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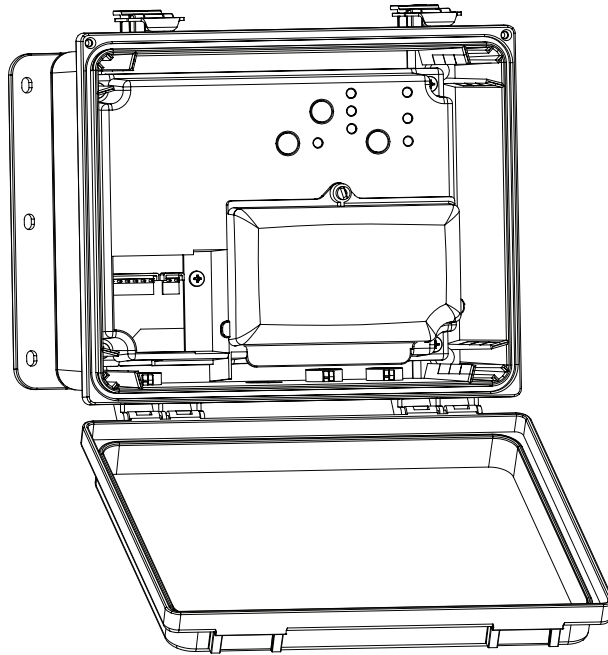
INTELLICONNECT™
CONTROL AND MONITORING SYSTEM

INSTALLATION GUIDE

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

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IMPORTANT WARNING AND SAFETY INSTRUCTIONS

IMPORTANT NOTICE

This guide provides installation and operation instructions for this pump. Consult Pentair with any questions regarding this equipment.

Attention Installer: This guide contains important information about the installation, operation and safe use of this product. This information should be given to the owner and/or operator of this equipment after installation or left on or near the equipment.

Attention User: This manual contains important information that will help you in operating and maintaining this product. Please retain it for future reference.

READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

This is the safety alert symbol. When you see this symbol on your system or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

DANGER Warns about hazards that can cause death, serious personal injury, or major property damage if ignored.

WARNING Warns about hazards that may cause death, serious personal injury, or major property damage if ignored.

CAUTION Warns about hazards that may or can cause minor personal injury or property damage if ignored.

NOTE Indicates special instructions not related to hazards.

Carefully read and follow all safety instructions in this manual and on equipment. Keep safety labels in good condition; replace if missing or damaged.

DANGER SERIOUS BODILY INJURY OR DEATH CAN RESULT IF THIS PRODUCT (UNIT) IS NOT INSTALLED AND USED CORRECTLY.

DANGER INSTALLERS, POOL OPERATORS AND POOL OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS BEFORE USING THIS PRODUCT. This Guide provides installation and operation instructions for the product. Consult Pentair Water Pool and Spa, Inc. ("Pentair") with any questions regarding this product.

WARNING This product is intended for use in swimming pool applications only.

WARNING Most states and local codes regulate the construction, installation, and operation of public pools and spas, and the construction of residential pools and spas. It is important to comply with these codes, many of which directly regulate the installation and use of this product. Consult your local building and health codes for more information.

WARNING A pool or spa pump must be installed by a qualified pool and spa service professional in accordance with the current National Electrical Code and all applicable local codes and ordinances. Improper installation may create an electrical hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.

DANGER RISK OF ELECTRICAL SHOCK OR ELECTROCUTION!
Always disconnect power at the circuit breaker before servicing the enclosure or equipment connected to the enclosure.
Improper installation can create an electrical shock hazard that can result in death or serious injury.

This product must be installed by a licensed or certified electrician or a qualified pool professional in accordance with the current National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1. All applicable local installation codes and ordinances must also be adhered to. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to property. Always disconnect the power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to serviceman, pool users or others due to electrical shock.

DANGER Water temperature in excess of 100° F (37.7° C) may be hazardous to your health. Prolonged immersion in hot water may induce hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 98.6° F (37° C).

Effects of hyperthermia include: (1) Unawareness of impending danger. (2) Failure to perceive heat. (3) Failure to recognize the need to leave the spa. (4) Physical inability to exit the spa. (5) Fetal damage in pregnant women. (6) Unconsciousness resulting in danger of drowning. The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

WARNING The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

WARNING Do not use this product to control an automatic pool cover. Swimmers may become entrapped underneath the cover.

WARNING For units intended for use in other than single-family dwellings, a clearly labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least five (5) feet (1.52 m) away, adjacent to, and within sight of, the unit.

WARNING Except for listed spa-side remote controls, install a minimum of five (5) feet (1.52 m) from the inside wall of the pool and spa.

WARNING The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with the current National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1. All applicable local installation codes and ordinances must also be adhered to.

WARNING Use only copper supply conductor's rated for 60C/75C sized based on ampacity to support all loads (refer to NEC tables).

IMPORTANT WARNING AND SAFETY INSTRUCTIONS

⚠ **CAUTION**

For Installation of Electrical Controls at Equipment Pad (ON/OFF Switches, Timers and Automation Load Center)
Install all electrical controls at equipment pad, such as on/off switches, timers, and control systems, etc. to allow the operation (startup, shut-down, or servicing) of any pump or filter so the user does not place any portion of his/her body over or near the pump strainer lid, filter lid or valve closures. This installation should allow the user enough space to stand clear of the filter and pump during system start-up, shut down or servicing of the system filter.

General Installation Information

1. All work must be performed by a licensed electrician or qualified pool professional, and must conform to all national, state, and local codes.

