



# **AUTO-SHUTOFF 3 WIRE 120V INSTALLATION INSTRUCTIONS**

Pre-wiring Instructions  
**Auto-Shutoff Amp Limit 120v  
with Accessory Board**

## **⚠WARNING**

**FOR YOUR SAFETY**—This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed where such state or local requirements exists. In the event no such state or local requirement exists, the installer or maintainer must be a professional with sufficient experience in pool equipment installation and maintenance so that all of the instructions in this manual can be followed exactly. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or loss of life. Improper installation and/or operation will void the warranty.

To protect against risk of electric shock which could result in fire, property damage, serious injury, or death, all wiring and servicing must be performed with the power turned off at the circuit breaker. All wiring must be done in accordance with all applicable local and national codes, such as the National Electrical Code (NEC). If a conflict exists between local and national codes, follow what is required by the local Authority Having Jurisdiction (AHJ).

This system uses sensors that automatically stop the cover when it has reached either the fully opened or fully closed position. A low voltage (5v DC) key switch or CoverLink™ controls all cover motion (stop, start, cover, and uncover). An accessory board or the AquaLink® can be used with this system that controls water features, lights, and other pool accessories.

### **REQUIREMENTS:**

1. The required power is a dedicated 120v 15amp G.F.C.I. Breaker. **All G.F.C.I. Breakers must be motor rated.**
2. The key switch or CoverLink™ is installed in a weathertight housing. The single gang weathertight housing requires a space 4-5/8" high x 2-7/8" wide x 2" deep, conduit connections are 1/2" NPT. The housing can be recessed or surface mounted. **THE KEY SWITCH MUST BE MOUNTED IN FULL VIEW OF THE POOL.**
3. **Option 1 (see illustration on page 2):** Conduit leading into the motor end of the cover housing should terminate in a J-box. From the J-box provide 36" of waterproof flex conduit with 1/2" NPT watertight connectors. DO NOT route conduit throughout the cover housing!  
**Option 2 (see illustration on page 2):** Conduits leading into the motor end of the cover housing should terminate into 36" of waterproof flex conduit with 1/2" NPT watertight connectors. DO NOT route conduit throughout the cover housing!

### **Main Power:**

#### **Option 1 (see illustration on page 2):**

Pull (3) 14 AWG stranded wires (HOT, NEUTRAL, GROUND) from the power source to the auto-shutoff.

Pull (4) 14 AWG stranded wires (NEUTRAL, GROUND & DIRECTIONAL) from the auto-shutoff through the J-box to the Motor. Larger gauge stranded wire may be required for runs longer than 50 feet.

Pull (3) 18 AWG stranded wires from the auto-shutoff to the J-box for sensors.

#### **Option 2: (see illustration on page 2):**

Pull (3) 14 AWG stranded wires (hot, neutral, ground) from the power source to the motor. Larger gauge stranded wire may be required for runs longer than 50 feet.

**⚠WARNING** To prevent the risk of fire and electric shock, which could result in serious injury or death, be sure not to damage any wire insulation when installing the power wiring.

### **Cover Switches:**

Option 1: Key Switch 5v – Pull (3) 18 AWG (min) stranded wires from the auto-shutoff to the key switch.

Option 2: CoverLink Wired Control – Pull (4) 18 AWG (min) stranded wires from the auto-shutoff to the CoverLink.

Option 3: CoverLink Wireless Control – See 600598 Pre-wiring CoverLink Wireless Control

### **Accessory Lockout:**

Optional accessory board pull (4) 18 AWG stranded wires from auto-shutoff to accessory board.

For wiring accessory board see the following:

