# **AIRMAX**

# **Control Panels**

# **INSTALLATION INSTRUCTIONS**



Item #651730 - 1/2 HP 115v #652107 - 1/2 HP 230v #652109 - 1 HP 230v #652113 - 2 HP 230v #652115 - 3 HP 230v #652525 - 5 HP 230v





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# IMPORTANT INFORMATION:

Please read these instructions thoroughly before use. Failure to follow instructions may result in equipment damage or failure, losses, injury or death.

Electrical connections to the control panel and proper grounding (properly sized copper conductor from the grounding terminal to the service panel or grounding rod) are to be completed by a licensed electrician and in accordance with the National Electric Code, local codes or ordinances.

# A WARNING: A

To reduce the risk of electric shock or injury:

- This control panel contains a Ground Fault Circuit Interrupter (GFCI). DO NOT remove, bypass or modify the GFCI.
- DO NOT operate the control panel if electrical cords are broken or spliced.
- ALWAYS turn off electrical power before installing, removing or servicing the control panel components.
- DO NOT immerse the control panel in water.
- This control panel is NOT intended for use in swimming pools, swimming ponds, or other situations where bodily contact is made with the water. Although the control panel is designed for outdoor use, it should never be submerged in water.

# **A CAUTION:**

To reduce the risk of equipment damage or failure:

- The control panel is NOT submersible; do not place the timer where it might contact or fall into the water.
- DO NOT operate the control panel with a unit that exceeds the maximum voltage indicated by the control panel specifications. Operating with a unit larger than recommended can cause damage to the control panel and will NOT be covered under warranty.

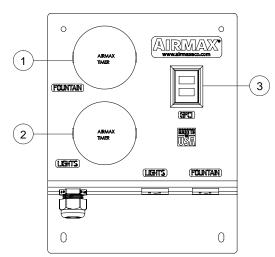
IMPORTANT: Airmax is not responsible for equipment damage or failure, losses, injury or death resulting from failure to follow safety precautions, misuse or abuse of equipment.

# **TECHNICAL SPECIFICATIONS:**

| ITEM NUMBER | VOLTAGE     | PANEL DIMENSIONS       | MOUNTING DIMENSIONS |
|-------------|-------------|------------------------|---------------------|
| 651730      | 1/2 HP 115v | 9 ½"w x 11 ½"h x 4 ½"d | 6"w x 10 ½"h        |
| 652107      | 1/2 HP 230v | 16"w x 17 ¾"h x 8 ½"d  | 12"w x 18 ½"h       |
| 652109      | 1 HP 230v   | 16"w x 17 ¾"h x 8 ½"d  | 12"w x 18 ½"h       |
| 652113      | 2 HP 230v   | 16"w x 17 ¾"h x 8 ½"d  | 12"w x 18 ½"h       |
| 652115      | 3 HP 230v   | 16"w x 17 ¾"h x 8 ½"d  | 12"w x 18 ½"h       |
| 652525      | 5 HP 230v   | 16"w x 17 ¾"h x 8 ½"d  | 12"w x 18 ½"h       |

# 1/2 HP 115v PRODUCT CONTENTS:





# 1/2 HP 115V REPLACEMENT PARTS:

| ITEM | DESCRIPTION | PART#  | ITEM | DESCRIPTION          | PART # |
|------|-------------|--------|------|----------------------|--------|
| 1    | Motor Timer | 651112 | 3    | Motor and Light GFCI | 651952 |
| 2    | Light Timer | 651112 |      |                      |        |

# 1/2 HP 115v INSTALLATION INSTRUCTIONS:

Airmax Control Panels are designed for outdoor use but should be mounted above any high water levels. We recommend using grommets to protect and seal the electrical access points and to help keep the control panel clean.

## **CONNECTING ELECTRICAL WIRING:**

**CONNECT UNIT TO CONTROL PANEL** 

# **▲ WARNING: ▲**

Turn off electrical power before connecting units to the control panel.