2. Install to provide drainage of compartment for electrical components.

3. This equipment is not provided with integral Ground Fault Circuit Interruptors (GFCI) protection. When this equipment is used to power or switch an underwater luminaire, suitable GFCI protection shall be provided in the field. Luminaire circuit conductors shall not occupy the conduit, boxes or enclosures with other circuits unless the other circuits are also GFCI protected.

4. The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with in accordance with the current National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1. All applicable local installation codes and ordinances must also be adhered to. The disconnecting means must be readily accessible to the tub occupant but installed at least 10 ft. (3.05 m) from the inside wall of the pool.

For information about the Virginia Graeme Baker Pool and Spa Safety Act, contact the Consumer Product Safety Commission at (301) 504-7908 or visit www.cpsc.gov.

NOTE: Always turn off all power to the pool pump before installing the cover or working on any suction outlet.

RF Exposure Requirements: The antenna(s) used for this device must be installed to provide a separation distance of at least 7.0 inches (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. L'antenne (s) utilisé pour cet appareil doit être installé pour fournir une distance de séparation d'au moins (20 cm) à partir de toutes les personnes et ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.

FCC Standard - 47 CFR Part 15, Subpart C (Section 15.247). This version is limited to chapter 1 to chapter 11 by specified firmware controlled in the U.S.A.
Instruction to user - 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.

Note: In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

Canada - Industry Canada (IC) Regulatory Notice: - This device complies with RSS210 of Industry Canada. (1999).
Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

INTRODUCTION

IntelliConnect™ Control and Monitoring System provides control of high voltage (120/240 VAC) equipment, pumps, lighting and chlorinators. Pool and spa operations can be controlled through a mobile device or computer, or manually controlled from the outdoor control panel housed inside the enclosure at the pool equipment pad.

Enclosure Overview

- Dimensions: 8-1/8" H x 12-1/8" W x 5-3/8" D
- Separate high voltage and low voltage wiring compartments with 1/2-inch conduit knockouts. One knockout for incoming power to power the unit and one knockout for each relay and a webbed low voltage cable snap bushing.
- Control, Monitoring and Scheduling via mobile device or computer
- Two 20-Amp, 2 HP relays
- 120/240 VAC

Control Panel Overview

Buttons

MODE: Cycles through Auto, Service and Timeout modes

RELAY 1: Activates system component that is wired to Relay 1 on the control board. **When pressed, the system will enter Service Mode.**

RELAY 2: Activates system component that is wired to Relay 2 on the control board. **When pressed, the system will enter Service Mode.**

LEDs

AUTO: Control via mobile devices or computer is allowed

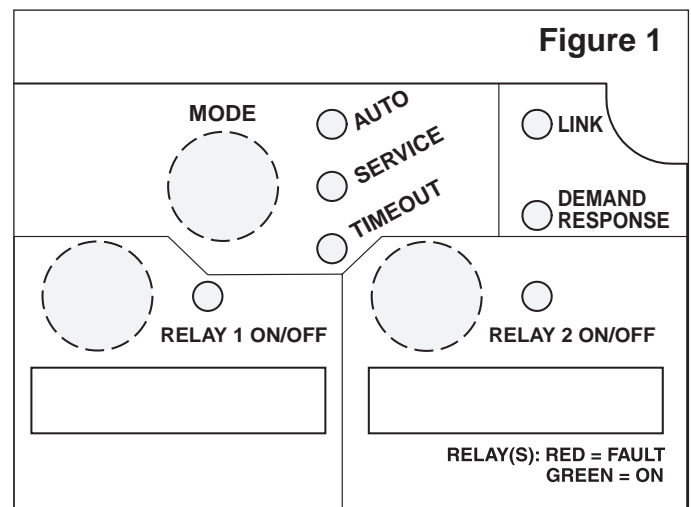**SERVICE:** Control via mobile devices or computer is prevented

TIMEOUT: Control via mobile devices or computer is prevented for 3 hours

LINK: Green when wireless connection is active; blinks red when a router connection can not be found; solid red when an internet connection can not be found.

DEMAND RESPONSE: Red when a "Demand Response" event has been activated by the electrical utility. Homeowner must contact the utility to participate.

RELAY 1 ON/OFF: Green when Relay 1 is active; red when a fault involving Relay 1 is detected.

RELAY 2 ON/OFF: Green when Relay 2 is active; red when a fault involving Relay 2 is detected.

Figure 1

MODE — AUTO / SERVICE / TIMEOUT — LINK — DEMAND RESPONSE — RELAY 1 ON/OFF — RELAY 2 ON/OFF

RELAY(S): RED = FAULT GREEN = ON

PRE-INSTALLATION

Enclosure Location and Installation Guidelines

Before installing the IntelliConnect™ Control and Monitoring System enclosure, read the following guidelines carefully:

1. Before permanent installation, test the wireless signal strength at the location where the enclosure will be mounted (see *Testing Wiring Signal Strength* below).

2. If possible, minimize the number and volume of obstacles that may block the wireless signal to the enclosure.

3. All electrical equipment, except for UL Listed spa-side remote switches, must be installed no fewer than 5 ft. (1.5 m), [in Canada, 3 m (9.75 ft.)] from pool and/or spa, and comply with all national, state, and local codes.

4. Install the enclosure no less than 5 ft. (1.5 m) from the inside wall of the pool, spa and/or hot tub.

5. The installation shall allow the user enough space to stand clear of the filter and pump during system start-up.

6. The TYPE 4X "Rainproof" enclosure can be mounted outside or inside of a pool equipment shed or other enclosure.

7. Before choosing the final location for the enclosure, consider the length of all of the conductors that will have be connected to the enclosure. Make sure to consider cable lengths for the sensors to the enclosure location.