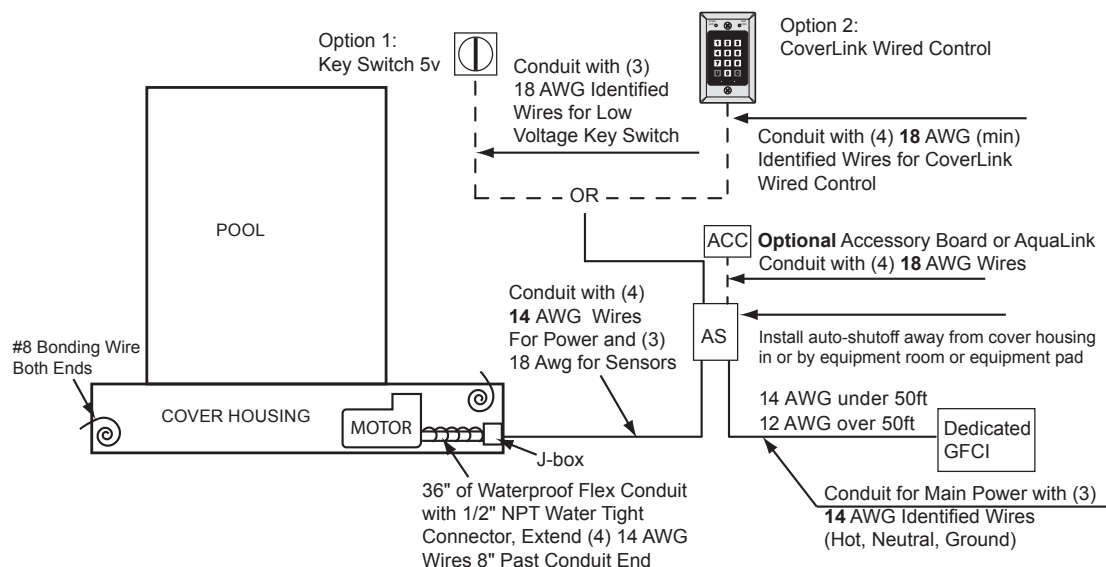
600223 WIRING ACCB #050253 TO WATER FEATURE PUMP MOTOR

600273 WIRING ACCB AMP LMT TO ACTUATOR W-CONTROL PANEL

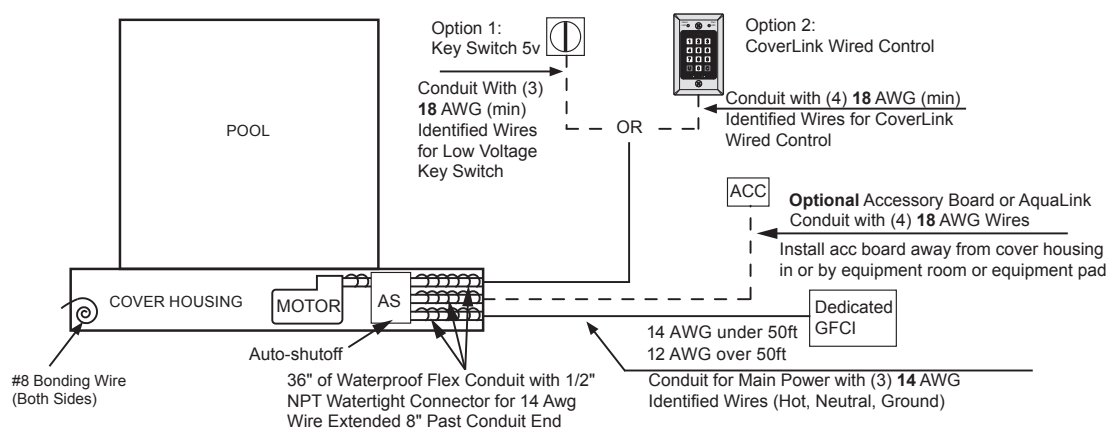
600344 WIRING ACCB AMP LMT MDL #050253 JANDY® OR COMPOOL® VALVES

**WARNING! These are minimum recommendations only.  
All local and federal codes of standard safe practices must be followed.**

