

Pump Controller



Installation
& User Guide

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ABOUT YOUR SYSTEM

Additional Features You'll Find on Your Pump Controller System

Pressure Monitoring and Pump Control:

Turns on and off a pump based on water pressure settings and readings. Records pressure data over time for a quick look at what has been happening recently on your system.

Pump Protection

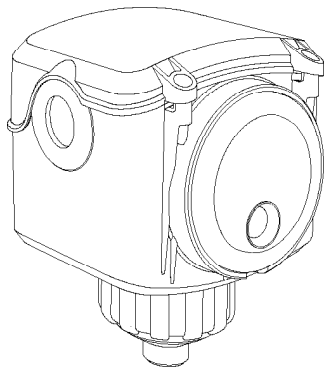
- Monitor pump current and protect the pump from overloads.
- Records peak and average motor current, number of pump cycles and cycle length and frequency.
- Monitor incoming voltage and protect the pump in high or low voltage conditions by not turning on the pump.
- Monitors pressure and motor current to detect pump run dry conditions and open discharge conditions.
- Short cycle notification to indicate pressure tank or other equipment failures.
- Defective pump check valve detection.
- High-pressure tank precharge detection.

Home Protection

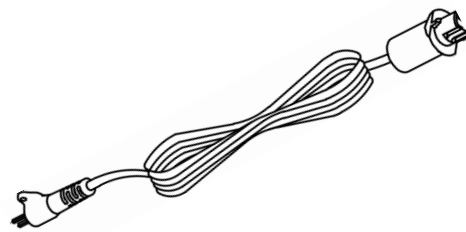
- Monitors for local leaks using a leak detection probe or cable that is connected on the underside of the Pump Controller housing.
- Monitors temperature of the general area to protect from freezing conditions.
- Preventative protection is available by proactively disabling the pump from the app during times of no water use.
- With the optional water meter attached, you can monitor water usage and protect against continuous flow or high flow conditions.

CONTENTS OF CARTON

Contents of Carton

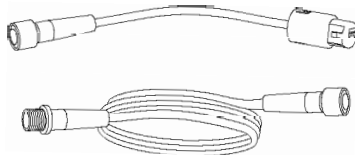


PUMP CONTROLLER

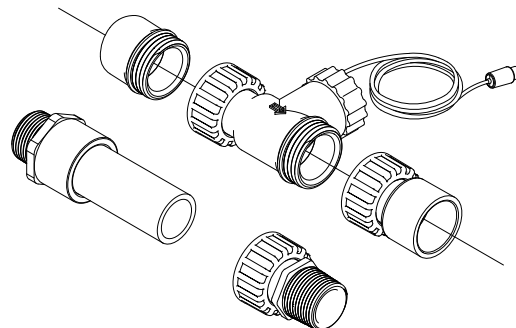


LEAK DETECTOR CABLE

Optional Accessories



WATER METER EXTENSION CABLE 10 ft.



WATER METER

WARNINGS

WARNING: Read carefully the product installation & operation instructions. Failure to follow the instructions and warnings in the manual may result in serious or fatal injury and/or property damage and will void the product warranty. This product must be installed by a qualified professional. Follow all applicable local and state codes and regulations. In the absence of such codes, follow the current editions of the National Plumbing Code and National Electrical Code (NEC), as applicable. Failure to properly size the system or follow instructions in the manual may result in excessive strain on the system and may lead to product failure, leakage, flooding and/or property damage.

WARNING: This product is used in conjunction with a system containing a tank under pressure, which may over time corrode, weaken and burst or explode, causing serious or fatal personal injury, leaking or flooding and/or property damage.

DANGER: EXPLOSION HAZARD: When the well tank has been in service and a change to a higher pre-charge pressure is necessary due to a required change in the pressure switch setting, failure to follow instructions below can cause a rupture or explosion, possibly causing serious or fatal personal injury and/or property damage.

- Do not adjust or add pressure if there has been a loss of air.
- Do not adjust the pre-charge pressure if there is visible exterior corrosion.
- Do not adjust the pre-charge pressure if there has been a reduction of the pump cycle time or the pre-charge pressure compared to its initial setting. This is because a reduction in pump cycle time can result from loss of tank air pressure which can mean there may be internal corrosion. Any re-pressurization or additional pressure could result in rupture or explosion.

