering flexible Supply Tubes (9) and Control Cable (6) through deck hole. Secure faucet to sink deck using Mounting Washers (7) and Mounting Nuts (8).
- Attach Inline Filter/Check Valves (10) to stop valves using Nylon Washers inserted into filter inlet. Attach Supply Tubes (9) to Filter/Check Valve Compression Fittings. Left supply tube "HOT". Right supply tube "COLD". Filters may be cleaned by using a screwdriver to open the cleanout trap and remove the screen.
- Mount Gooseneck Spout (1) onto faucet using Spout Nut (2) and Split Washers (3).
- Plug Control Cable (15) with Power Adaptor Connector (13).

**8. IMPORTANT: FIRST**, plug power adapter (11) into 120V AC outlet and **THEN** turn on water. Place your hand in front of faucet sensor eye to activate water flow. Adjust water temperature using control handle on right side of faucet. Remove hand and flow should stop. If not, refer to Troubleshooting Guide.

**9. IMPORTANT:** The stop valve should never be opened to the point where the water flow exceeds the flow capability of the fixture. The fixture must always be able to accommodate the continuous water flow from the valve in the event of a valve failure. Should the fixture overflow happen due to water exceeding the capability of the fixture & or the drain pipe, Hydrotek will not be responsible for any flood damages.

**10. IMPORTANT:** This product contains mechanical and/or electrical components that are subject to normal wear. These components should be checked regularly (1 year is recommended) and replaced as needed to maintain the Faucets performance. Call 800-922-9883 for further details.

**11. IMPORTANT:** DO NOT use abrasives, acids or cleaning fluids to clean the Hydrotek Faucet as they may dull the luster and attack the chrome or special finishes. Use only soap and water then wipe with a clean cloth or towel.

### TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	TO DIAGNOSE	REMEDY
Faucet Will Not Turn On	Water not on	Check water supply.	Turn on water supply
	Power failure.	No light, no click: Check power adapter.	Replace power adapter.
	PCB/Sensor Is defective.	No light, no click : Re-attach power adapter.	Replace electronic PCB.
	Solenoid Valve Is clogged.	Solenoid is clicking but No water.	Clean solenoid.
	In-line Filter is Clogged.	Open clean-out trap and check filter.	Clean or replace Filter.
	Solenoid Coil is Defective.	Re-attach power adapter, Light blinks, but no clicking.	Replace solenoid coil.
Faucet Will Not Shut Off, Low Flow Drips.	Flow Control is Clogged.	Open flow control device And check.	Clean the flow control device.
	Solenoid valve is normally closed. Turn off water and activate the faucet, if there is a clicking sound, then the solenoid is dirty. If there is no clicking sound, then check solenoid valve. If faucet has a low flow or is dripping, clean solenoid valve. For mixing models, If faucet continues to run, check the manual adjusting handle to see if it is in on position.		



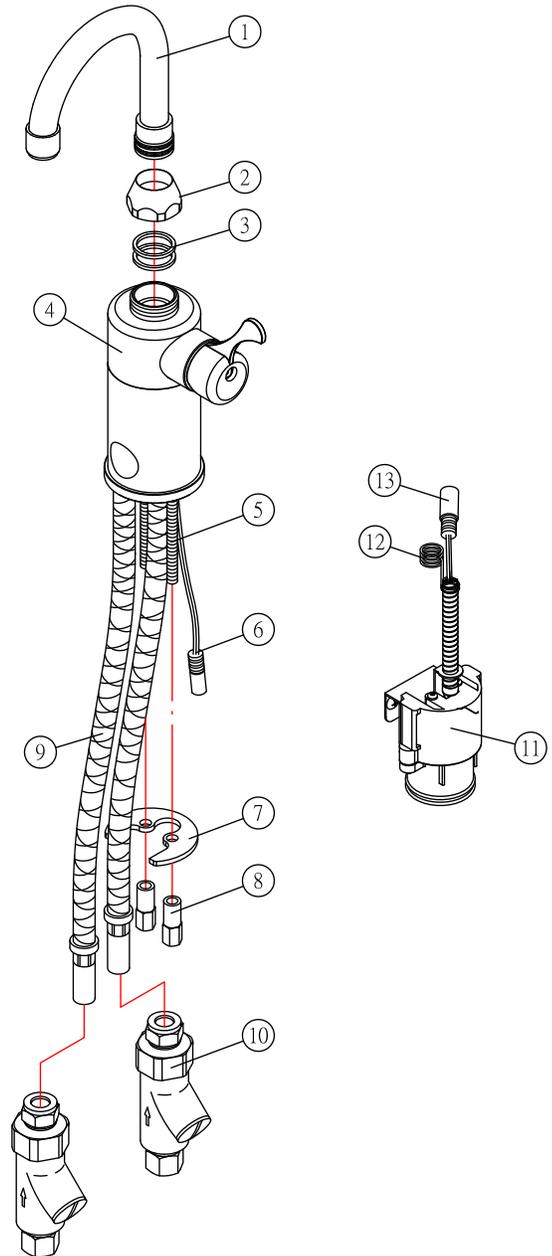
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# HB-4100-LR

