The BinLogic

Installation and Operation Manual

IHA Holiday Ice Machine Version

This document makes no guarantee of accuracy or warranties against damages to your equipment or person. By referring to this document you accept that you understand all the terminology and accept any risk associated in performing this work yourself.

If you have any concerns or questions please contact a professional installer.

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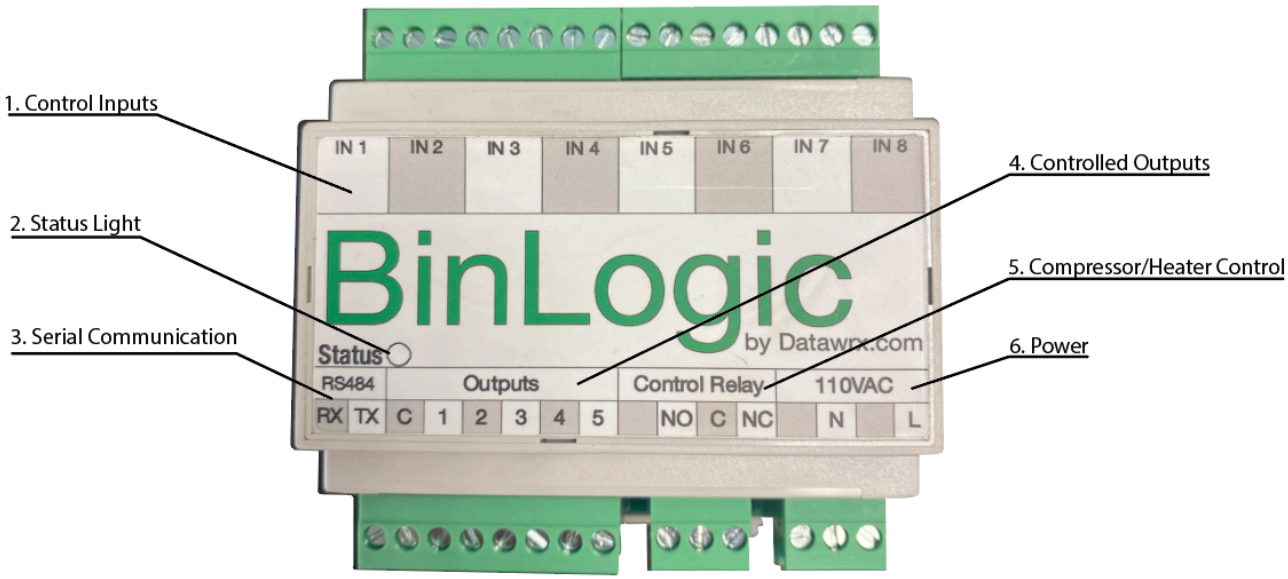
Overview



The BinLogic 2.0 control panel is an upgrade to the outdated control panel on ice makers. It provides several benefits over the mechanical timer, including:

- Increased accuracy and control: The BinLogic 2.0 uses a microprocessor-based logic controller to provide more accurate and precise control over the ice maker's functions.
- Improved efficiency: The BinLogic 2.0 incorporates a safety delay and cold start function which initializes the machine in harvest mode, reducing the load on the compressor on startup. It also includes a flush cycle which will remove the ice off the tubes if a fault does occur so you can diagnose, resolve and restart the machine sooner.
- Ease of Diagnosis: The BinLogic 2.0 is easier to troubleshoot. It includes sensors to monitor the water flow, contactor, heater and hot gas valve. It responds to faults with a graceful shutdown sequence and indicates the specific fault status to enable you to quickly diagnose and resolve the issue.
- Troubleshooting: The BinLogic 2.0 provides clear indicators for each input & output and fault codes to identify the cause of a failure. All of these are available to view remotely in a BinLogic enabled monitoring system.

BinLogic 2.0 Installation and Operations Manual

This document provides instructions on how to replace the mechanical timer panel on a typical IHA installation with the BinLogic 2.0 panel, including safety precautions and a list of materials needed.

WARNING: YOU ARE WORKING WITH HAZARDOUS VOLTAGE.
ELECTRICITY CAN KILL!

Turn off all power to the equipment before proceeding. Test that all circuits are de-energized and no voltage is present in the circuits.
If you are not familiar with alternate current (AC) and safety norms, hire a professional. We can provide references.

Important Safeguards

SAFETY FIRST: If you are not comfortable working with hazardous voltages or are unfamiliar with electricity please contact a professional. Electricity can be fatal!

1. READ ALL INSTRUCTIONS
2. IHA machine wiring varies. Connecting BingLogic incorrectly can damage it or other equipment.
3. Plan before working with electrical equipment, especially near hazardous voltage circuits.
4. Connect a protective earth wire (green or green with yellow stripes) to the ice maker's metallic structure and the ground terminal in the control panel terminal strip.
5. The protective earth conductor is green or green with yellow stripes and is always connected to the neutral of the electrical system in the AC power supply. The hot (live or active) wires are black and red, with a voltage of 220 VAC between them.