## OPTION 1: Auto-Shutoff mounted outside housing.

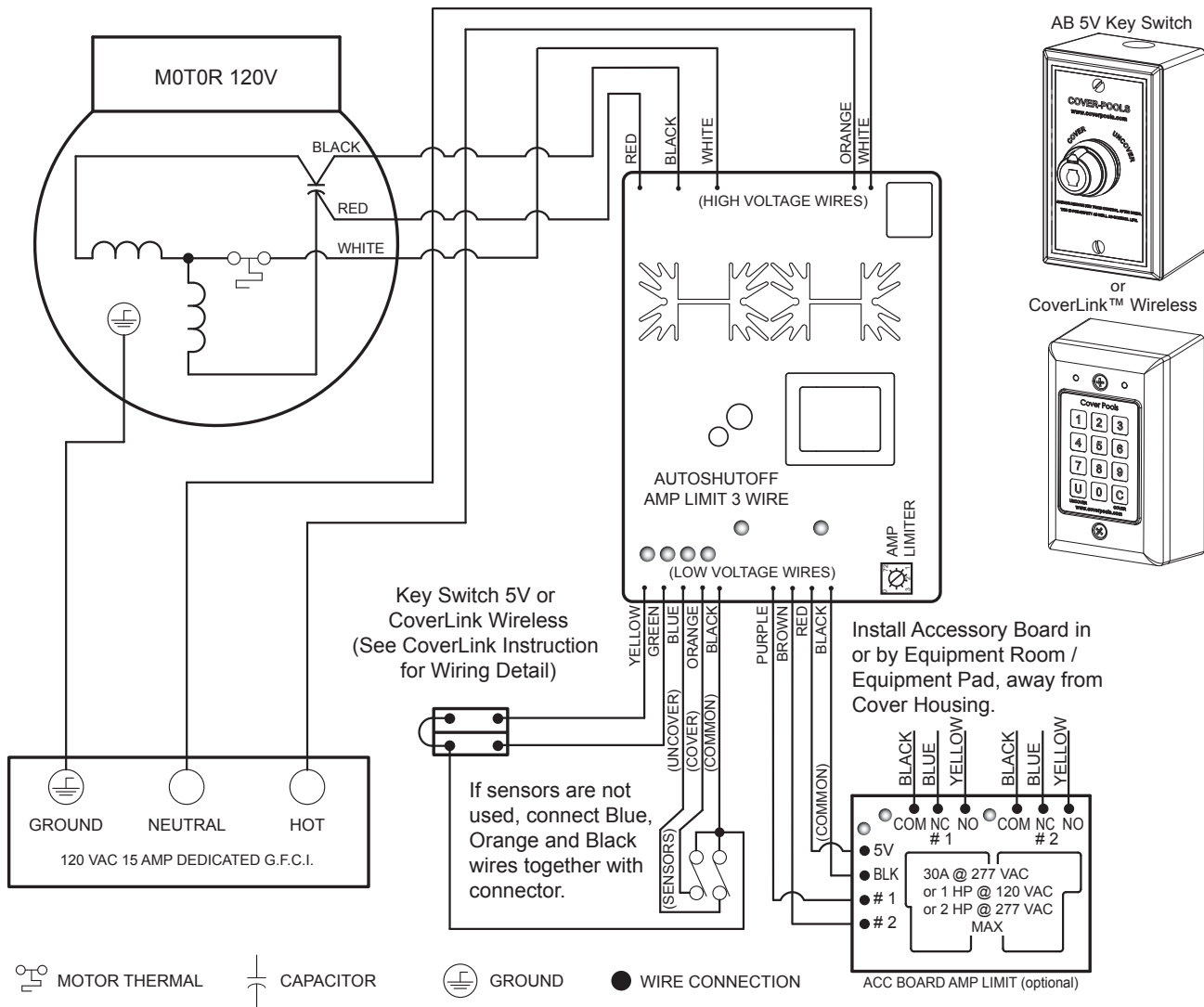


## OPTION 2: Auto-Shutoff mounted inside housing.



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**Motor 120v Model #050239 or Model #050348  
to Auto-Shutoff Amp 3 Wire Limit 120v Model #050338/050440  
with Acc Board Model #050253**