## DC Powered Sensor Operated Mixing Faucet Installation Instructions

### Installation Instructions:

1. The spout nut(2) and spout gaskets(3) will come assembled on the spout(1). Insert the spout into the receptacle on the body(4) and tighten down the spout nut(2) to secure the spout.
2. Remove the washer(7) and lock nuts(8) and slide the faucet supply rods through the deck hole. If there are 3 holes, use the cover plate(4"or 8") from Hydrotek, call 800-922-9883. If desired, slide the wire bracket(12) onto a mounting rod(5). Tighten faucet to deck using washer(4) and lock nuts(5).
3. Connect in-line filters(10) to the supply tubes and the in-line filters to the stop valves. A  $\frac{3}{8}$ " union connector (**provided by others**) is required to connect the inline filters to the stop valves.
4. Insert 4 AA batteries into the battery holder(11) and attach the battery holder(11) to the power connector(6). Wait 10 seconds for the sensor to self-adjust, then place hand in front of spout, it should click. If not, check the connection between the AC connector and plug-in adapter.
5. Turn on water from the stop valve and check for leaks.
6. Place hand in front of the sensor eyes, water should start to flow. Remove hands, water stops.
7. **IMPORTANT:** The control stop valve should never be opened to the point where the flow from valve exceeds the flow capability of the sink fixture. In the event of a valve failure, the sink fixture must be able to accommodate a continuous flow from the valve.
8. **IMPORTANT:** This product contains mechanical components that are subject to normal wear. Periodical maintenance is required in order to maintain the faucet performance.
9. **DO NOT USE** abrasives, acids or cleaning fluids to clean Hydrotek Sensor faucet. Use only soap and water then wipe with clean cloth or towel.



### Parts:

- |                    |                       |
|--------------------|-----------------------|
| 1. Gooseneck Spout | 8. Lock Nuts          |
| 2. Spout Nut       | 9. Supply Tubes       |
| 3. Spout Gasket    | 10. Inline Filters    |
| 4. Body            | 11. Battery Holder    |
| 5. Mounting Rod    | 12. Wire Bracket      |
| 6. Power Connector | 13. Battery Connector |
| 7. Washer          |                       |

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# 4100-LR Series

## Sensor Operated Mixing Faucet

### Troubleshooting Guide

Normal Operation: When power is connected, the faucet will immediately perform diagnostic function. You will hear a clicking sound and see lights flash. When the user's hands are placed under the spout, the light will flash once and water will start to flow. Water flow will stop when hands are removed. The red indicator light will flash when the batteries are low.

Turn the manual handle clockwise to increase temperature and counter-clockwise to decrease.

Problem	Possible Cause	To Diagnose	Remedy
Faucet will not turn on:	Water not turned on	Check water supply	Turn water on
	Power supply failure	No light, no clicking: <ul style="list-style-type: none"> <li>• Check batteries</li> <li>• Check power adapter</li> </ul>	Reinstall or replace batteries/ Replace power adapter
	Low battery	Light continues to flash	Replace batteries
	Electronic PCB / Sensor is defective	No light, no clicking: <ul style="list-style-type: none"> <li>• Reinsert batteries</li> <li>• Reattach power adapter</li> </ul>	Replace electronic PCB
	Solenoid valve is clogged	Solenoid is clicking but no water is coming out	Clean solenoid
	In-line filter is clogged	Open clean-out trap and check filter screen	Clean or replace filter screen
	Solenoid coil is defective	Insert new batteries or reattach power adapter. Light blinks but no solenoid is clicking	Replace solenoid coil
	Flow control is clogged	Open flow control device and check	Celan the flow control device
Faucet will not shut off, has low glow, or drips:	The solenoid valve is normally closed. Turn off water and activate the faucet. If there is a clicking sound, the solenoid valve is dirty. If there is no clicking sound, then check the solenoid valve. If the faucet is dripping, clean the solenoid valve.		