WARNING: To minimize risk, a licensed professional must install and periodically inspect and service the system, including the pump controller, yearly and more frequently as the system ages.

WARNING: A drip pan connected to an adequate drain must be installed if leaking or flooding may cause property damage. Do not locate system in an area where leaking may cause property damage. Do not locate unit where it can be affected by flooding.

WARNING: This control can run pumps to pressures that may exceed the limitations of system components unless a relief valve capable of passing full pump flow at the maximum system pressure is installed. The maximum operating pressure rating of this pressure switch is 120 psi (827 kPa). Check local code requirement or maximum working pressure designated in the product manuals, whichever is less should be the maximum system pressure. Never set the operating pressure higher than that of the safe maximum system capacity.

WARNING: This control can be adjusted to a narrow pressure differential. An improperly sized tank can cause the pump to cycle frequently and lead to pump damage. This may require a larger pressure tank than is normally used.

WARNING: Do not expose system to freezing temperatures or temperatures in excess of 120°F (49°C).

CAUTION: Do not touch an operating motor. Modern motors can operate at high temperatures. To avoid burns when servicing a pump, allow it to cool for 20 minutes after shutdown before handling.

WARNINGS

CAUTION: Use this Pump Controller only in systems that pump water.

CAUTION: Do not use Vaseline or any petroleum-based lubricants on O-rings or rubber seals. Only use food-grade silicone lubricant.

CAUTION: Do not use pipe dope or any sealant other than Teflon tape on threaded connections. Threads on the tool free connection nuts do not require any tape because they use an O-ring seal. Tape is only required on the 1/4" NPT pipe connection.

A water test must be taken before installation of any water treatment equipment. The water quality can significantly influence the life of your system. You should test for corrosive elements, acidity, total solids and other relevant contaminants, including chlorine and treat your water appropriately to ensure satisfactory performance and prevent premature failure.

CALIFORNIA PROPOSITION 65 WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

WARNING: Use only lead-free solder and flux for all sweat-solder connections, as required by state and federal codes.

ELECTRICAL SAFETY

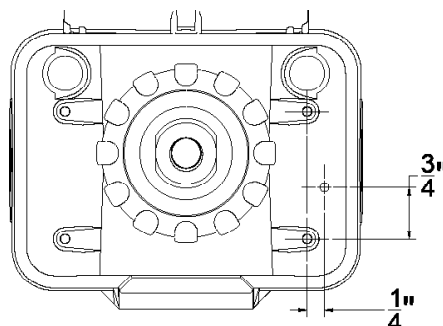
DANGER: ELECTROCUTION HAZARD: Must be installed by a qualified professional. First disconnect all electrical power before servicing. For your safety, the installation and operation instructions must be followed to minimize the risk of electric shock, property damage or personal injury.

WARNING: Unit must not be supported solely by the electrical conduit.

CAUTION: Systems with metallic conduit as grounding conductor (EMT, RMC, IMC, ETC): Electrical bonding between conduit connections is not automatic and must be provided as part of the installation. A bonding kit can be ordered separately.

CAUTION: The pump controller has a Type 3R environmental rating. Watertight conduit connections must be used when exposed to direct weather, moisture or high humidity in order to maintain this rating.