Materials Required

To install the BinLogic you will need the following materials:

- A small, medium, and large flathead screwdriver
- A Large and medium Phillips screwdriver
- Wire snips, stripper, and crimper
- A multimeter (To test current and voltage) from Harbor Freight
- A fine point sharpie
- Zip-ties
- Electrical tape
- ½ in, 7/16 in, and ⅜ inch socket driver
- Voltage detector (optional)
- conduit cutter
- Silicon

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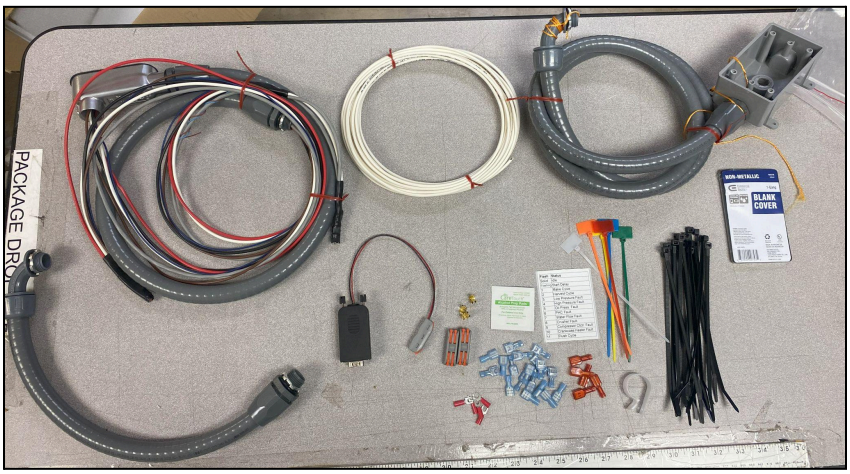
- 8 in long, ½ in drill bit
- Unibut if your ice maker has a cover underneath
- Allen Keys (some machines may require these for the **Fan Contactor**)

Each icemaker uses 1 BinLogic 2.0 kits

The following is provided in the BinLogic kit:

- BinLogic
- Port 2 plug
- 2 core wire for serial comms
- Conduit harness
- Labeling zip-ties
- Crimps
- Zip-ties
- Wago connectors
- Alcohol swab
- Fault code decal
- 6 Self tapping Stainless steel screws
- Conduit with box for serial 2 core



CAUTION: Turn OFF All Power to the Machine

The ice maker and other systems run on a hazardous voltage and the control panels carry voltage from multiple sources. All power sources need to be turned off. From the ***outside*** breaker box: flip all the switches toward off, turn off all breakers in the control panel, and also turn off the large switchgear on the ice makers.

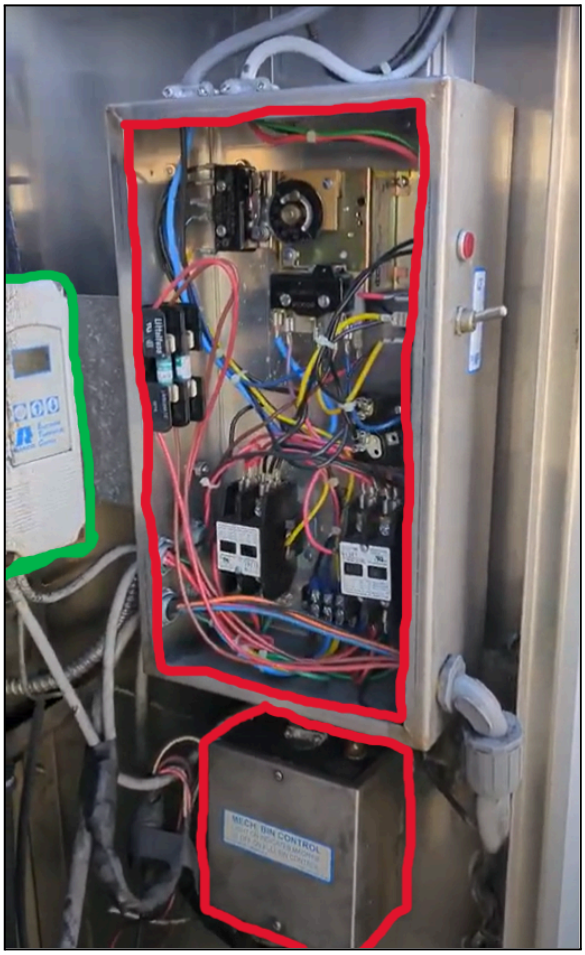
Test with a voltage tester or multimeter first. Wear insulated gloves.

SAFETY FIRST: If you are not comfortable working with hazardous voltages or are unfamiliar with electricity please contact a professional. Electricity can be fatal!

Check List

- **The main breaker in the outside electrical panel is turned OFF**
- **The ice maker breaker beside the ice maker is turned OFF**
- **The breakers inside the control panel are turned OFF**
- **Test with voltage detector or voltmeter that there IS NO live voltage on any terminal**

At the Crusher (Evaporator) Control Panel



Removing the mechanical timer panel

Start by unplugging all the incoming cables from the panel, DO NOT cut the wires or remove the conduits.

Remove the indicator lamp and the toggle switch,fuse holder and the panel.

Undo the 4 retaining nuts that hold the base plate and set them aside - you will need these later.

Remove the entire control panel base plate with the timer, PHC relay, contactors, and any other parts that are present on the base plate.

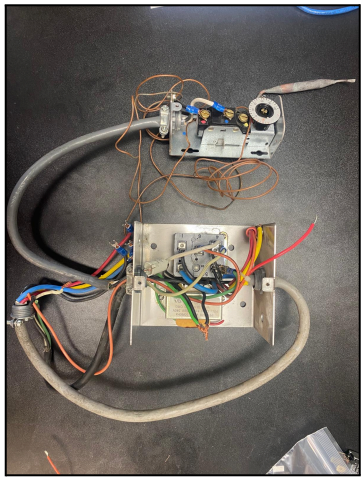
The panel you remove should look like the one shown.