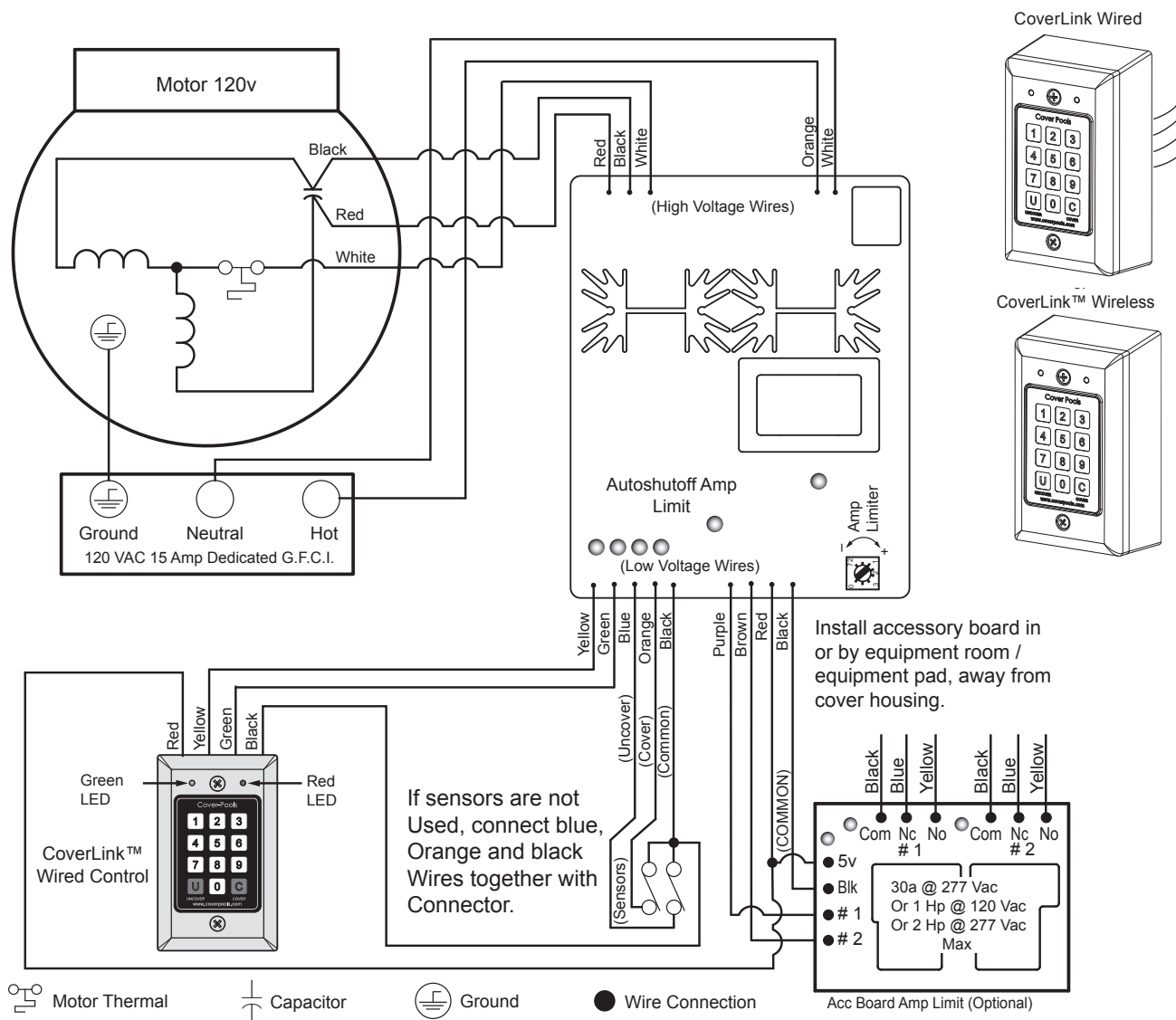
1. To change motor direction, exchange red and black motor wire connections or yellow and blue auto-shutoff amp limit wire connectors on high voltage side.
2. To change key switch orientation (uncover to cover and vice versa), exchange yellow and green key switch wires.
3. Accessory terminals (purple, brown, red, black) are for use with acc board amp limit.
4. Accessory board function: At the fully uncovered position, the purple auto-shutoff wire signals the #1 relay to switch to the (no) position. At the fully covered position, the brown wire signals the #2 relay to switch to the (no) position. Note: to get both relays to function the same, leave the brown or purple wire disconnected and install a jumper between the remaining wire and terminal. (e.g., purple to both 1 and 2 with brown disconnected).
5. Use only listed (UL, CSA, ETL, etc.) silicone filled connectors for all wire connections. With silicone connectors, you must twist the wires together first and then thread them on the connector until tight.

**⚠ WARNING**

To prevent risk of electric shock which could result in fire, property damage, serious injury, or death

- All controllers must be in full view of the pool.
- All connections to the motor and control must be watertight.
- Do not allow water to enter the control box. Water infiltration to this control box can cause electrical fault or other malfunction creating a risk of personal injury.
- Disconnect all power at the circuit breaker before servicing.
- Use copper conductors only.
- All wiring must be done in accordance with all applicable local and national codes, such as the National Electrical Code (NEC). If a conflict exists between local and national codes, follow what is required by the local Authority Having Jurisdiction (AHJ).
- Cover equipment must be bonded according to the NEC.

**Motor 120v Model #050239 or #050348  
to 3 Wire Auto-shutoff Amp Limit 120v Model #050338/050440  
with CoverLink™ Wired Control Model #050332  
and Acc Board Model #050253**



1. To change cover direction (uncover to cover and vice versa), exchange control wires yellow and green.
2. Accessory terminals (red & black) are used with CoverLink control
3. Accessory terminals (purple, brown, red & black) are used with board amp limit.
4. Accessory board function:  
at the fully uncovered position, the purple auto-shutoff wire signals the #1 relay to switch to the (no) position.  
At the fully covered position, the brown wire signals the #2 relay, to switch to the (no) position.  
*Note: to get both relays to function the same, leave the brown or purple wire disconnected and install a jumper between the remaining wires. (Eg.: Purple to both 1 and 2 with brown disconnected).*
5. Use only listed (UL, CSA, ETL, etc.) silicone filled connectors for all wire connections. With silicone connectors, you must twist the wires together first and then thread them on the connector until tight.