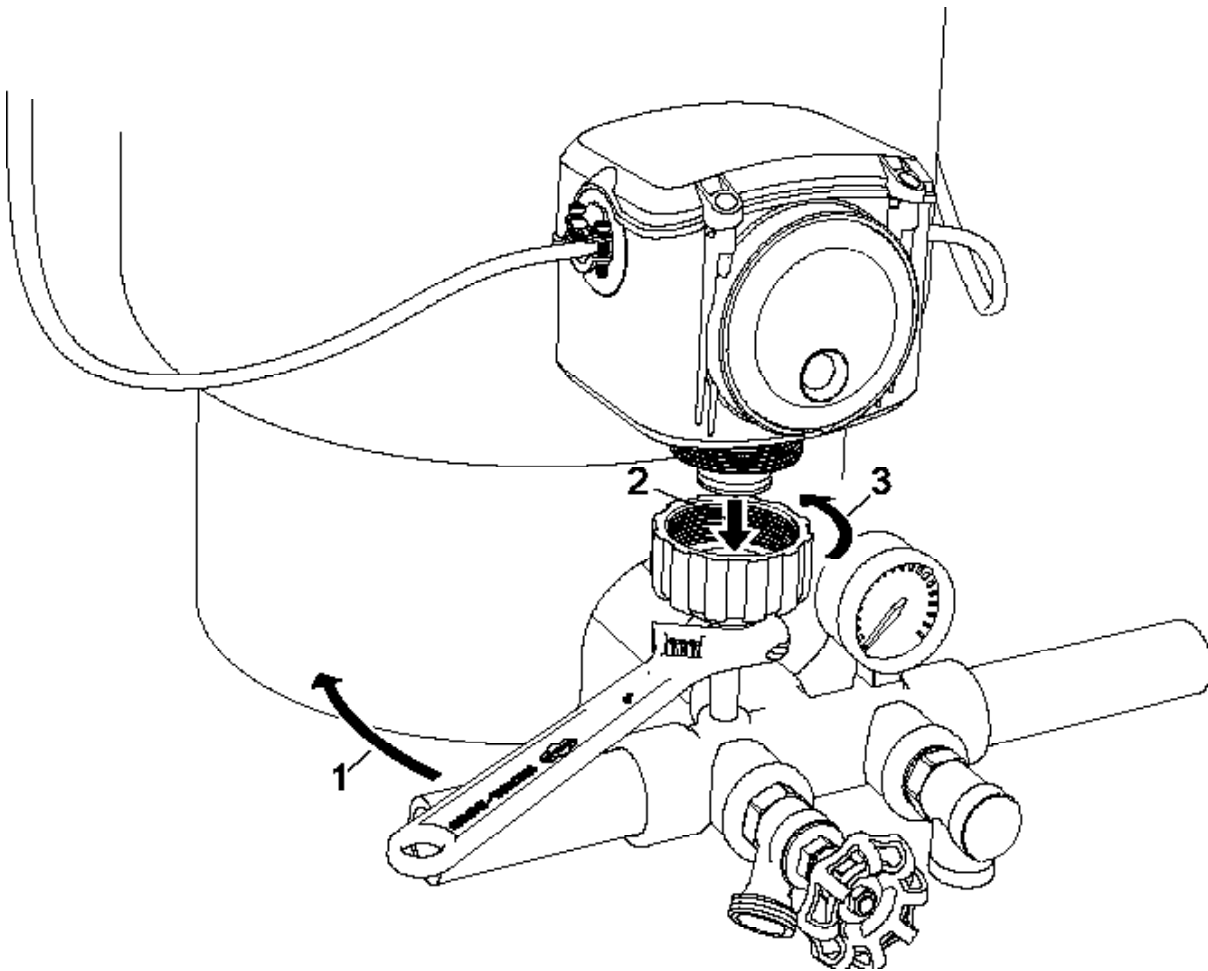
The Pump Controller is rated for Type 1 and 3R environments. If installed in a 3R environment a 1/8" drain hole should be drilled into the bottom of the enclosure in the location shown below. The installer should use caution when making this hole to only penetrate the housing wall and not unnecessarily plunge the drill bit deep into the enclosure interior.