Panel sizes do differ between model years and some components may look different. The mechanical timer has remained consistent.

An example machine showing the old **Timer Wheel Panel** highlighted above the **Mechanical Bin Control**. As well as, the **thermostat** on the left.

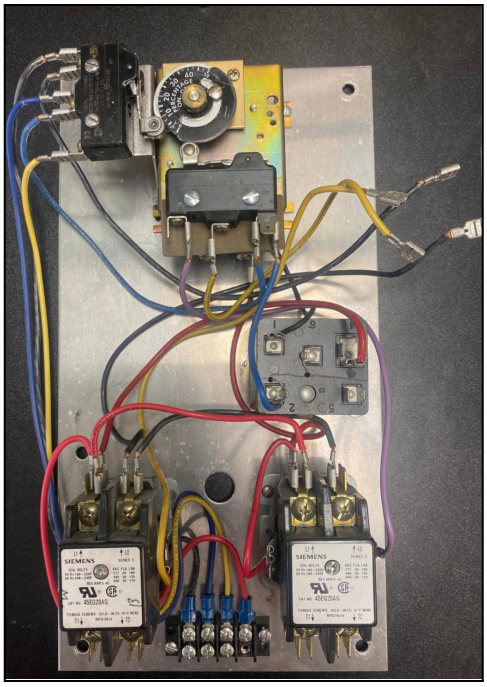
This particular panel also has a set of fuses for the leveler control wires. These fuses can be removed, as our panel has a built-in circuit breaker.

Before starting the installation be sure to **identify all of the wires** needed for the ice maker to run, such as the: **Crusher, Pump, PHC, and Hot Gas Valve**.



Old Mechanical Bin Control
Remove the mechanical bin control and thermostat.

Picture shows a panel removed from the machine.



We recommend installing a digital thermostat e.g Ranco beside the control panel inside the machine with the thermocouple on the outside wall - this makes it easier to adjust and reference.

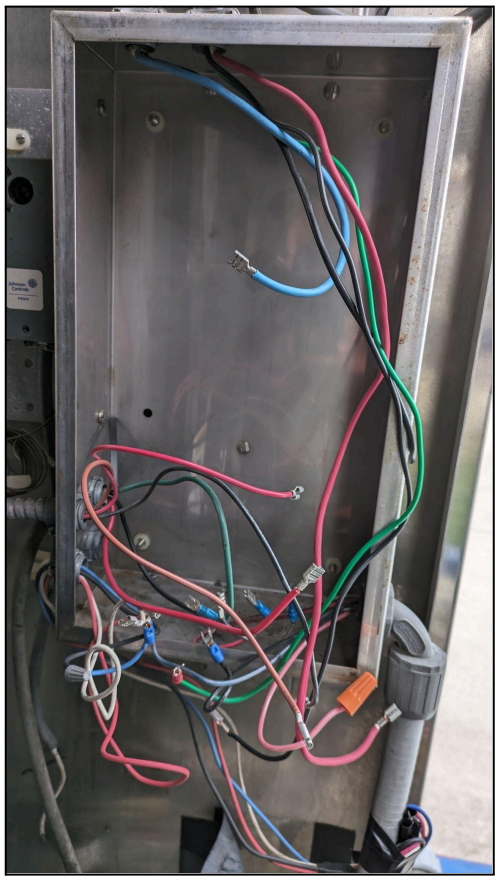
The same thermostat can be used in winter or summer to turn off the icemaker in extreme hot or cold temperatures.

You may have one in the icemaker already - this can be removed and reinstalled beside the PLC panel in the front room for easy access and reference.

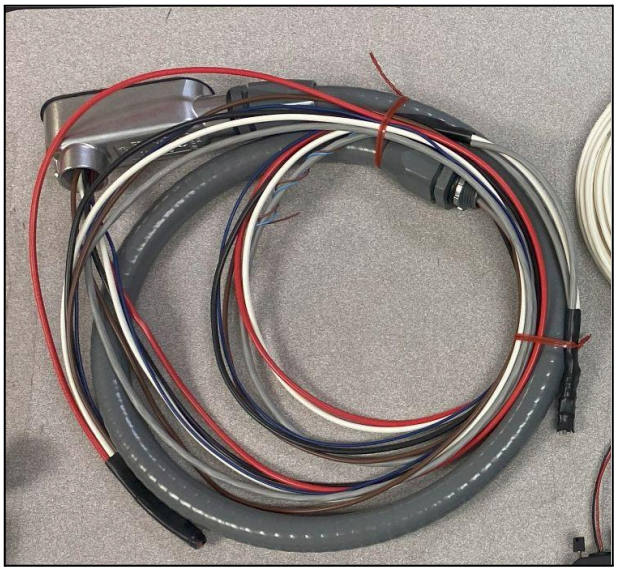
If you have the older mechanical style thermostat, remove it entirely and purchase a Ranco from Amazon or another supplier.

Once the panel has been removed you are left with

- a pair of wires from the crusher motor
- a pair of wires from the pump
- a pair of wires from the PHC switch
- a pair of wires from the hot gas valve
- 3 wires, red, black, and brown wire
    - Red & black are 220VAC
    - Brown goes to the compressor contactor coil



Remove the conduit with the red, black & brown wire which runs between this panel and condenser panel altogether. Make a note of where the wires came off of in the condenser panel.