#### **Connect to a Fountain:**

 $\bullet \ \mathsf{Plug} \ \mathsf{fountain} \ \mathsf{power} \ \mathsf{cord} \ \mathsf{into} \ \mathsf{receptacle} \ \mathsf{labeled} \ \mathbf{FOUNTAIN}$ 

### **Connect to Fountain Lights (optional):**

• Plug light set power cord into receptacle labeled **LIGHTS** 

## **Connect Control panel to Power Source:**

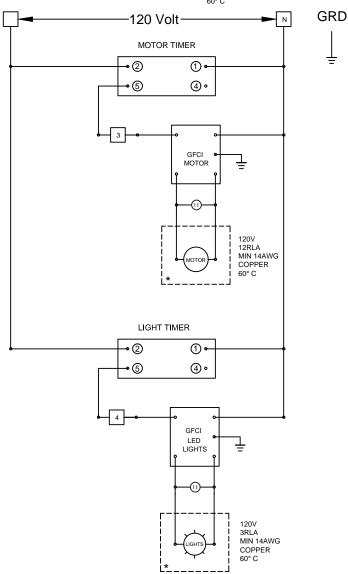
• Plug control panel power cord into the main power supply

## 1/2 HP 115v CONTROL PANEL WIRING DIAGRAM:

- Main Disconnect Supplied and Installed by Licensed Electrician
- Input Hubs Must Comply With UL 514B \*Shall Be Provided By Installer

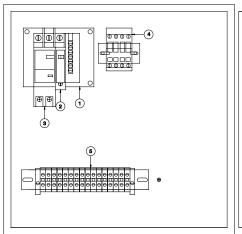
120V FLA 15A

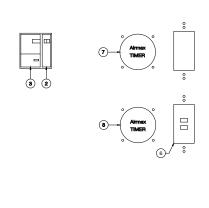
MIN SERVICE 15A 14AWG COPPER 60° C





Airmax 230v Control Panel 1/2 HP





| ITEM | DESCRIPTION                 | PART#  | ITEM | DESCRIPTION             | PART # |
|------|-----------------------------|--------|------|-------------------------|--------|
| 1    | Breaker Base                | 651970 | 5    | Terminal Blocks (Green) | 651941 |
| 2    | Control Breaker (15 Amp)    | 651976 | 6    | Light GFCI              | 651952 |
| 3    | Motor GFCI Breaker (15 Amp) | 651971 | 7    | Motor Timer             | 651112 |
| 4    | 1/2 HP Contactor 230v       | 651962 | 8    | Light Timer             | 651112 |
| 5    | Terminal Blocks (Gray)      | 651940 |      |                         |        |

# 1/2 HP 230v INSTRUCTIONS:

Airmax Control Panels are designed for outdoor use but should be mounted above any high water levels. Holes should be drilled into the bottom of the control panel for electrical access. We recommend using grommets to protect and seal the electrical access points and to help keep the control panel clean.

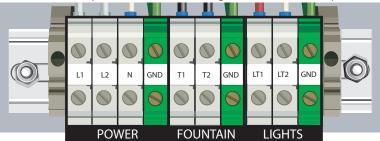
It is recommended that you have between 230 and 253 combined voltage on your incoming (L1 and L2) terminals. 208v power **IS NOT ACCEPTABLE** and will likely cause catastrophic failure to your power unit.

## **CONNECTING ELECTRICAL WIRING:**

**CONNECT UNIT TO CONTROL PANEL** 

# 🛦 WARNING: 🛦

Turn off electrical power before connecting units to the control panel.



#### Connect to a Fountain:

- Black lead to T1 on the terminal strip
- White lead to T2 on the terminal strip
- Green lead to the grounding terminal