8. Mount the enclosure on a flat vertical surface and ensure conduit knockouts are facing the ground. Side brackets are provided to mount the enclosure.

   Note: Failure to mount the enclosure correctly can lead to water entering the conduit knockouts, causing damage to the system and creating a possible electrical shock hazard.

9. Motors should be listed for pool and spa applications and have built-in thermal protection.

10. Allow unobstructed access to the front of the enclosure.

11. Grounding wires coming into the enclosure must be capped with appropriately sized wire nuts (not included).

Testing Wireless Signal Strength

Before permanently installing the enclosure, follow the instructions below to ensure router signal is strong enough at the installation site to successfully pair IntelliConnect.

1. Ensure the power is turned off at the circuit breaker before wiring the IntelliConnect system.

2. Open the enclosure by unfastening the two retaining clips at the top of the enclosure

3. Remove the retaining screw securing the high voltage wiring compartment cover and remove the high voltage cover.

4. At the proposed mounting location, bring 120/240 VAC power into the high voltage wiring compartment and temporarily wire to screw terminals marked L1 and L2 (see **Figure 4** on next page).

   Note: Cap the ground wire to ensure electricity does not arc to a hot wire or the control board.

5. Reinstall the high voltage cover over the high voltage wiring compartment and secure with the retaining screw.

6. Return power to the enclosure at the circuit breaker.

7. Follow the instructions given on page 6, *Pairing IntelliConnect to a Wireless Router.*

8. The LINK LED will temporarily blink green when power is first returned to the IntelIIConnect enclosure. After a few seconds the LINK LED will either be:

   a. **BLINKING GREEN:** Indicates the IntelliConnect is in access point mode and has not yet established a connection with the router.

   b. **SOLID GREEN**: Indicates a successful wireless connection between the IntelliConnect and the home router has been established. PROCEED TO STEP 11.

   c. **BLINKING RED:** Indicates an unsuccessful wireless connection to the IntelliConnect and that access point mode has timed out. Power down the IntelliConnect for 10 seconds to reset access point mode and proceed to step 9 for recommendations on improving the signal/connection strength.

   Note: Ensure the router security key entered in step 7 is correct before continuing to step 9. Entering an incorrect router security key will result in an unsuccessful connection.

   Note: If the IntelliConnect drops a wireless connection, it may take up to 3 minutes before the LINK LED begins to blink red.

9. If the wireless signal from the router is not strong enough to successfully pair with the IntelliConnect system, the signal strength may be improved by:

   a. Moving the router to an area that minimizes the distance and obstructions between it and the enclosure.

   b. Repositioning the enclosure so that the distance and obstructions between it and the wireless router are minimized.

   c. Purchasing and installing a wireless range extender to bridge the wireless signal between the home router and IntelliConnect enclosure.

Mounting the IntelliConnect

Mount the IntelliConnect™ Control and Monitoring System enclosure on a flat vertical surface, such as a wall or post at eye level.

Note: The enclosure must be at least 5 ft. (1.5 m), (in Canada, 3 m [9.75 ft.]) from the inside wall of the pool, spa and/or hot tub.

1. Position the enclosure against a vertical flat surface. If wall anchors are being used, support the enclosure in position (horizontally level and square) against the surface and mark the bracket hole pattern on the wall.

2. Secure the enclosure with two screws in both sides of the mounting bracket holes (see **Figure 2**). If using wall anchors, drill and set the anchors and secure the enclosure with screws.

Connecting to Power

Some pool equipment requires connection to ground fault circuit breakers (GFCI). Check all current local and NEC (CEC) codes to determine specific requirements. For recommended field conductor gauge usage, refer to the circuit breaker label.

Note: Wiring to Enclosure: 14 AWG minimum copper conductors for relays and other equipment sized according to the amps used.

1. Open the enclosure by unfastening the two retaining clips at the top of the enclosure. See **Figure 3**.

2. Remove the retaining screw securing the high voltage wiring compartment cover (see **Figure 3**) and remove the high voltage cover.