INSTALLATION INSTRUCTIONS

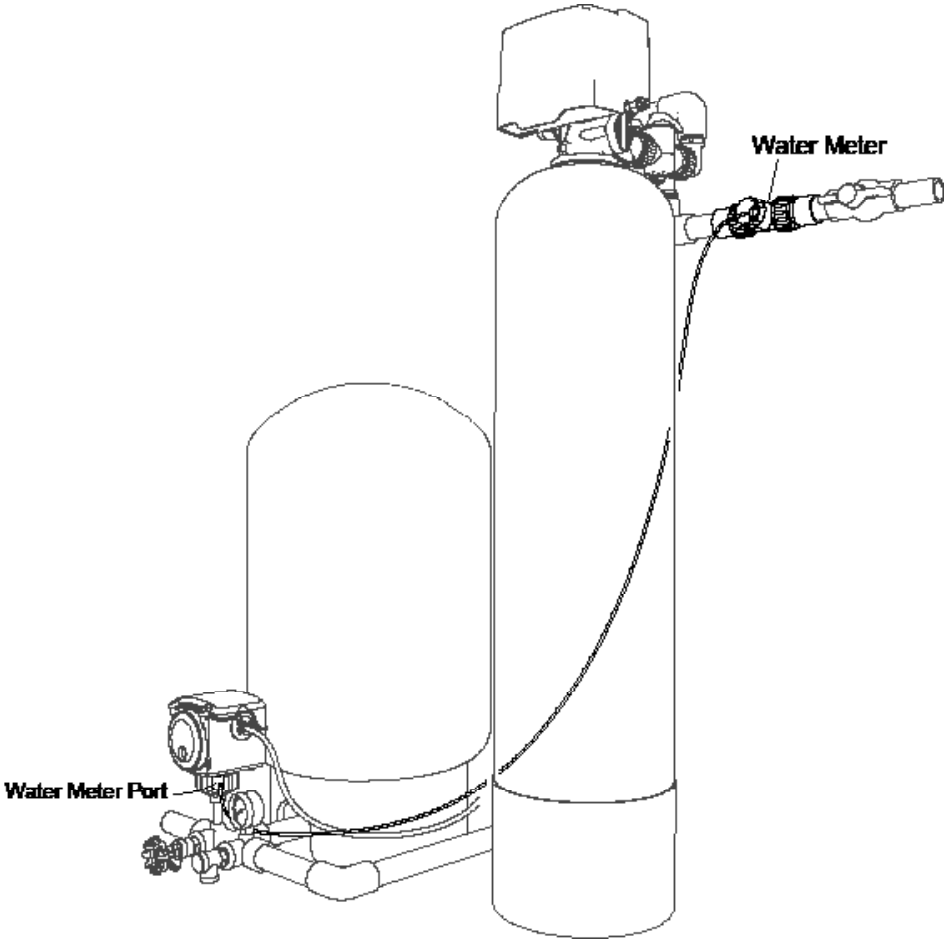
STEP 1: Plumb the Pump Controller into your water supply

Unpack equipment. Mount the 1/4" NPT stainless steel pump controller connection to the pressure tank tee using an appropriate length pipe nipple. Then insert the pump controller and tighten the plastic nut (hand tighten only).