### **Connect to Fountain Lights (optional):**

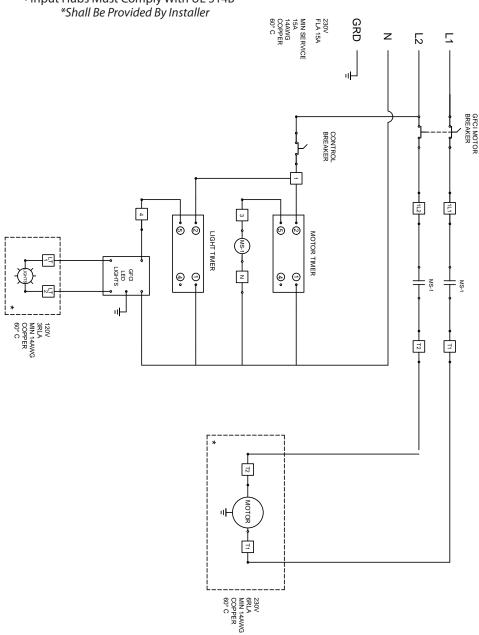
- Black lead to LT1 on the terminal strip
- White lead to LT2 on the terminal strip
- Green lead to the grounding terminal

### **CONNECT CONTROL PANEL TO POWER SOURCE**

### Connect the following:

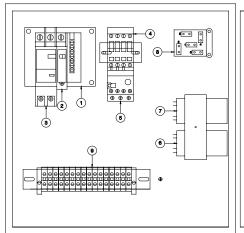
- Line 1 to L1 on the terminal strip
- Line 2 to L2 on the terminal strip
- White to N on the terminal strip
- Green lead to the grounding terminal
- Set or verify that the overload assembly in the control panel is set to the motor nameplate value, plus two (2) amperes.

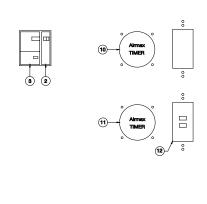
- Main Disconnect Supplied and Installed by Licensed Electrician
- Input Hubs Must Comply With UL 514B





Airmax 230v Control Panel 1 HP

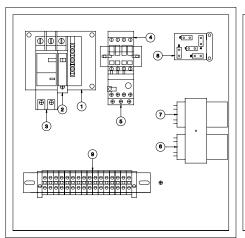


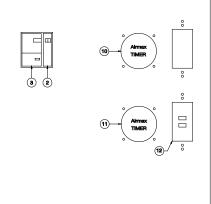


| ITEM | DESCRIPTION                 | PART#  | ITEM | DESCRIPTION             | PART#  |
|------|-----------------------------|--------|------|-------------------------|--------|
| 1    | Breaker Base                | 651970 | 8    | 1 HP Potential Relay    | 652214 |
| 2    | Control Breaker (15 Amp)    | 651976 | 9    | Terminal Blocks (Gray)  | 651940 |
| 3    | Motor GFCI Breaker (20 Amp) | 651068 | 9    | Terminal Blocks (Green) | 652125 |
| 4    | 1 HP Contactor 230v         | 651963 | 10   | Motor Timer             | 651112 |
| 5    | 1 HP Overload Relay         | 651883 | 11   | Light Timer             | 651112 |
| 6    | 1 HP Start Capacitor        | 651980 | 12   | Light GFCI              | 651952 |
| 7    | 1 HP Run Capacitor          | 651981 |      |                         |        |



Airmax 230v Control Panel 2 HP

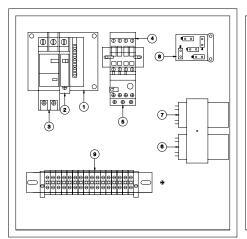


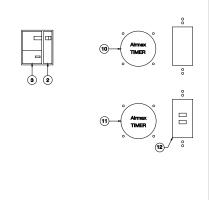


| ITEM | DESCRIPTION                 | PART#  | ITEM | DESCRIPTION             | PART#  |
|------|-----------------------------|--------|------|-------------------------|--------|
| 1    | Breaker Base                | 651970 | 8    | 2-3 HP Potential Relay  | 652213 |
| 2    | Control Breaker (15 Amp)    | 651976 | 9    | Terminal Blocks (Gray)  | 651940 |
| 3    | Motor GFCI Breaker (20 Amp) | 651068 | 9    | Terminal Blocks (Green) | 652125 |
| 4    | 2 HP Contactor 230v         | 651965 | 10   | Motor Timer             | 651112 |
| 5    | 2 HP Overload Relay         | 651967 | 11   | Light Timer             | 651112 |
| 6    | 2 HP Start Capacitor        | 651984 | 12   | Light GFCI              | 651952 |
| 7    | 2 HP Run Capacitor          | 651985 |      |                         |        |