3. Bring 120/240 VAC power into the high voltage wiring compartment and wire to screw terminals marked L1 and L2 (see **Figure 4**).
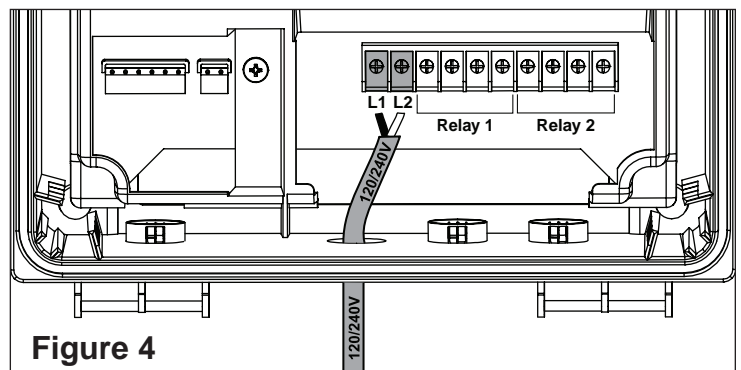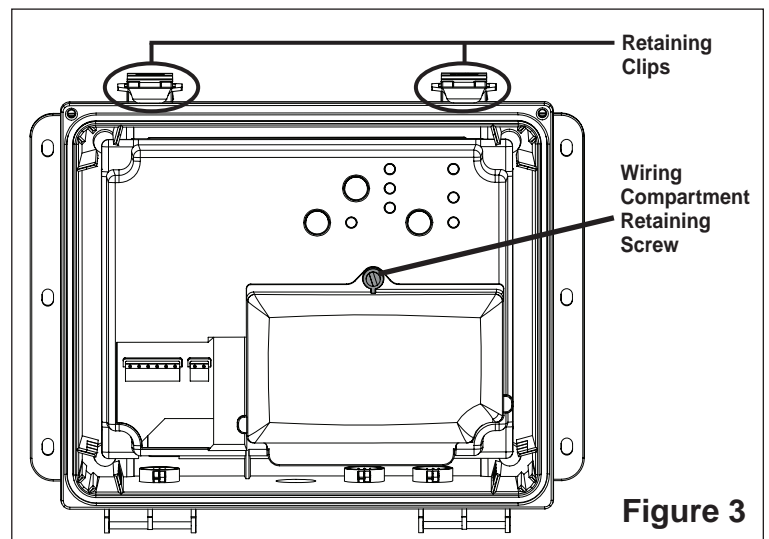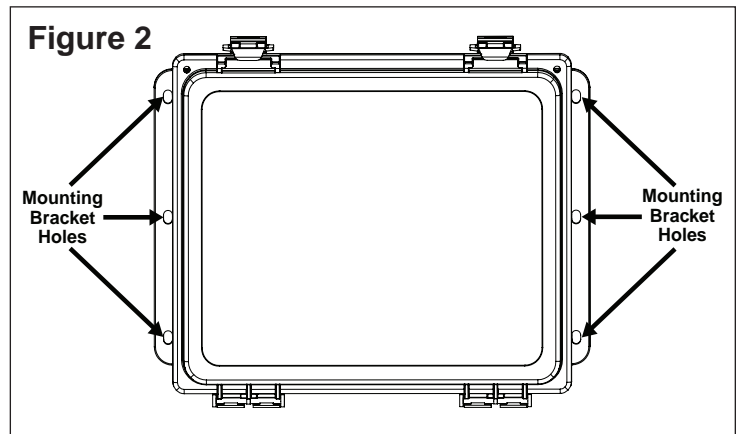
⚠️ **WARNING** ALWAYS ensure the high voltage cover is installed and secured to the wiring compartment before powering on this equipment. Powering on this equipment while the high voltage cover is removed can lead to electrical shock.

Wiring System Relays

1. Bring 120/240 VAC into the high voltage wiring compartment and wire to LINE1 and LINE2 to power Relay 1.

2. Send power out from LOAD1 and LOAD2 to the system component that you wish to have on Relay 1.

3. If needed, repeat steps 1 and 2 to connect a system component to Relay 2.

4. After electrical connections have been completed reinstall the high voltage wiring compartment cover and secure with screw. Close the enclosure's front cover and fasten the two retaining clips.

Figure 2

Mounting Bracket Holes

Mounting Bracket Holes

Retaining Clips

Wiring Compartment Retaining Screw

Figure 3

L1 L2

Relay 1   Relay 2

120/240V

120/240V

Figure 4

Wiring Filter Pumps

The IntelliConnect™ Control and Monitoring System enclosure includes two pre-installed relays (Relay 1 and Relay 2) and an RS-485 terminal block. These relays and terminals support manual, scheduling and egg timer functions. They can be turned on and off via the mobile app and manually at the enclosure by placing the system in Service mode.

When a relay button is pressed inside the IntelliConnect enclosure, the system will automatically enter Service mode. The app cannot be used to remotely control the relays when the system is in Service mode.

Note: IntelliConnect must be in Auto mode for the app to be able to send commands to IntelliConnect.

Single Speed Pump

A single speed pump will be wired to either Relay 1 or Relay 2 on the high voltage side of the enclosure (see **Figure 5**). Relay output is rated at 120-volt, 16-amp maximum and 240-volt, 15-amp maximum. Check the electrical rating marked on the pump motor before connecting it to the system.

In the Link$_2$O app, the single speed pump must be designated as "Filter Pump", if it is indeed the filtration pump.

IntelliFlo Variable Speed Pump

Each IntelliFlo® Variable Speed Pump is shipped with a 50 ft. (15.2 m) low voltage, RS-485 communication cable. The IntelliFlo pump will be wired to two of the four left-most pins in the low voltage terminal (see **Figure 5**) using this cable.

Note: The IntelliFlo should be wired with constant power from a GFCI breaker.

Note: IntelliConnect is not compatible with IntelliFlo VF (P/N 011012), IntelliFlo VS (P/N 011013) and IntelliPro VS (P/N P6E6T4H-209L) pumps.

To wire an IntelliFlo pump to IntelliConnect:

1. Switch OFF power to enclosure at the main circuit breakers.
2. Run the RS-485 communication cable from the pump to the enclosure.
3. Insert the cable conductors into the left-most grommet fitting (**Figure 5**) in the bottom of the enclosure and pull the cable into the low voltage wiring compartment.
4. Strip back the outer jacket of the communication cable by 1-inch, exposing the two conductors. Strip back each conductor 1/4-inch.
5. Insert the conductors into the RS-485 terminal block (see **Figure 5**) and secure the individual wires in their corresponding slots.
   Note: Multiple conductors may be inserted into a single screw terminal.

Wiring Flow-Dependent Devices

A device component wired to Relay 1 or Relay 2 (see **Figure 5**), and designated as either "Flow Dependent Device" or "Booster Pump" in the Link$_2$O app, will not energize until the filter pump has run for 2 minutes and allowed the system time to prime.

> **Note:** A relay designated as "Flow Dependent Device" will not activate during Freeze Protection.