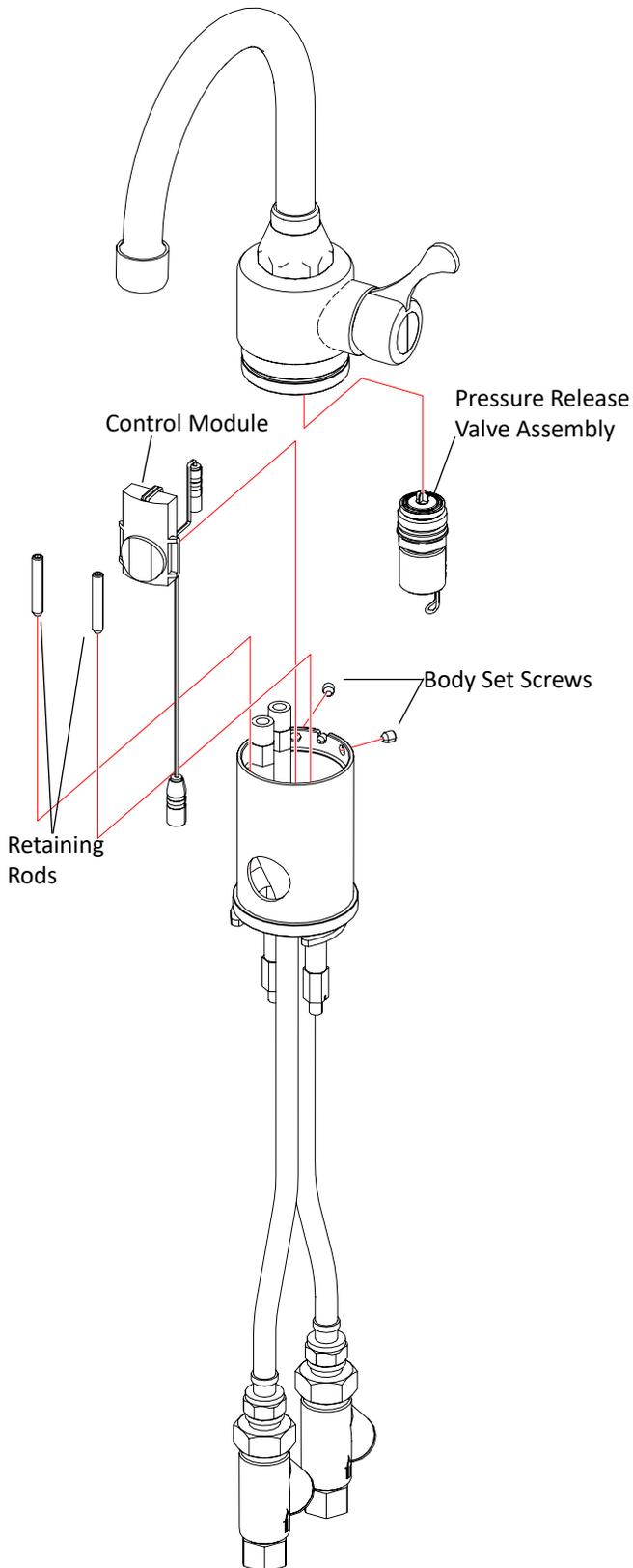
**IMPORTANT:** Periodic maintenance is required for smooth and trouble-free operation of this faucet.

For service and inquiry about available repair kits, please call Hydrotek Technical Support at (800) 922-9883.