INSTALLATION INSTRUCTIONS

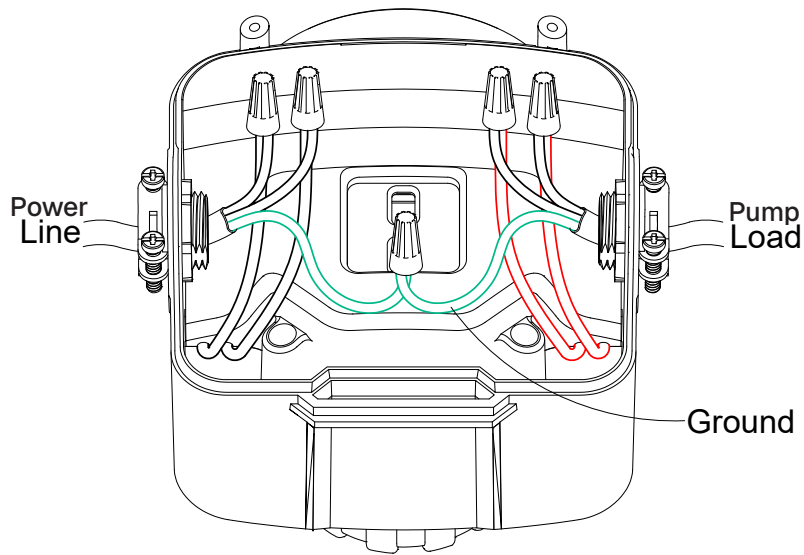
Installation with Optional Water Meter



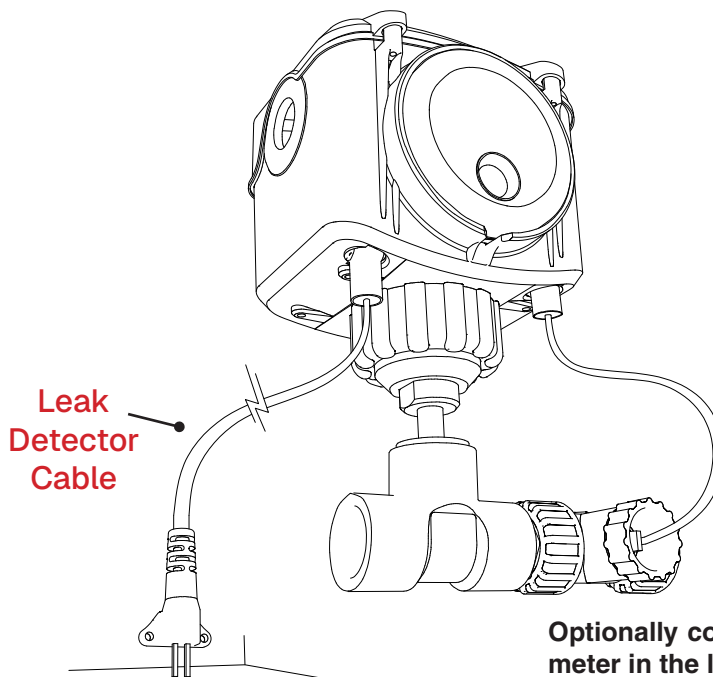
INSTALLATION INSTRUCTIONS

STEP 2: Connect Power Line and Pump Wire Load to the Pump Controller

Back View of Pump Controller



Front View of Pump Controller



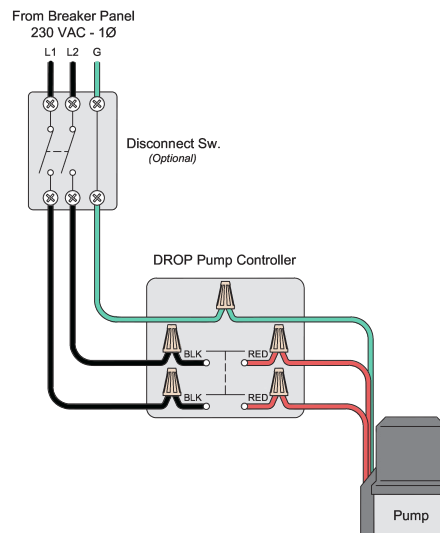
Optionally connect the leak cord and the water meter in the locations shown.

INSTALLATION INSTRUCTIONS

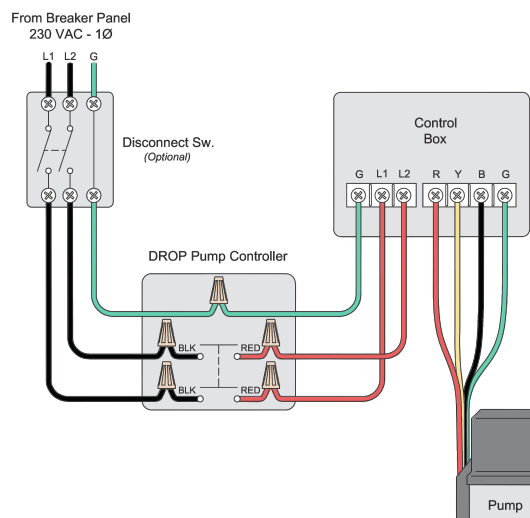
STEP 2: Continued



This product must be installed by a qualified professional. Follow all applicable local and state codes and regulations. In the absence of such codes, follow the current editions of the National Plumbing Code and National Electrical Code (NEC), as applicable.



230VAC 2-Wire Pump Wiring Diagram (P/Ns: B-PC230-25, B-PC230-30)



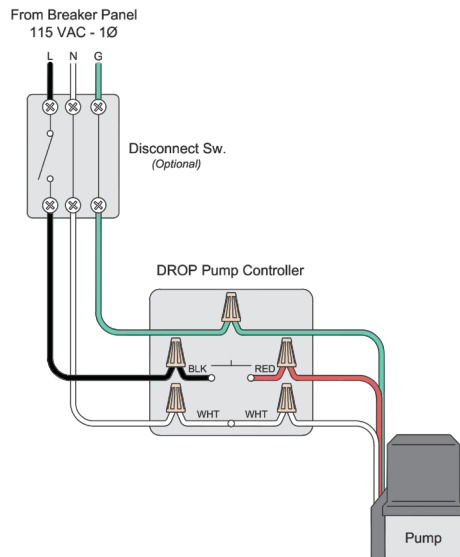
230VAC 3-Wire Pump Wiring Diagram (P/Ns: B-PC230-25, B-PC230-30)