If a single speed pump is the filter pump, that relay must be designated as "Filter Pump" in the Link$_2$O app to be recognized as such.

If an IntelliFlo pump connected via RS-485 is the filter pump, the system will automatically recognize it as such, **unless there is a separate relay designated as "Filter Pump" in the Link$_2$O app.**

Booster Pump

A booster pump will be wired to one of the two Relay terminals on the high voltage side of the enclosure (see **Figure 5**). Relay output is rated at 120-volts, 16-amp maximum and 240-volts, 15-amp maximum. Check the electrical rating marked on the pump motor before connecting it to the system.

In the Link$_2$O app, the user will designate the booster pump as "Booster Pump". If freeze protection is activated, this relay will activate.

Wiring a Salt Chlorine Generator (SCG)

IMPORTANT!: If a salt chlorine generator is being connected to the IntelliConnect, a single speed pump designated as "Filter Pump" in the Link$_2$O app, or an IntelliFlo pump, MUST also be connected.

A salt chlorine generator will be wired to one side of the RS-485 terminal on the low voltage side of the enclosure (see **Figure 5**).

When an IntelliChlor or iChlor SCG is wired to IntelliConnect via RS-485, a power connection to the load side of the pump relay is not required. Digital commands sent from the IntelliConnect to the SCG will not allow chlorine production when there is low power or no power on the filter pump relay or when the IntelliFlo is not running.

Only wire the RS-485 cable's yellow and green conductors to the IntelliConnect's RS-485 terminal.
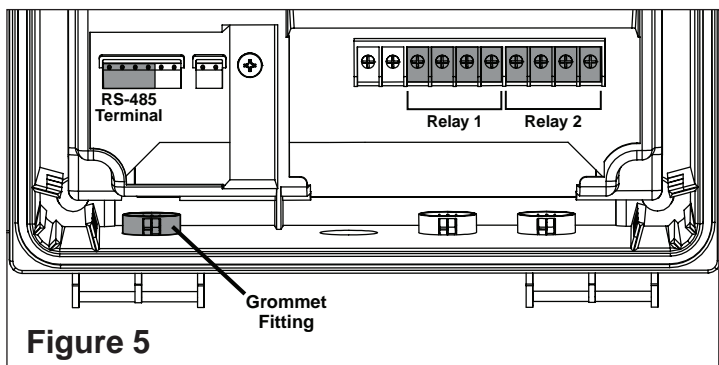
Figure 5

Wiring a Heater or Heat Pump

Water Temperature Sensor

When connecting a heater to the IntelliConnect system, a water temperature sensor (sold separately) must be installed into the plumbing system between the filter pump and filter. Refer to sensor manual for specific sensor installation instructions.

To wire a water temperature sensor to IntelliConnect:

1. Switch OFF power to enclosure at the main circuit breakers.

2. Run the 22 AWG, two-conductor cable from the sensor to the IntelliConnect enclosure.

3. Insert the cable into the left-most grommet fitting (**Figure 6**) in the bottom of the enclosure and pull the cable into the low voltage wiring compartment.

4. Strip back the outer jacket of the cable by 1-inch, exposing the two conductors. Strip back each conductor 1/4-inch.

5. Insert the conductors into the temperature sensor terminals (see "**A**" in **Figure 6**) and secure the individual wires in their corresponding slots.

Gas Heater or Heat Pump

IntelliConnect contains low-voltage dry contacts that can be connected to most gas heaters or heat pumps with 24 VAC control circuits.

IMPORTANT!: If a heater or heat pump is being connected to the IntelliConnect, a single speed pump designated as "Filter Pump" in the Link$_2$O app, or an IntelliFlo pump, MUST also be connected. **For instructions on assigning a custom heater speed for an IntelliFlo pump, refer to** *Setup Page on page 8.*

To wire a gas heater (or heat pump) to IntelliConnect:

1. Switch OFF power to the heater and enclosure at the main circuit breakers.

2. Remove the factory installed jumper from the heater "Ext Switch" or fireman's switch.

> **⚠ WARNING** DO NOT disconnect or remove the jumper on the thermostat, pressure switch, high limit switch or other safety devices. Disconnecting these jumpers will cause improper heater operation and could lead to personal injury or damage to the equipment.

3. At the heater, wire a two-conductor cable to the heater's Ext Switch connection. Ensure the cable meets the minimum temperature and gauge ratings given in the heater manual or installation instructions.

   Note: Use caution when wiring to the Ext Switch connection. Internal heater components may be hot.

   Note: Ensure this cable is not near or touching any line voltage conductors inside the heater. This could cause the heater to malfunction.

4. Run the cable from the heater to the IntelliConnect enclosure.

5. Insert the cable into the left-most grommet fitting (**Figure 6**) in the bottom of the enclosure and pull the cable into the low voltage wiring compartment.

6. Strip back the outer jacket of the cable by 1-inch, exposing the two conductors. Strip back each conductor 1/4-inch.

7. Insert the conductors into the heater connection terminal (see "**B**" in **Figure 6**) and secure the individual wires to their corresponding slots.

8. At the heater control panel, set both the Pool and Spa thermostats to the desired temperatures and select either the Pool or Spa run mode.