This conduit will be replaced by the new conduit included in the kit which has the red, black and brown wires along with a multi core cable as shown.

Install this conduit on the condenser side first, wire the cables in the condenser panel, then pull any excess wire back into the control panel before installing the other end onto the control panel to ensure a neat installation.

At the Compressor Side Electrical Panel (Condenser)

Red, Black and Brown Wires

Connect the new **red & black** wires from the new conduit directly to T1 & T2 on the double terminal.

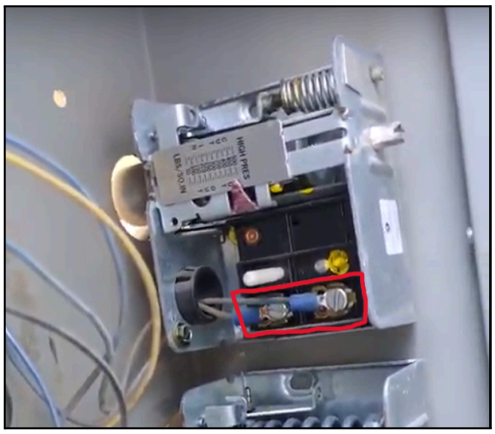
The terminal strip labeled T1 as R, T2 as BLK, and T3 as BR is no longer used.

The Brown pair of wires should be connected to the contactor coil. These should be the only wires on the contactor coil.

Without a CoreSense the oil pressure switch is wired to the coil of a relay (included). If the oil pressure switch trips the relay will turn off, the contacts of the relay are connected to the BinLogic input #3 to detect an oil pressure fault .

If you have a CoreSense with an independent, isolated set of contacts then this can be wired to input 3 of the BinLogic to monitor and report oil pressure independently.

High Pressure

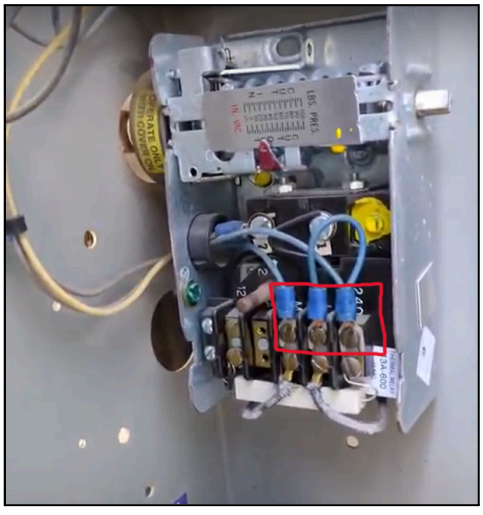


The High-pressure switch is the smaller box of the two pressure switches. It may be labeled **“HIGH PRES”**

Disconnect and remove the blue wires completely.

These wires will be **replaced with the fork crimped red and black** 22 gauge wires from the 6 core wire provided in the flex conduit.

Low Pressure



Low-Pressure Switch can be identified as the larger box of the two pressure switches. It will be labeled **“LBS. PRES.”**

Disconnect and then remove the blue wires going to terminals L & M completely. Remove the jumper between M & 240. The Blue wire on 240 and the Yellow wire on #2 remain.

These wires will be **replaced with the fork crimped green and white** 22 gauge wires from the 6 core wire provided in the flex conduit.

These should be the only wires on L & M

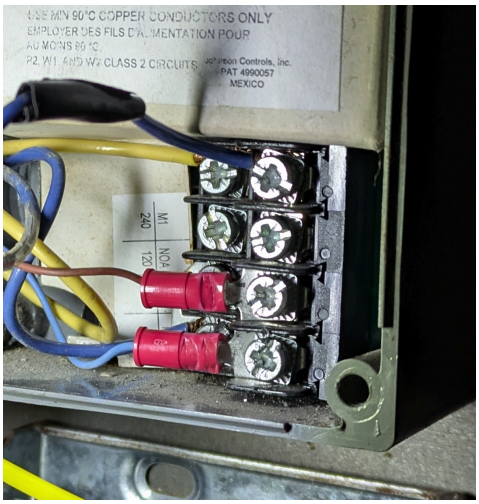
Green will be connected to L

White will be connected to M

NOTE: This is a good time to test that the 1K resistor is good.

Oil Pressure w/o Coresense *(with Coresense see next step)*

A. Johnson Control P545



Install the 220VAC relay provided using the included DIN rail and screws at any convenient location in the panel.
Identify the Blue wire connected to the contactor coil.
Disconnect it from the contactor and connect it to the A2 terminal on the new relay.
Open the cover of the controller and connect the Blue and Brown wires from the new six core wire to the terminals marked CMA & NCA respectively.
Using a yellow wire connect the 220V relay coil to T1 on the distribution terminal.
Note: We are only using the relay as an indicator and also if the oil pressure switch is replaced with a Sentronic you will have the relay.