Airmax 230v Control Panel 3 HP

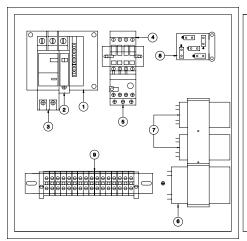


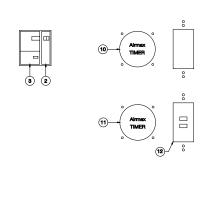


| ITEM | DESCRIPTION                 | PART#  | ITEM | DESCRIPTION             | PART#  |
|------|-----------------------------|--------|------|-------------------------|--------|
| 1    | Breaker Base                | 651970 | 8    | 2-3 HP Potential Relay  | 652213 |
| 2    | Control Breaker (15 Amp)    | 651976 | 9    | Terminal Blocks (Gray)  | 651940 |
| 3    | Motor GFCI Breaker (30 Amp) | 651882 | 9    | Terminal Blocks (Green) | 652125 |
| 4    | 3 HP Contactor 230v         | 651966 | 10   | Motor Timer             | 651112 |
| 5    | 3 HP Overload Relay         | 651967 | 11   | Light Timer             | 651112 |
| 6    | 3 HP Start Capacitor        | 651986 | 12   | Light GFCI              | 651952 |
| 7    | 3 HP Run Capacitor          | 651987 |      |                         |        |



Airmax 230v Control Panel 5 HP





| ITEM | DESCRIPTION                 | PART#  | ITEM | DESCRIPTION             | PART#  |
|------|-----------------------------|--------|------|-------------------------|--------|
| 1    | Breaker Base                | 651970 | 8    | 5 HP Potential Relay    | 652220 |
| 2    | Control Breaker (15 Amp)    | 651976 | 9    | Terminal Blocks (Gray)  | 651762 |
| 3    | Motor GFCI Breaker (40 Amp) | 651975 | 9    | Terminal Blocks (Green) | 651763 |
| 4    | 5 HP Contactor 230v         | 651966 | 10   | Motor Timer             | 651112 |
| 5    | 5 HP Overload Relay         | 651969 | 11   | Light Timer             | 651112 |
| 6    | 5 HP Start Capacitor        | 652221 | 12   | Light GFCI              | 651952 |
| 7    | 5 HP Run Capacitor(s)       | 652222 |      |                         |        |

# 1 HP, 2 HP, 3 HP & 5 HP 230v INSTALLATION INSTRUCTIONS:

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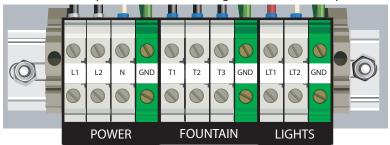
It is recommended that you have between 230 and 253 combined voltage on your incoming (L1 and L2) terminals. 208v power **IS NOT ACCEPTABLE** and will likely cause catastrophic failure to your power unit.

## **CONNECTING ELECTRICAL WIRING:**

**CONNECT UNIT TO CONTROL PANEL** 

# **▲ WARNING: ▲**

Turn off electrical power before connecting units to the control panel.



#### **Connect to a Fountain:**

- Black lead to T1 on the terminal strip
- White lead to T2 on the terminal strip
- Red lead to T3 on the terminal strip
- Green lead to the grounding terminal

### **Connect to Fountain Lights (optional):**

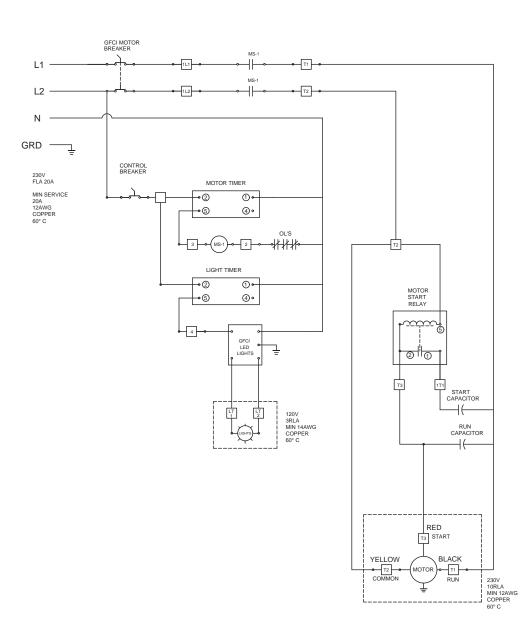
- Black lead to LT1 on the terminal strip
- White lead to LT2 on the terminal strip
- Green lead to the grounding terminal