   Note: If temperatures set at the heater control panel are lower than those set in the Link$_2$O app, the heater will not heat above the heater control panel settings.
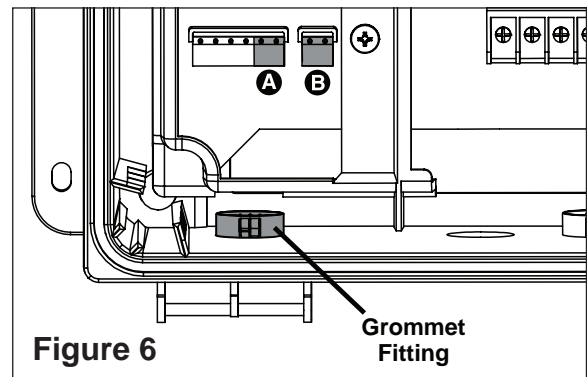
Figure 6 Grommet Fitting

Wiring Pool Lights

A pool light will be wired to Relay 1 or Relay 2 on the high voltage side of the enclosure (see **Figure 5**, on previous page). Relay output is rated at 120-volts, 16-amp maximum and 240-volts, 15-amp maximum. Check the electrical rating marked on the light housing before connecting it to the system.

In the Link$_2$O app, the user will designate a white pool light as "Light" or a color light as "Pentair Color Light".

Testing the Relays

With a felt-tip pen, write the component name in the space provided under the relay buttons and LEDs.

Press the Relay 1 button and the IntelliConnect system will enter service mode. Press the Relay 2 button and verify function. **Press the MODE button to set the system in "AUTO" mode when done.**

   Note: In Auto Mode, if a booster pump or other flow-dependent system component is connected to either relay then the filter pump will be activated for 2 minutes before the flow-dependent relay turns on.

If the filter pump relay detects a low power condition, the relay LED will turn red indicating a fault, and the flow-dependent relay will not activate. This helps prevent damage to the system or flow-dependent system component in no flow situations.

6

Pairing IntelliConnect to a Wireless Router

The IntelliConnect™ Control and Monitoring System must be paired to a wireless router to allow for control via Link$_2$O™ Technology App.

The wireless router must be within range of the IntelliConnect during the pairing process.

To pair IntelliConnect to a Wireless Router:

1. Disconnect power to the IntelliConnect for 10 seconds, and then return power to the unit to activate an access point for 10 minutes.

2. Open your computer, smartphone or tablet's wireless settings.
    a. **To open Wireless Settings on smartphones or tablets:** Go to Settings > Wireless *OR* Settings > Connections > Wireless.
    b. **To open Wireless Settings on computers:** Click on the wireless icon [or] in the desktop system tray.

3. You should see an available access point titled "IntelliConnectPIFxxxxxxx". Select this access point to connect to IntelliConnect.

4. Once connected, open your web browser.

5. Type **192.168.123.1** into the address bar and press enter. This will take you to the pairing page.

6. At the pairing page, select your home router from the drop down SSID list and enter your router password into the security key field. See **Figure 7**.

    Note: Passwords are case sensitive.

Figure 7

    Note: If your home router does not display in the SSID drop down list and the LINK LED is still flashing green:
    • The router list may need to be refreshed. Close the drop down menu and reopen. Repeat this several times until your router appears.
    • If the router does not appear after several refreshes, the router may be too far from the IntelliConnect enclosure to receive a strong enough signal. Refer back to *Testing the Wireless Signal Strength* on page 2 for suggestion on correcting this issue.

7. Tap Connect button.

8. Once the IntelliConnect has successfully paired to your home router the IntelliConnect LINK LED will turn solid green.

INTELLICONNECT™ Control and Monitoring System Installation Guide

App Install and Signup

1. Download the Link$_2$O™ Technology app to your smartphone or tablet via its app store or download from a computer at *www.MyLink2O.com*.

2. Open the Link$_2$O app and tap the hyperlink at the bottom of the login page (see **Figure 8)** to open the Product Information page.

3. Enter all required information into the Product Information page.
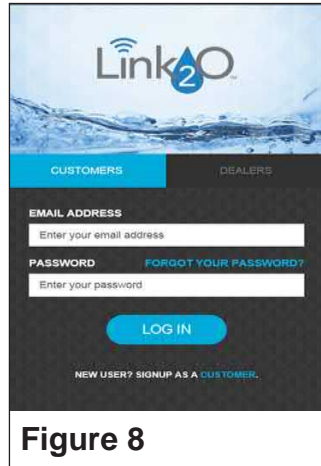
   Note: "Device ID" is your IntelliConnect's unique device code. This code can be found inside the enclosure, on the bottom left of the control panel overlay (see the dashed box in **Figure 9**). This code should be entered exactly as it appears on the overlay.

Figure 8

Figure 9

4. Tap the "Next Step" button to continue to the Account Access page.

5. Enter all required information into the Account Access page.

   Note: Both the Terms of Use and Data Privacy Notice must be acknowledged before continuing signup.

   Note: To receive loss-of-connection alerts and other important system notifications, one of the system notification options must be checked.

6. Tap the "Next Step" button to continue to the Dealer page.

7. Select your preferred local pool dealer to allow for system monitoring, or select "I'm Not Interested in Assigning a Dealer".

   Note: Selecting a dealer only allows monitoring of system components wired to the IntelliConnect. A dealer will not be able to modify any component settings remotely.

8. Tap the "Next Step" button to continue to the Verification page.

9. Verify that all entered settings are correct and tap the Finish button to complete signup.
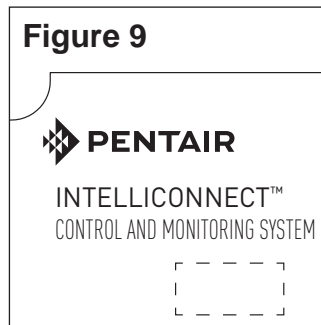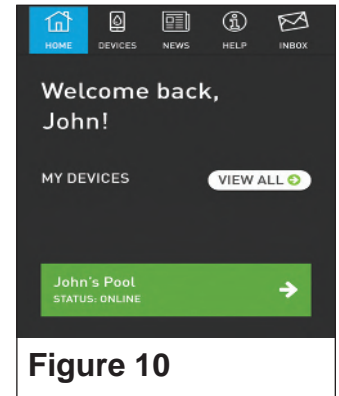
Initial App Login

After logging into you new account for the first time, firmware updates may be available. Follow the steps below to install updates.