B. Sentronic 2 or 3

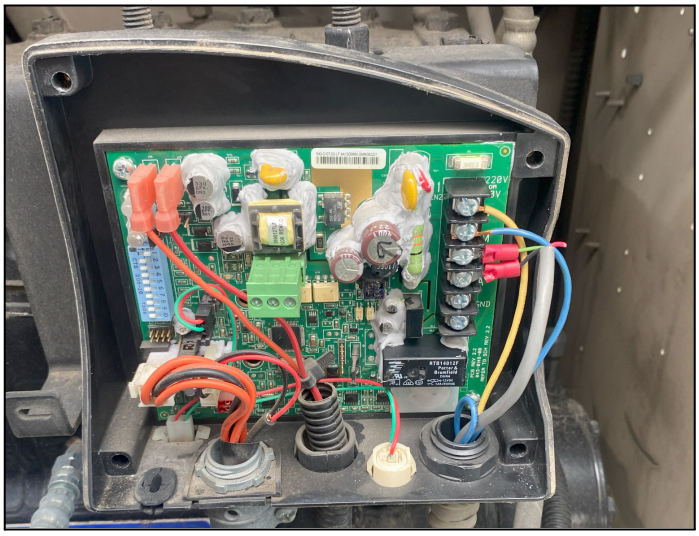
Identify the blue wire from the oil pressure switch that is connected to T3 (BR) on the terminal strip, label this wire Oil Pressure (L). Identify the blue wire from the oil pressure switch that is connected to the contactor coil, label this wire Oil Pressure (M). Identify the Yellow wire from the Oil Pressure switch and label it Oil P L1.
Install the 220VAC relay provided using the included DIN rail and screws at any convenient location in the panel.
Move the Blue wire labeled Oil Pressure (L), connect it to T2 on the distribution strip terminal.
Move the wire labeled Oil Pressure (M), connect it to the 220V relay coil A2 terminal.
Move the Yellow wire labeled Oil P L, connect it to the underside of the contactor to the switched L1 terminal.
Using the new yellow wire included, connect the 220V relay coil A1 terminal to T1 on the distribution terminal block.
Connect the Blue and Brown wires from the BinLogic to the COM (11) and NO (14) terminals of the new relay, it is not important which goes to which.

Note: *The oil pressure switch has a built in delay from power up before it will report a low pressure. Without power the oil pressure switch keeps the contact closed. We need the new relay to stay powered at all times except when there is a fault.*

Check List - see Schematic 2

- ☐ T3 terminal has the Brown wire from the new conduit, the new Brown wire going to the contactor coil.
- ☐ Yellow wire from oil pressure switch connects to L1 on the underside, NO terminal of the contactor
- ☐ Yellow wire from L1, connects to A1 of the relay.
- ☐ Blue wire from Oil Pressure Switch labeled M is connected A2 of the relay
- ☐ Thin Blue & Brown pair from the six core wire are connected to the 11 & 14 of the relay

Oil Pressure CoreSense *(No Coresense see prior Step)*



The CoreSense can be located on the Compressor. You will have to remove the metal grate on the side.

Identify the 2 wires that connect to “**L**” and “**M**” on the terminal strip in the CoreSense, use the labeling zip ties to label them “Oil Pressure 24VDC”. Disconnect them on the other side of the conduit in the panel.

Identify the yellow and blue wires that connect to the 220V terminals, use the labeling zip ties to label them “Coresense Power 220VAC”

Use a continuity tester to verify that you have identified the wires correctly.

On the panel side connect the wires from L&M labeled Oil Pressure 24VDC to blue and brown on the 6 core that goes to the BinLogic Panel using a 2x2 Wago connector.

Connect the Blue wire from Coresense labeled Coresense Power 220VAC to L2 on the power distribution terminal. The Coresense detects voltage fluctuations and has a start delay timer so it requires power at all times. Make sure the Yellow lead from the pair labeled Coresense Power 220VAC to L1 on the power distribution terminal.

See Schematic 3

Crankcase Heater

Identify the pair of wires powering the **crankcase oil heater**.

- ➔ Without the Coresense
  - ◆ this is the Blue and Yellow pair run along the 3 phase power cables to the compressor
- ➔ With the Coresense and a Relay
  - ◆ This is the Blue wire connected to the NC terminal of the Relay. The relay and all other wires connected to it can be removed entirely.

Disconnect the blue and yellow wire and connect it, using a wire nut, to the 18 AWG blue pair of wires in the new conduit.

Fan Control

The BinLogic only engages power via its Fan control during the Make Cycle and turns it OFF in the Harvest Cycle. The pressure control switches or FCS are in series and will turn ON the fans in sequence based on the pressure switch settings.
Using this relay is optional but if power to the fans is wired through the BinLogic Fan Relay it will ensure that a stuck FCS does not stop you from making ice.
Identify the 2 fuses (usually labeled F3 & F4) or circuit breaker that supplies power to the fans.
Disconnect and remove the Blue & Yellow wires completely.
Connect the heat shrinked pair of Red & Black wire from the new conduit in their place. There is no polarity but for consistency connect the red wire on the left, black on the right.

Checklist

- ☐ The Brown pair of wires from the BinLogic are connected to the contactor coil directly. There are no other wires on the contactor coil
- ☐ The Red and Black wire pair providing power to the BinLogic are connected to T1 & T2 on the distribution terminal.
- ☐ With a Coresense only - the Blue and Yellow wires providing power to the CoreSense are connected to T1 & T2 on the power distribution terminal
- ☐ The Blue wire pair from the BinLogic is connected to the Blue & yellow wires to the Crankcase heater.

3 Phase Monitor

If you have a 3 Phase Monitor in your panel use it to cut-off power to everything by connecting L2 to the Common terminal of the switching relay and Normally Open to T2 of the terminal strip.
BinLogic and icemaker will only receive power once the 3 Phase Monitor check and safety delay is complete on power up.