INSTALLATION INSTRUCTIONS

STEP 2: Continued



This product must be installed by a qualified professional. Follow all applicable local and state codes and regulations. In the absence of such codes, follow the current editions of the National Plumbing Code and National Electrical Code (NEC), as applicable.

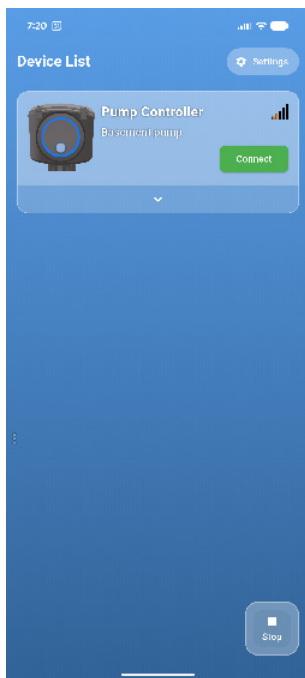


115VAC 2-Wire Pump Wiring Diagram (P/Ns: B-PC115-25, B-PC115-30)

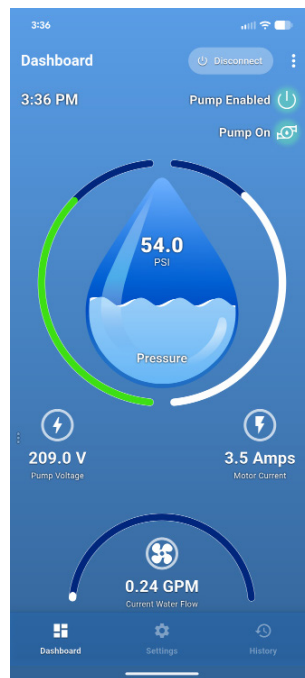
INSTALLATION INSTRUCTIONS

STEP 8: BluQ App Startup Guide

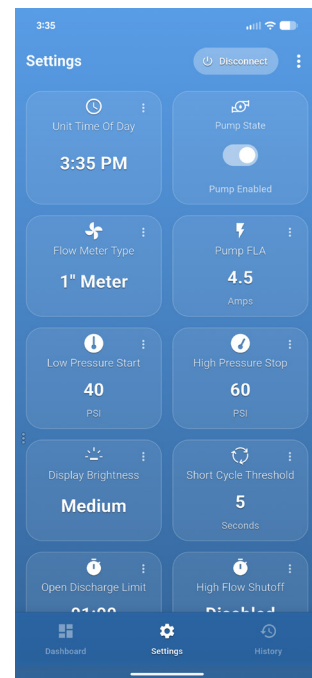
Open the BluQ app and navigate to the device list. Tap Connect under the Pump Controller to access the dashboard. From there, select Settings at the bottom of the screen to adjust your pump controller settings.



Device List



Dashboard



Settings

Water Meter Setting

A water meter allows the controller to measure water usage and display flow information.

Select the size of the installed flow meter.

If no flow meter is installed, this setting has no effect.

* Selecting the wrong size will cause water usage and flow readings to be inaccurate. A water meter is an optional accessory.

INSTALLATION INSTRUCTIONS

STEP 8: Continued

Manual Pressure Settings

The controller turns the pump on and off based on system pressure.

Default for single story home: 30 PSI ON / 50 PSI OFF

Common alternative: 40 PSI ON / 60 PSI OFF

Things to consider:

- Pumps should ideally run 2 minutes or longer per cycle
- Higher pressure usually requires a larger pressure tank
- Higher pressure improves fixture performance

Maximum recommended pressure: 70 PSI

Higher pressure increases leak risk and can shorten fixture life.

Manual Pump FLA Setting

Protects the pump motor from overheating.

If the pump draws more current than this value, the controller stops the pump.

