PENTAIR

INTELLICHEM® CONTROLLER
TITLE 22 UPGRADE KIT

INSTALLATION INSTRUCTIONS

Title 22 of California's Water Recycling Criteria refers to California state guidelines for how treated and recycled water is discharged and used. The standards require the state's Department of Health Services enforce water and bacteriological treatment standards for pool/spa water in commercial pools.

The Commercial IntelliChem Chemical Controller meets Title-22 requirements to record of historical log of sensor data including the water temperature. For more information, refer to the Commercal IntelliChem Installation and User's Guide (P/N 522669).

This upgrade kit includes installation instructions for:
- IntelliChem Controller Daughter Card - P/N 523470 (page 2)
- Water temperature sensor for use with a 10kΩ thermistor (page 3)

Kit Contents P/N 523537Z
• PCBA Daughter Card - P/N 523470
• Water Sensor with fitting 10' ecolab – P/N 820041000
• Strain Relief 1/4" npt heyco m4514 – P/N 521339
• Screw #6x3/4 ph phl ss plastite - P/N 523142
• IntelliChem Controller Installation Instructions (this manual)

Risk of Electrical Shock or Electrocution!

⚠ DANGER

IntelliChem controller must be installed by a licensed or certified electrician or a qualified pool professional in accordance with the current National Electrical Code and all applicable local codes and ordinances. 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.
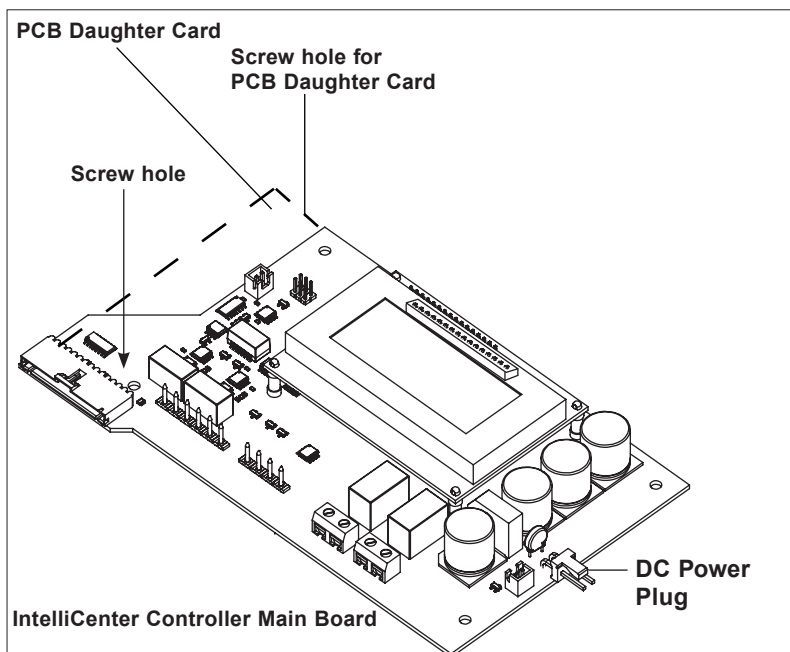

⚠ WARNING Always disconnect the power to the IntelliChem controller enclosure at the circuit breaker before servicing the unit. Failure to do so could result in death or serious injury to serviceman, pool users or others due to electrical shock.

IntelliChem Controller Daughter Card Installation

Install the PCB Daughter Card as follows: See Diagram below.