1. Open the Link$_2$O app and log into your account. The Home Screen and welcome message will display. (see **Figure 10**).

2. Tap the Device tab of the IntelliConnect you wish to view (in **Figure 10** "John's Pool" is shown).

3. If there are available system updates, they will display on the Device Details page (see **Figure 11**).

   Note: If no firmware updates are displayed, unplug the IntelliConnect for 10 seconds then re-power to refresh updates.

4. Tap the "Install Update" button for each available update.

   Note: Do NOT disconnect power to the IntelliConnect during firmware updates.

Figure 10

Figure 11

   Note: When installing a host update, the LINK LED will turn yellow. When installing a WiFi update the LINK LED may blink temporarily then turn red. This is normal.

5. After all updates are installed, continue app setup.

Setup Page

After logging into the Link₂O app for the first time, the Setup Page will open (see **Figure 12**). The following settings and defaults will display on this page.

The Setup Page can also be accessed from the Device Details screen by opening the "Status" drop down and selecting "Setup".

Freeze Protection Mode

In areas where freezing temperatures are expected, Freeze Protection Mode should be activated by sliding the "Freeze Protection Mode" toggle to the ON position.

A stable wireless connection is required for proper synching freeze protection, as IntelliConnect uses data from the internet-based AccuWeather weather service and updates hourly.

1. **Alert if Offline Toggle**
   Toggling this feature ON will allow the app to notify you if the IntelliConnect is offline for more than 12 hours.

   Note: At least one notification method must be allowed. Email and/or text notifications can be toggled on at the Install Details page.

2. **Start Temperature**
   Determines the temperature at which the IntelliConnect, while in Freeze Protection Mode, will activate the Filtration Pump. Default setting is 38°F, but the slider can be set between 36-85°F.

   Note: Start Temperature should always be set below the Stop Temperature.

   Note: If a booster pump or heater is installed into the filtration system, they will run alongside the filtration pump when Freeze Protection is activated.

3. **Stop Temperature**
   Determines the temperature at which the IntelliConnect, while in Freeze Protection Mode, will stop the Filtration Pump. Default setting is 42°F, but the slider can be set between 37-86°F.

4. **IntelliFlo Freeze Protection RPM**
   Determines the speed an IntelliFlo pump will run during Freeze Protection. Default setting is 1850 RPM, but the slider can be set between 450-3450 RPM.

   Note: The IntelliFlo will ramp up to a higher speed if there is a booster pump or heater programmed for a higher speed.
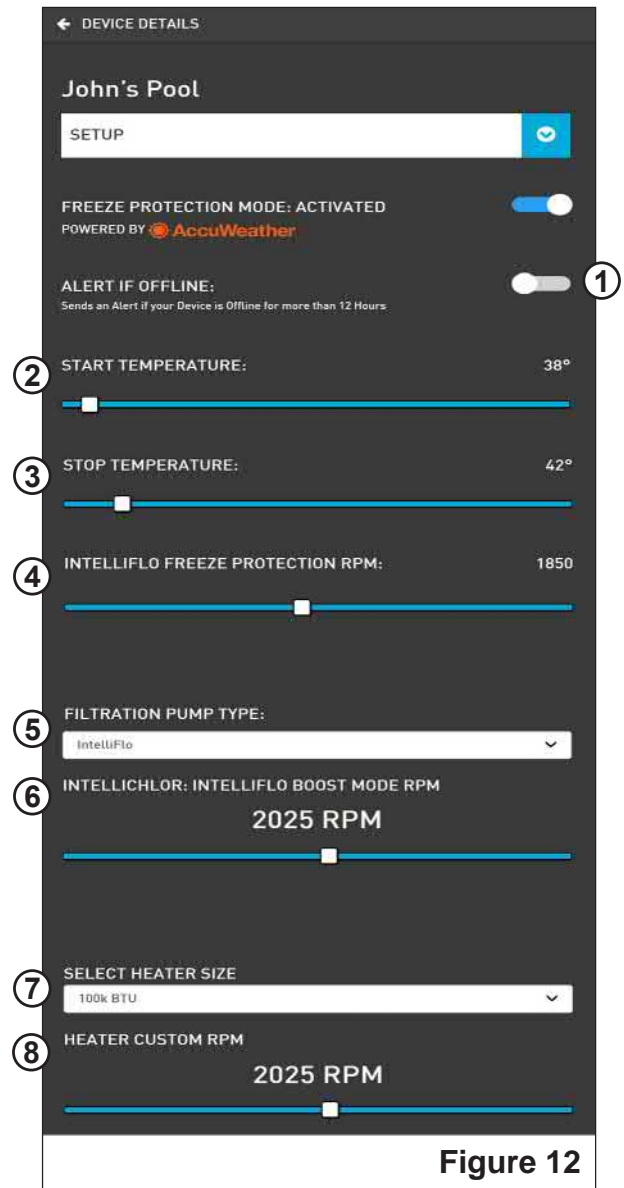
Figure 12

General System Settings

5. **Filtration Pump Type**
   Defines the Filtration Pump for freeze protection purposes and flow-dependent components. IntelliConnect will ensure this pump is running before any flow-dependent devices are activated.