Use the FLA listed on the pump motor nameplate.

* This controller uses a Class 10 electronic overload.

If an overload occurs 3 times in a row without a successful run cycle, the pump will lock out until manually restarted.

Restart can be done using:

- The controller button
- The BluQ app

Short Cycle Threshold Setting

Detects pump cycles that are shorter than expected. Frequent short cycling can damage pumps. Set this slightly shorter than your normal pump run time.

Example:

If your pump normally runs 2 minutes, set this around 90 seconds.

STEP 8: Continued

Common causes of short cycling

- Low pressure tank air charge
- Failed pressure tank bladder

Maximum setting: 250 seconds

Setting 0 disables short cycle detection.

Open Discharge Limit Setting

Stops the pump if it runs but cannot build pressure.
This may happen if water is flowing freely from the system.

Set this to about 2× your normal pump run time.

Example:
If the pump normally runs 1 minute, set this to 2 minutes.

If detected:

- Pump stops for 5 minutes, then retries automatically
- If it occurs 3 times in a row, the pump locks out until manually restarted

Setting range: 0:00 – 99:59 (minutes:seconds)

0:00 disables this protection

High Flow Shutoff Setting

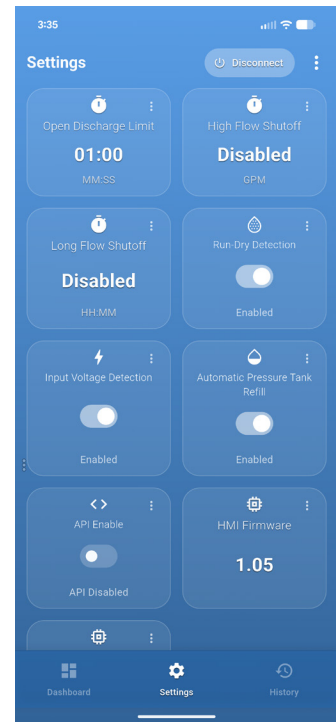
Stops the pump if the flow rate exceeds the limit you set. This usually only occurs during very high flow conditions, such as when the plumbing system has been depressurized and water is suddenly restored or there is a major leak.
Set the limit slightly above your normal peak flow.

Use the Peak Flow graph on the History page to see normal maximum flow.

A common starting point is 1–2 GPM above peak flow.

Maximum setting: 35 GPM

Setting 0 disables this feature.



Settings

INSTALLATION INSTRUCTIONS

STEP 8: Continued

Long Flow Shutoff Setting

Stops the pump if water flows continuously for longer than the time set. This can help detect abnormal continuous water usage.

Set this longer than the longest normal water usage event in your system.

Example uses include irrigation or large tank fills.

Setting range: 0:00 – 5:59 (hours:minutes)

Setting 0:00 disables this feature.

Run Dry Detection Setting

Protects the pump if the well cannot supply enough water. This occurs when the water level drops to the pump inlet.

The controller monitors pump load to detect run dry conditions.

If detected:

- Pump stops for 5 minutes, then retries automatically
- If run dry occurs 3 times in a row, the pump locks out

The pump must then be restarted manually using:

- The controller button
- The BluQ app

Input Voltage Detection Setting

Protects the pump if the supply voltage is outside the safe operating range.

If the voltage remains outside the allowed range for 30 seconds while the pump is running,

the controller shuts down the pump.

Allowed voltage ranges:

- 120V pump: 100–135 V
- 208/230V pump: 187–265 V

LIMITED WARRANTY

This warranty cannot be transferred - it is extended only to the original purchaser or first user of the product. By accepting and keeping this product, you agree to all of the warranty terms and limitations of liability described below.

Important Warning: Read carefully the Chandler Systems Water Management Systems Equipment Installation, Operating and Maintenance Instructions Manual to avoid serious personal injury and property HAZARDS and to ensure safe and proper care of this product.

***FOR AS LONG AS YOU OWN AND LIVE IN YOUR SINGLE FAMILY HOME**, this warranty covers your water treatment equipment, if you are the first user of this Chandler Systems Water Treatment Systems equipment and purchased it for single family home use - subject to all of the conditions, limitations and exclusions listed below. Purchasers who buy the Chandler Systems equipment for other purposes, and other component parts are subject to more limited warranties and you should read all of the terms included in this form to make sure you understand your warranty.