1. **TURN OFF POWER TO ALL POOL AND SPA EQUIPMENT BEFORE STARTING.**
   CAUTION! DO NOT PLUG IN OR UNPLUG ANY SYSTEM COMPONENTS WITH THE POWER ON. THIS MAY DAMAGE THE SYSTEM COMPONENTS.
2. Disconnect the DC Power Plug from the main Controller board.
3. Unlatch the Controller front door latch and open the door.
4. Remove the two screws securing the IntelliChem Controller main board, as shown below.
5. Remove the PCB Daughter Card from the package.
6. Locate the male pins on the back of the PCB Daughter Card.
7. Align PCB pins with the pin socket on the main PCB. As shown below. Note: Use the screw holes to align the PCB pins.
8. Once the PCB Daughter Card is in place, secure the board with the two screws (provided in kit) removed in Step 3.
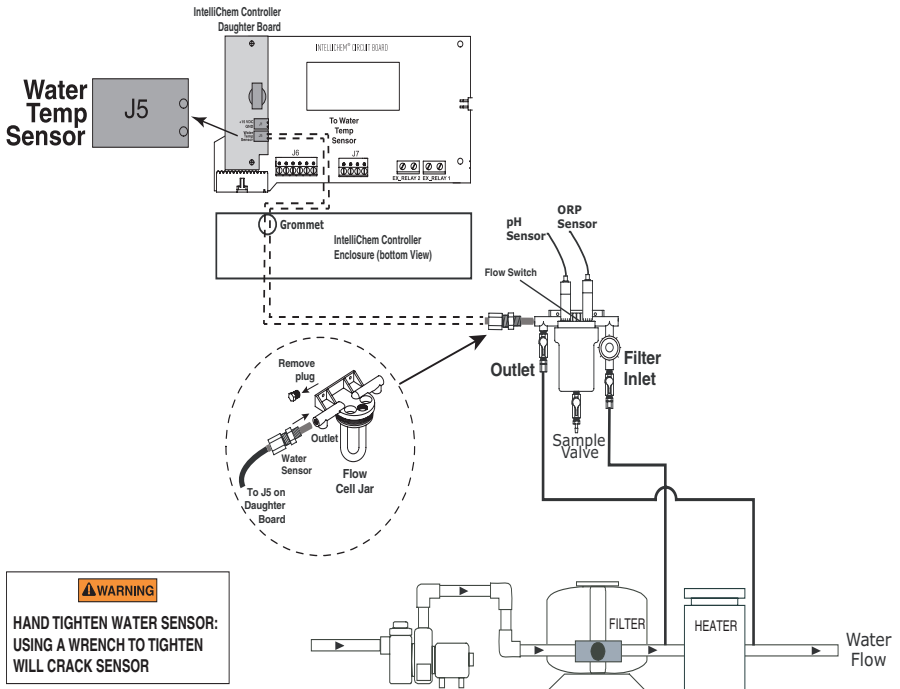9. Reconnect the DC Power Plug on the main Controller board.

PCB Daughter Card

Screw hole for PCB Daughter Card

Screw hole

IntelliCenter Controller Main Board

DC Power Plug

Installing / Wiring the Water Temperature Sensor

Install the Water Temperature Sensor as follows: See Diagram below.

1. TURN OFF POWER TO ALL POOL AND SPA EQUIPMENT BEFORE STARTING. CAUTION! DO NOT PLUG IN OR UNPLUG ANY SYSTEM COMPONENTS WITH THE POWER ON. THIS MAY DAMAGE THE SYSTEM COMPONENTS.
2. Disconnect the DC Power Plug from the main Controller board.
3. The Water Sensor wires are 10 ft long. Be sure the IntelliChem controll enclosure is within 10 feet of the Flow Cell Jar.
4. Remove the plug from the Flow Cell Jar located on the Filter Inlet port side of the jar.
5. Carefully insert the sensor prong into the OUTLET (shown) or INLET port. Screw on the sensor fitting into the port. HAND TIGHTEN ONLY DO NOT OVER TIGHTEN.
6. Route the temperature sensor wires through the same bottom grommet used by the RS-485 wires from the wireless device.
7. Insert the Black and Red wires into J5 connector on the IntelliChem Daughter Card. Note: There is no polarity for the wires.
8. Power up the system and check for water leaks. Water leaks will cause damage to other components! Check the Water Sensor is firmly secure onto the fiting and that water does not leak out of the fiting. Extreme pressure variances may affect readings and can cause damage to the sensors.
9. Reconnect the DC Power Plug on the main Controller board.

IntelliChem® Controller Water Sensor Installation

PARTS LIST

INTELLICHEM (TITLE 22 UPGRADE KIT) PARTS LIST P/N 523537Z

P/N	Description	Qty.
521339	STRAIN RELIEF 1/4" NPT HEYCO M4514	1
521621	LBL HANDLNG LITHIUM ION BATTERY UN3481	1
522657	LBL LITHIUM BATT INFO TEAR OFF DOCUMENT	1
523142	SCREW #6X3/4 PH PHL SS PLASTITE	2
523470	PCBA DAUGHTER CARD ICHEM	1
523542	INST TITLE 22 UPGRADE	1
522669	INST COM INTELLICHEM	1
820041000	SENSTEMP W/FTG 10'ECOLAB	1