#### **CONNECT CONTROL PANEL TO POWER SOURCE**

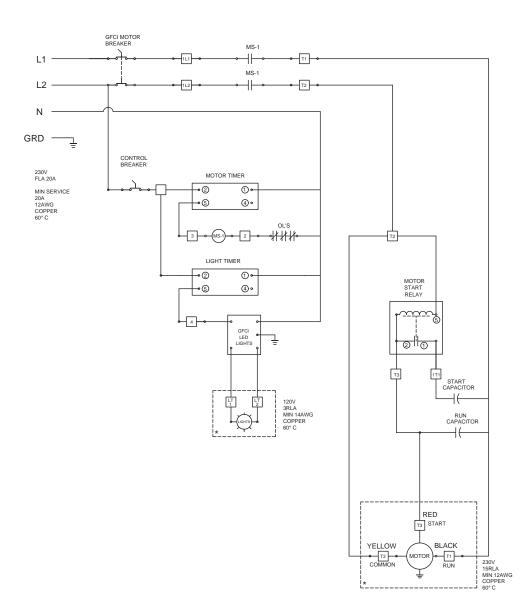
#### **Connect the following:**

- Line 1 to L1 on the terminal strip
- Line 2 to L2 on the terminal strip
- White to N on the terminal strip
- Green lead to the grounding terminal
- Set or verify that the overload assembly in the control panel is set to the motor nameplate value, plus two (2) amperes.

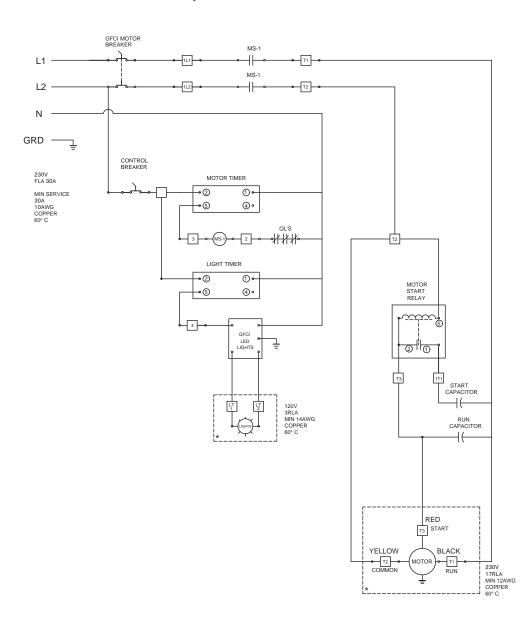
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- Input Hubs Must Comply With UL 514B \*Shall Be Provided By Installer



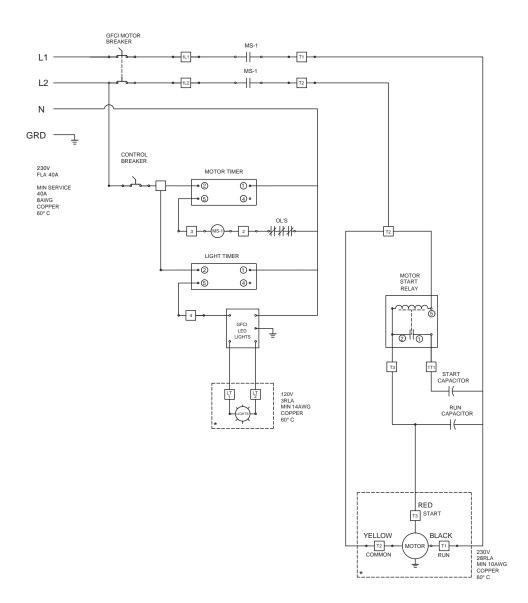
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# Maintenance & Operation of the Control Panel Timer:

#### **RUN TIME USING THE MANUAL BYPASS**

Press the MANUAL button until the line is above "ON". This mode will bypass all programmed settings. The MANUAL/ON mode can be used if 24/7 operation is desired.