# 4100-LR Series

## Sensor Operated Mixing Faucet Maintenance Tasks

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### PRESSURE RELEASE VALVE REPLACEMENT

1. Disconnect power by disconnecting the AC adapter or battery pack underneath the faucet.
  2. Unscrew the **Body Set Screws** and with an upward motion, pull the the upper faucet body off of the faucet base.
  3. Disconnect the connector for the **Pressure Release Valve Assembly**.
  4. Unscrew the **Pressure Release Valve Assembly** and remove it from the upper faucet body.
  5. Install the new **Pressure Release Valve** and reassemble the faucet in reverse order.
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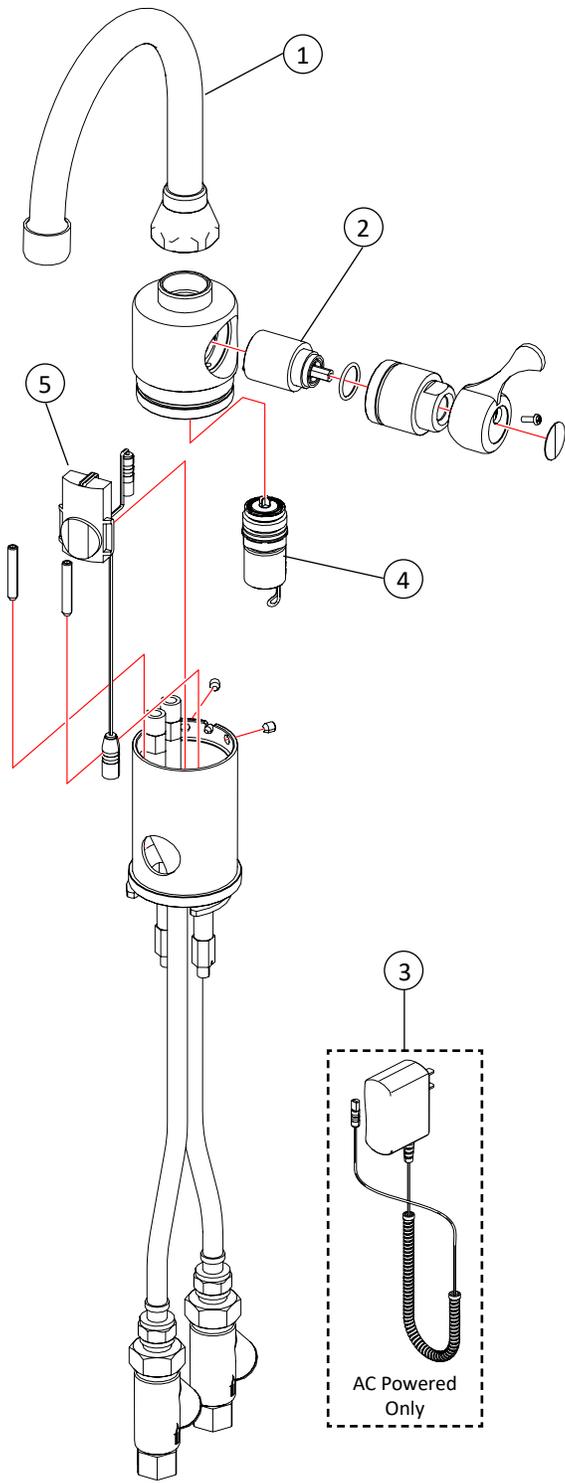
### CONTROL MODULE (P.C. BOARD) REPLACEMENT

1. Disconnect power by disconnecting the AC adapter or battery pack underneath the faucet.
2. Unscrew the **Body Set Screws** and with an upward motion, pull the the upper faucet body off of the faucet base.
3. Disconnect the connector for the **Pressure Release Valve Assembly**.
4. Unscrew the **Retaining Rods** and pull them up and out from the faucet base.
5. Remove the **Control Module**.
6. Install the new **Control Module** and reassemble the faucet in reverse order.

*For further questions, please call Hydrotek Technical Support at (800) 922-9883.*

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## Sensor Operated Mixing Faucet Assembly Parts



No	Description	Part Number
1	Gooseneck Spout	H41-001
2	Ceramic Cartridge	H41-002
3	Power Adapter (AC Only)	HCE-008
4	Pressure Valve Assembly	H41-004
5	Sensor/Control Module Assembly	H41-005

*Please visit our website, [www.hydrotekintl.com](http://www.hydrotekintl.com), for our most current Products Pricing Sheet.*