Installing the new panel

Pull any excess wire through to the other side of the conduit before attaching it to the rear of the evaporator enclosure. Attach using a gland short conduit.

Pass the wires through the short conduit and attach the other end to the control panel.

Install the new panel which should drop right in and secure with the original nuts.

Connect the multicore cable to the inputs of the bin logic starting from left to right

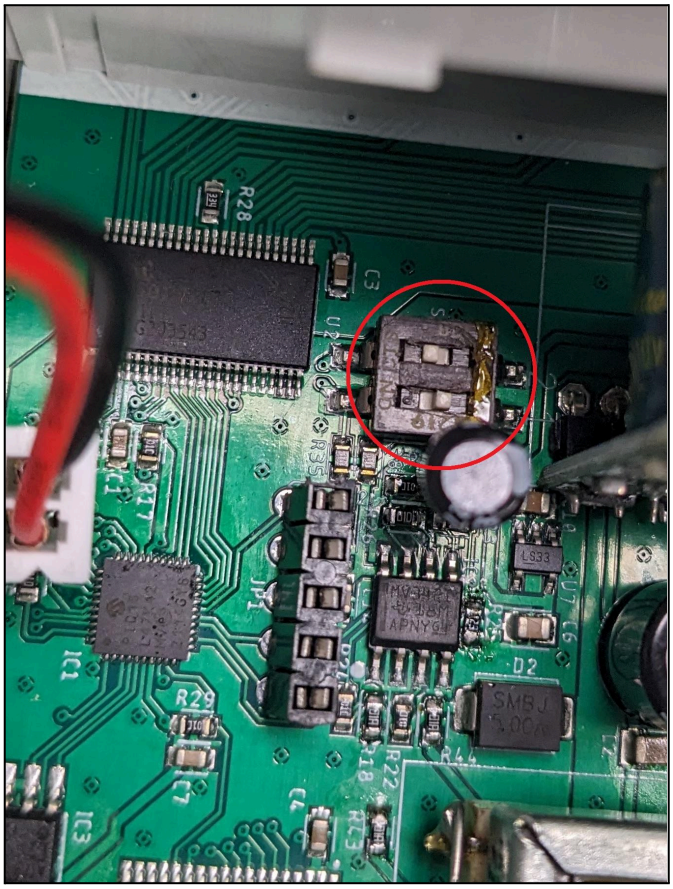
- Green & white to input 1
- Red & **black** to input 2
- Connect the blue and brown wires to input 3
- Connect the pair of wires from the PHC pressure switch two input number 4 labeled PHC
- Blue and **black** wires coming from the control panel in the icehouse through a conduit to the Waygo connector coming from the switch
- Install the External LED and connect to the terminal marked LED, pay attention to polarity.
- Install the new Toggle Switch
- Connect the 18 AWG brown wires to the plug marked contactor
- Connect the 18 AWG blue wires to the plug marked heater (H)

Connect the high voltage wires going from R to L

- the pair of wires from the pump plug into the connector labeled PUMP
- the pair wires from the crusher motor plug into the connector labeled CRUSHER
- the pair of wires from the hot gas valve plug into the connector labeledHOT GAS VALVE
- (if you have a leveler) the red & brown pair from the leveler relay plug them into the connector labeled LEVELER.
- Connect the ground wire from the crusher and hot gas valve to the ground terminal
- Connect the red and black wire without shrink wrap to the breaker, match colors to the wires on the opposite side of the breaker. Red is usually L1 and Black is L2.
- Connect the 18 AWG heat shrink wrapped Red & Black pair to the relay marked Fan

Dip Switches

There are 2 DIP switches inside the BinLogic. They are accessed by opening the lid.
TURN OFF POWER BEFORE PROCEEDING
The lid can be opened by inserting a small screwdriver in the notches around the label and prying up each of the 4 gently. The lid will remain attached to the circuit board on the LED wire.



The top #2 switch controls the contactor and heater checks. ON to the left means that the BinLogic will check the crankcase heater is drawing current while the compressor is OFF and while the contactor is energized by the BInLogic it is monitoring the contactor.
If either fails the BInLogic will display a fault code and prevent operation of the ice maker.

The bottom #1 switch controls the Flow and RPM checks for the pump and crusher respectively.
ON to the left will cause the BinLogic to look for a Flow input while the pump is running and a RPM input while the crusher is spinning. These require optional Flow and RPM sensors to be installed
If these switches are to the right in the OFF position the BinLogic will skip these checks.

Flow Switch & RPM Switch

If you have installed these optional items:

- Wire the Flow Switch to Input 5 of the BinLogic. When Flow is detected Input 5 LED will illuminate.
- Wire the RPM Switch to Input 6 of the BinLogic. When high speed RPM is detected the LED on the sensor and the Input 6 LED will illuminate.

Neither device is polarized so the pair of wires need not be connected in a specific order. Do make sure they are connected to the correct terminal pair by function.

RS485 Serial Communications with PLC

The BinLogic communicates its status to your PLC so that a monitoring system can access this information. This requires you to use the included Serial Port 2 adapter.