### **RUN TIME USING A PROGRAM**

### **Setting the Clock**

- **Step 1:** Press the RESET button to clear all history from memory.
- **Step 2:** Press and hold the CLOCK button.
- **Step 3:** Continue to hold the CLOCK button while pressing the DAY, HOUR or MIN button to set the day and time.
- **Step 4:** Release the CLOCK button.



#### **CREATING A PROGRAM**

The Airmax Digital Timer allows up to allows up to 8 ON/OFF run times.

Select the days for each run time to occur based on the 15 preset schedule of days shown in the table. (Fig. 1 - Page 19)

**Note:** Ponds will receive the most benefit from continual water movement. We recommend running fountains at least 8-10 hours daily to maximize benefits, unless a secondary aeration system is in operation.

- Step 1: Press the TIMER button once to display "1on --:--"
- **Step 2:** Press the DAY button to scroll through the preset schedule options. *Mode A, MONDAY SUNDAY, is the default schedule.*
- **Step 3**: When the desired schedule is displayed, press the HOUR or MIN buttons to select the ON time.
- **Step 4:** Press the TIMER button once to switch display to "1off --:--" Programming without inserting an OFF time will also allow the fountain to run 24/7 if desired.
- **Step 5:** Press the DAY button to scroll to the program selected in step 2.
- **Step 6:** Press the HOUR or MIN button to select the OFF time.
- **Step 7:** Repeat steps 1-6 for each additional program desired, up to 8 programs.
- **Step 8:** When all programs have been created press the CLOCK button to execute the programs.
- **Step 9:** Press the MANUAL button until the line is above AUTO.

# Maintenance & Operation of the Control Panel Timer Cont.:

#### **EDITING A PROGRAM**

**Review a Program** – To review the list of current programs, press the TIMER button repeatedly to scroll through the programs. When finished press the CLOCK button to return to the time of day.

**Change an On/Off Time** – To adjust an On/Off time, press the TIMER button to scroll to the program you want to change. Press the DAY, HOUR or MIN buttons to adjust the time. When finished press the CLOCK button to return to the time of day.

**Add a Program** – If there are not already 8 programs running, you may elect to add an additional program by following the CREATING A PROGRAM procedure.

**Remove a Program** – In the event that a program needs to be removed, you will need to RESET the timer and program only the desired schedules.

| a. | МО | TU | WE | TH | FR | SA | SU |
|----|----|----|----|----|----|----|----|
| b. | МО |    |    |    |    |    |    |
| c. |    | TU |    |    |    |    |    |
| d. |    |    | WE |    |    |    |    |
| e. |    |    |    | TH |    |    |    |
| f. |    |    |    |    | FR |    |    |
| g. |    |    |    |    |    | SA |    |
| h. |    |    |    |    |    |    | SU |
| i. | МО | TU | WE | TH | FR |    |    |
| j. |    |    |    |    |    | SA | SU |
| k. | МО | TU | WE | TH | FR | SA |    |
| I. | МО | TU | WE |    |    |    |    |
| m. |    |    |    | TH | FR | SA |    |
| n. | МО |    | WE |    | FR |    |    |
| 0. |    | TU |    | TH |    | SA |    |

Fig. 1

#### REPLACING THE BATTERY

**Note:** Timer settings will be retained for approximately 1 minute once the battery is removed. Each timer uses (1) CR2032 Lithium Battery.

**Step 1:** On the back of the timer, use a small flathead screwdriver or similar to pull the battery compartment from the timer.

**Step 2:** Install a new battery (print side down) and and reinstall the battery compartment.



# **WARRANTY:**

Airmax Control Panels are covered under the system warranty (3 Years - EcoSeries & PondSeries / 5 Years - LakeSeries)

## THANK YOU FOR CHOOSING: Airmax, Inc.

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#652090 V6