6. **IntelliChlor: IntelliFlo Boost Mode RPM**
   Determines the speed an IntelliFlo pump will run when a salt chlorine generator is placed in Boost Mode. Default setting is 2025 RPM, but the slider can be set between 450-3450 RPM.

7. **Select Heater Size**
   Defines the size of the system's Heater in BTUs.

8. **Heater Custom RPM**
   Determines the speed an IntelliFlo pump will run when a heater is activated. Default setting is 2025 RPM, but the slider can be set between 450-3450 RPM.

   Note: The heater will turn off and begin a cool down period 5 minutes before the end of a filtration schedule.

   Note: When an IntelliFlo filtration schedule is programmed on Speeds 5-8 and the heater is activated, the IntelliFlo will run in 2-hour intervals. If the heater reaches its set point during this time it will turn off, return to the schedule, wait 7 minutes and then refire if necessary.

Enabling Component Pages

1. From the home screen, tap the device tab you wish to set up.

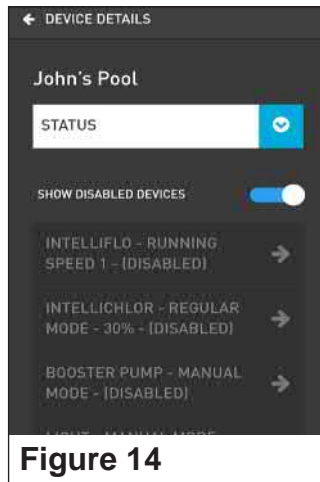   In this example we will be editing "John's Pool". See **Figure 13**.

   Note: If the status of the device tab you wish to edit is "OFFLINE" and the LINK LED is solid red, there is a issue with the internet connection. Ensure your router is connected to the internet and disconnect power from the IntelliConnect for 10 seconds then reconnect.

2. The Device Details screen will display.

3. System components wired to the IntelliConnect will not initially show up on this screen.

   To show all wired system components, slide the "Show Disabled Devices" toggle to ON position. Disabled Device pages will display in grey. See **Figure 14**.

4. Tap the component tab you wish to enable. In this example we will enable the IntelliFlo device page.

5. The IntelliFlo device page will display.

6. To activate the IntelliFlo device page, slide the "Enable Page" toggle to the ON position.

Figure 13

Figure 14

7. Return to the Device Details screen by tapping the Hub Details tab at the top of the page.

8. The IntelliFlo tab will now display blue, signifying an active page. See **Figure 15**.
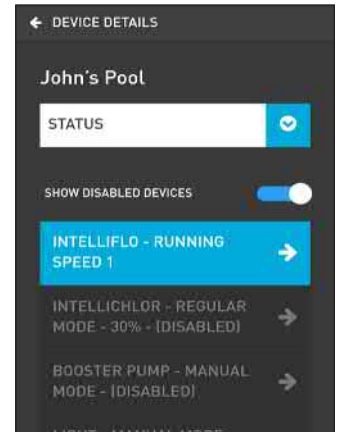
9. Repeat steps 4-6 as necessary to enable the pages for each system component wired to your IntelliConnect.

10. You may now slide the "Show Disabled Devices" toggle back into the OFF position to hide device tabs for equipment that is not wired to the IntelliConnect.

Figure 15

TECHNICAL DATA

Wiring Diagram

CONTROL BOARD RATINGS		
Input: 100-240 V, 100 mA, 50/60 Hz		
RELAY CONTACT RATINGS (60 Hz)		
General: 20 A, 277 V		
PUMP	**LIGHT**	**HEATER**
1 HP, 120 V	1 kW, 120 V TUNGSTEN	0.5 A, 24 V
2 HP, 240 V	1.3 kW, 240 V TUNGSTEN	
16 FLA/96 LRA, 120 V	10 A, 240 V BALLAST	
15 FLA/90 LRA, 240 V		
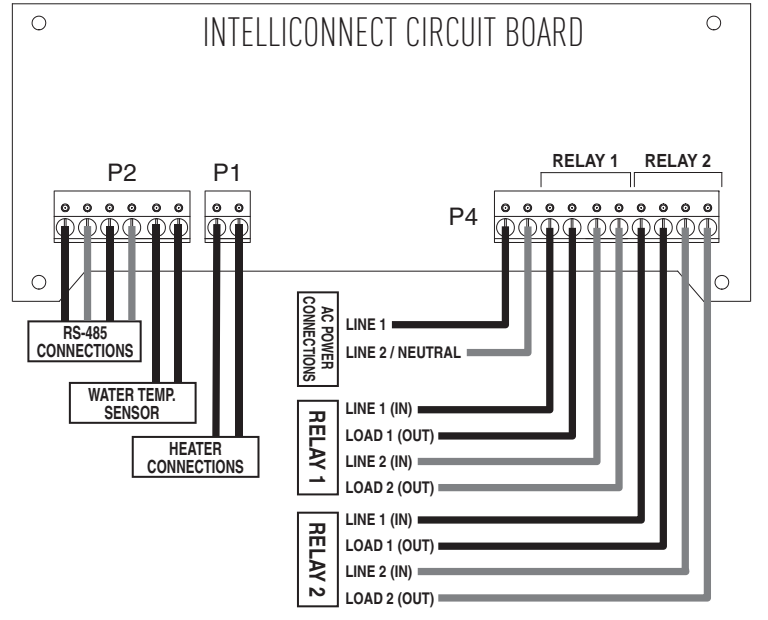
Replacement Parts

P/N	Description
523327	IntelliConnect Control Board Replacement Kit

NOTES

PENTAIR