You will need to run the included 2 core, shielded cable from the BinLogic Rx(+)/Tx(-) terminals to the PLC.
There is a short conduit with a junction box at the end in the kit. Attach the junction box to the wall of the ice house such that you can drill a hole through the wall behind the junction box to pass the wire through. The conduit runs from the control panel in your ice machine to the junction box.
The 2 core wire runs through this conduit, through the junction box, into the machine. From there you will run it along the conduit all the way to the PLC.
You may have to drill a hole in the panel if don't have any to pass the wire through.
Connect the PLC end of the wire to the Serial Port Adapter A(+)/B(-).
You will need to call your monitoring service provider to program the port to accept the data.

Test and Startup

DO NOT TURN ON POWER just yet.

- Make sure all connections are secure, tug gently on all the wires to make sure they are securely crimped or screwed down.
- Unplug the green connector from the BinLogic control relay.This is to prevent power from going to the compressor. (The 3-pin plug bottom and middle, and their wires are Brown (connected to NO terminal), Black (connected to C terminal), and Blue (connected to NC terminal) Left to Right).
- Make sure all tools and body parts are clear of the motor, belts, and wiring. The crusher and pump will come ON.
- If you do not have a Flow Switch or RPM Sensor move DIP switch 1 on the circuit board to the right (OFF).

TURN ON POWER

- ☐ With the toggle switch in the middle OFF position. Turn on the Power.
- ☐ The BinLogic should have power.
- ☐ INput 1 should be ON - pressing the Reset button on the Low Pressure switch will cause INput 1 to turn OFF
- ☐ INput 2 should be ON - pressing the Reset button on the High Pressure switch will cause INput 2 to turn OFF
- ☐ INput 3 should be ON - pressing the Reset button on the OIl Pressure Sensor will cause INput 3 to turn OFF

- ☐ INput 4 - 8 should be OFF
- ☐ OUTputs 1-4 should be OFF
- ☐ OUTput 5 should be blinking 10 times with the toggle in the Run position indicating a Crankcase Heater Fault since we have the BinLogic Control Relay (green plug) unplugged.
- ☐ External LED should match OUTput 5
- ☐ Control RELAY should be OFF

TEST PUMP

- ☐ Put the Toggle Switch in PUMP position, INput 8 should come ON, after a 2-second delay the pump should run.
- ☐ If you have a Flow switch installed, INput 5 will turn ON.

RUN

- [ ] Turn off power to the panel
- [ ] Plug in the 3-pin plug with the Brown, Black & Blue wires back into the Control Relay
- [ ] Put the Toggle Switch in the middle, OFF position
- [ ] Put the Toggle Switch in the RUN position, INput 7 should come ON
- [ ] Turn on the power, Status LED begins flashing continuously indicating it is in safety delay.
- [ ] Press the reset button on the low pressure switch. The status led should flash 3 times indicating a low pressure fault. Move the toggle to pump to reset, switch back to run.
- [ ] Press the reset button on the high pressure switch. The status led should flash 4 times indicating a high pressure fault. Move the toggle to pump to reset, switch back to run.
- [ ] Press the reset button on the oil pressure switch or the coresense. The status led should flash 3 times indicating a low pressure fault. Move the toggle to pump to reset, switch back to run.
- [ ] Wait for the Safety Delay, the Status Led will flash for 3 minutes from power up.
- [ ] IF INput 8 is ON check that all the icemaker control switches i.e. bin full, manual switch, leveler overload, remote control, and thermostat are operating.
- [ ] With INput 8 OFF:
    - [ ] without RPM & Flow Sensor - the Control Relay indicator will come ON along with the crusher and hot gas valve OUTputs turning on the compressor, crusher, and hot gas valve.
    - [ ] with RPM & Flow Sensor - the Pump and Crusher will go through a test cycle before starting the compressor.
    - [ ] *NOTE: The machine always starts in Harvest cycle on cold start..*
- [ ] After 30 seconds the Crusher and Hot Gas Valve will turn OFF, Pump and Fan relay will turn ON.
- [ ] Make sure at least one fan comes on and if it's hot the 2nd fan should come on too subsequently.

- [ ] If any of the icemaker control switches listed above engages INput 8 will come ON after a 2-second delay and the BinLogic will complete the last harvest, shut down and go into an idle state.

- [ ] The ice maker should remain in the Make Cycle for exactly 7 minutes after which it will return to the Harvest Cycle.

- [ ] In the Harvest Cycle, it will wait for the PHC to turn OFF, after 30 seconds of PHC turning OFF the Make Cycle resumes.

Toggle Switch Function

- In the Make Cycle, flipping the toggle switch instantly to Pump will cause it to switch to the Harvest Cycle. At the end of the Harvest Cycle, the compressor will turn OFF and the pump will continue to run.
- Flipping the toggle switch to OFF at any time will cause everything to Stop.
- Flipping the Toggle Switch from OFF to Pump will cause the Pump to run.
- Flipping the Toggle Switch to Pump when the ice maker is shut down due to a fault it will Reset the BinLogic if all fault conditions are resolved - see troubleshooting guide.

NOTE:

- There is a 2-second delay on all inputs before they take effect.
- There is a 3-minute delay from a Cold Start or any time the compressor turns OFF before it is permitted to come back ON.
- If the BinLogic detects a Fault it will stop the compressor and follow a shut down sequence dependent on the fault- see Retained Fault State.