**⚠ WARNING**

**To prevent risk of electric shock which could result in fire, property damage, serious injury, or death**

- All controllers must be in full view of the pool.
- All connections to the motor and control must be watertight.
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- Disconnect all power at the circuit breaker before servicing.
- Use copper conductors only.
- All wiring must be done in accordance with all applicable local and national codes, such as the National Electrical Code (NEC). If a conflict exists between local and national codes, follow what is required by the local Authority Having Jurisdiction (AHJ).
- Cover equipment must be bonded according to the NEC.

## Adjusting Amp Limiter and LED Function of the 3 Wire Auto-shutoff Amp Limit 120v Model #050338 or 220v Model #050352 w/ ACC Board 120v/220v Model #050253

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The auto-shutoff amp limit board has LED lights to ease installation and diagnostics. The board also has an adjustable amp limit feature. The amp limit feature stops the cover by sensing the amperage draw to the motor. If the cover runs into an obstacle or resistance (e.g., water on the cover, dirt or contamination in the tracks, something damaged on the system) during the cover or uncover cycle, the amp limit feature will sense the additional load and shut off the motor. The optional accessory board can be used to lockout water features or other accessories when the cover is **NOT** fully open it can also lockout optional accessories when the cover is **NOT** fully closed.

#### ADJUSTING THE AMP LIMITER

Adjust the amp dial (A) with a small screwdriver, turning clockwise or counter clockwise, to the lowest position required to run the cover in both the cover and uncover cycles without the amp limit feature turning off the motor. Then, increase the amp dial setting 1/8 turn clockwise.

**Caution: An adjustment that is too high can lead to premature mechanism and/or rope failure.**

#### AUTO-SHUTOFF AMP LIMIT BOARD LED FUNCTION

- LED 1 (flashing).....Power on, processor functioning.  
(Green)
- LED 2 (on) .....Key contacted to Cover position.  
(Green)
- LED 3 (on) .....Key contacted to Uncover position.  
(Green)
- LED 4 (on) .....Sensor circuit connected (Uncover Sensor).  
(Yellow)  
NOTE: When the magnet is activating the limit sensor, the LED will go off
- LED 5 (on) .....Sensor circuit connected (Cover Sensor).  
(Yellow)  
NOTE: When the magnet is activating the limit sensor, the LED will go off.
- LED 6 (on) .....Amp Limit is above the setting. The motor will turn off if the red LED 6 stays on for 1/4 second.  
(Red)  
(Feature delayed by 2 seconds at motor start up.)
- A .....Amp limit potentiometer clockwise  increases the amps (torque) available before shut down.

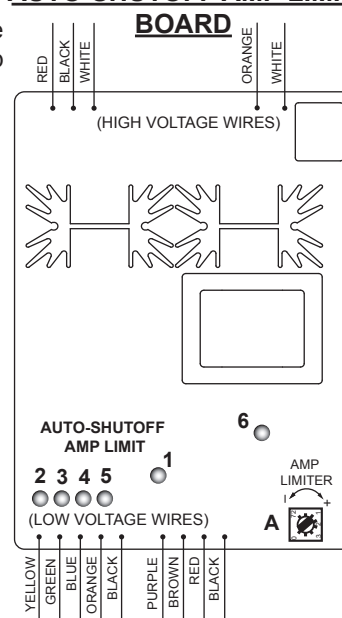
#### ACCESSORY BOARD FUNCTION

At the fully uncovered position, the purple auto-shutoff wire signals the #1 relay to switch to the (NO) position. At the fully covered position, the brown wire signals the #2 relay, to switch to the (NO) position. Note: To get both relays to function the same, leave the auto-shutoff brown or purple wire disconnected and install a jumper between the accessory board's two remaining wires. (e.g., purple auto-shutoff to both accessory board's #1 and #2 with brown auto-shutoff disconnected).

#### ACCESSORY BOARD FOR AMP LIMIT LED FUNCTION

- LED 8 (on) .....Power on to accessory board.  
(Green)
  - LED 9 (on) .....Relay 1 (cover open position) activated.  
(Yellow)
  - LED 10 (on) .....Relay 2 (cover closed position) activated.  
(Yellow)
- Install the accessory board away from cover housing in or by equipment room or equipment pad.

#### AUTO-SHUTOFF AMP LIMIT BOARD



#### ACC BOARD AMP LIMIT (OPTIONAL)