What is covered by this warranty?

Chandler Systems, Inc. warrants that at the time of manufacture, the equipment shall be free from defects in material and workmanship as follows:

* This warranty does not include media and/or cartridge filter elements.

PRODUCT	WARRANTY
Residential Mineral Tank	10 Years
Control Valves	5 Years
Pump Controllers	5 Years
Home Protection Valve	5 Years
Brine Tank	5 Years
Hub and Remote	1 Year
Wireless Low Salt Alarm	1 Year
Other Accesories / Parts	1 Year
Brine Tank Components	1 Year

Additional Terms & Conditions

What Chandler Systems Inc will do if you have a covered warranty claim;

Chandler Systems Inc will at its discretion either make repairs to correct any defect in material or workmanship or supply and ship either new or used replacement parts or products. Chandler Systems, Inc. will not accept any claims for labor or other costs.

LIMITED WARRANTY

Additional Exclusions and Limitations

This warranty is non-transferable and does not cover any failure or problem unless it was caused solely by a defect in material or workmanship. In addition, this warranty shall not apply:

- If the equipment is not correctly installed, operated, repaired and maintained as described in the Installation, Operating & Maintenance Instructions Manual provided with the product.
- Defects caused as a direct result of the incoming water quality
- If the Chandler Systems equipment is not sized appropriately for the intended job.
- To any failure or malfunction resulting from abuse (including freezing), improper or negligent; handling, shipping (by anyone other than Chandler Systems)
- If the unit has not always been operated within the factory recommended temperature limits, and at a water pressure not exceeding 125 psi, during storage, use, operation, accident; or alteration, lightning, flooding or other environmental conditions.
- To any failure or malfunction resulting from failure to operate the system with potable water, free to circulate at all times; and free of damaging water sediment or scale.
- This warranty does not cover labor costs, shipping charges, service charges, delivery expenses, property damage, administrative fees or any costs incurred by the purchaser in removing or reinstalling the water management equipment.
- The warranty does not cover any claims submitted more than 30 days after expiration of the applicable warranty, and does not apply unless prompt notice of any claim is given to an authorized Chandler Systems Dealer or to Chandler Systems or a designated contractor is provided access to the installation and to the water treatment equipment.

THESE WARRANTIES ARE GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. NO DROP REPRESENTATIVE OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY OTHER THAN THOSE EXPRESSLY CONTAINED IN THIS WARRANTY AGREEMENT.

Additional Warranty Limitations

ANY IMPLIED WARRANTIES THE PURCHASER MAY HAVE, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE TIME PERIODS SPECIFIED ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Limitations of Remedies

The remedies contained in this warranty are the purchaser's exclusive remedies. In no circumstances will Chandler Systems, Inc. or the seller of the product be liable for more than, and purchaser-user's remedies shall not exceed, the price paid for the product. In no case shall Chandler Systems, Inc. or seller be liable for any special, incidental, contingent or consequential damages. Special, incidental, contingent and consequential damages for which Chandler Systems, Inc. is not liable include, but are not limited to, inconvenience, loss or damage to property, consequential mold damage, loss of profits, loss of savings or revenue, loss of use of the products or any associated equipment, facilities, buildings or services, downtime, and the claims of third parties including customers. Some states do not allow the exclusion or the limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

What to do if you have a problem covered by this warranty

Any warranty coverage must be authorized by Chandler Systems, Inc.. Contact the person from whom you purchased the product, who must receive authorization from a Chandler Systems Dealer.

If your product is new and not used and you wish to return it, contact your Chandler Systems Dealer.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Privacy Statement

For more information about privacy, visit our privacy policy <https://chandlersystemsinc.com/bluq-privacy-policy/> online.

Patents

For the most up-to-date list of patents, visit our patents on our website: <https://chandlersystemsinc.com/>

FCC Compliance Statement:

https://www.chandlersystemsinc.com/files/FCC_Compliance_Statement.pdf

Industry Canada Compliance Statement:

https://www.chandlersystemsinc.com/files/Industry_Canada_Compliance_Statement.pdf



CHANDLER SYSTEMS



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