Retained Fault State

Whenever any input changes state the BinLogic will allow for a 2 second delay before acting on the change. Thus when a fault occurs it has to remain in fault for 2 seconds before it is considered a valid fault.
Once a fault has registered the BinLogic will take appropriate action and also hold the fault state in memory until it is Reset by moving the toggle switch to the Pump position.
E.g. a Low Pressure fault occurs, the same may be reset manually or automatically but the BinLogic will continue to report the fault and prevent the compressor from running until the operator Resets it via the Toggle Switch or it is rebooted by a power cycle.
Some older units will not retain fault state for Low Pressure, High Pressure and Oil Pressure. These can be replaced with a unit with newer firmware. Please contact support.

Troubleshooting - BinLogic Flash Code

See the Status LED - it indicates the current or fault state of the machine

Each INput and OUTput has an LED on the circuit board indicating whether it is ON or OFF

Solid - idle state

- Check that the BinLogic has power see power LED.
- Unit is in idle state
- see Input 7 LED - if lit Mode switch is in Run mode
- See input 8 LED - if 8 is lit along with 8, BinLogic is in Standby since the bin is full or the thermostat or user has turned ON standby mode.
- NOTE: There is always a 2 to 5-second delay before the BinLogic will act on any state change.

Rapid Flash - startup delay

- The Binlogic is in a 3-minute delay from power up OR the last time the compressor turned off. This is to protect your compressor from intermittent cycling.

1 Flash: Make Cycle

- During the Make cycle the compressor and pump will run for 7 minutes to form ice on the tubes.
- Pressure inputs, water flow, and compressor are continuously monitored
- If any of these fail the BinLogic will fail over to the Flush cycle.

2 Flash: Harvest Cycle

- The compressor, hot gas solenoid, and crusher will run for a short duration.
- The BinLogic is expecting the PHC to be ON at start and will wait for 3 minutes for it to turn off.
- Once it turns off the harvest will run for an additional 30 seconds to ensure that all ice is cleared of tubes and the crusher.
- The crusher is expected to be in continuous rotation.
- If any failures are detected the BinLogic will fail over to the Flush cycle. ● Anything greater than 2 flashes (other than rapid continuous flash) is an error code

3 Flash: Low-Pressure Fault

- The Low-Pressure Switch tripped - INput 1 turned OFF
- Check for water flow by turning the control switch to Pump mode. This will also reset the Fault indicator.
- Check for any other causes that could have triggered a Low-Pressure Fault - refer to your equipment operation manual.
- Reset the Low-Pressure switch - check that Input 1 is now lit.
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.

- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation

4 Flash: High-Pressure Fault

- The High-Pressure Switch tripped.
- Check for any other causes that could have triggered a High-Pressure Fault - refer to your equipment operation manual.
- The High-Pressure switch must be reset manually by the operator.
- The High-Pressure switch input 2 should turn ON
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.
- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation

5 Flash: Oil Pressure Fault

- Check for any other causes that could have triggered an Oil Pressure Fault - refer to your equipment operation manual.
- The Oil Pressure switch must be reset manually by the operator.
- The Oil Pressure Switch input 3 should be ON.
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.
- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation.

6 Flash: Positive Harvest Control Fault

- Either the Harvest Control Switch was not ON at the start of the Harvest cycle or did not turn OFF within 3 minutes from the start of the Harvest Cycle.
- Check for problems with the Positive Harvest Control switch - refer to your equipment operation manual.
- The Positive Harvest Control input is normally ON and will turn OFF briefly during the Harvest Cycle.
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.
- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation

7 Flash: Water Flow Fault

- Water flow was not detected during the Make cycle.
- Check for water flow by turning the control switch to Pump mode. This should turn ON the pump and the Water Flow input should also turn ON.
- Check for low water pressure on your supply line.
- The Water Flow input should be normally ON while the pump is running and adequate water is flowing over the tubes.
- Move the control Switch to Run to resume operation

8 Flash: Crusher Rotation Fault

- The Crusher rotation was not detected during the Harvest cycle.
- Check the crusher motor belt for breaks or looseness.
- Check that the crusher is not bound up on ice.
- The Crusher Rotation input is normally ON while the motor is running and the crusher is spinning.
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.
- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation

9 Flash: Compressor Contactor Fault

- Contactor operation was not detected during the Make or Harvest cycle
- If you do not have a Coresense oil pressure switch - check the oil pressure switch. The oil pressure switch is wired in series with the contactor and will cut off power to the contactor coil if tripped.
- Test the contactor - refer to your equipment operation manual.
- There is no indicator to display the contactor operation status but power is supplied to energize the contactor when the BinLogic relay is ON.
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.
- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation

10 Flash: Crankcase Oil Heater Fault

- Heater is not drawing any current while the compressor is off.
- Test the heater - refer to your equipment operation manual.
- There is no indicator to display the heater's operation status but power is supplied to energize the heater when the BinLogics compressor control relay is OFF.
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.
- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation

11 Flash: In Flush Cycle triggered due to a Fault

- This is a mode designed to clear any remnants of ice that remain on the tube.
- The pump and crusher are run for a short duration. During the Flush cycle if water flow is not detected only the crusher will operate and if crusher rotation is not detected only the pump will run.
- The Hot Gas Valve will not be energized.
- The Flush Cycle can be halted by moving the Toggle Switch to the Stop position. The Flash code will now indicate the fault that caused the Flush Cycle to start.
- Resolve the issue.
- Move the Toggle switch to Pump, wait for the pump to run. This also Resets the error code in the BinLogic.
- Move the Toggle switch to OFF, wait for the pump to stop.
- Move the Toggle Switch to Run to resume operation.