



# Pool & Spa Controls



# Pool & Spa

## Affordable and energy saving pool and spa controls

Intermatic pool and spa controls are affordable, efficient and easy to install. The core components are interchangeable to provide you with the flexibility you need to manage your pool, spa and backyard. Intermatic makes it easy for you to choose the right controls for your new pool, or upgrade an existing pool control to digital and wireless operation. Parts can be purchased as mechanisms that easily snap into most existing Intermatic enclosures or packaged inside raintight enclosures.

## Intermatic's Wave family of pool and spa controls

- **MultiWave** – Five Circuits featuring Single, Two & Variable Speed Pump Control, Booster Pump Control, Freeze Protection, Heater Thermostat, Z-Wave® control, Wireless Control
- **IWave** – Five Circuits featuring Single & Two Speed Pump Control, Booster Pump Control, Freeze Protection, Heater Thermostat, Actuator Control, Wireless Control
- **MiniWave** – Up to five circuits featuring Single Speed Pump Control, Booster Pump Control, Heater Thermostat, Actuator Control, Wireless Control
- **PoolWave** – Three Circuits featuring Single & Two Speed Pump Control, Booster Pump Control, Freeze Protection, Heater Thermostat, Wireless Control
- **SpaWave** – Three Circuits featuring Single & Two Speed Pump Control, Booster Pump Control, Freeze Protection, Heater Thermostat, Wireless Control
- **Mechanisms** – Available for upgrading or adding to current systems
- **Accessories** – To expand your pool and spa controls

## Energy Consumption – Can you afford to leave your filter on high speed all day?

Pool operation can be 20% of your entire electrical consumption. Title 20 recommends filtering pool water only twice per 24 hour period - which is sufficient for most residential pools. Intermatic has several digital, multi-circuit solutions that offer features to control Two-Speed and Variable-Speed pumps. For simple Two-Speed control, the P1353ME (Mechanism) snaps right into most existing Intermatic enclosures. For Variable-Speed control, the new MultiWave connects to any existing enclosure. See Intermatic's offering for simple, efficient upgrades that meet Title 20 and other new energy legislation.

## New Multiwave wireless control for one, two or variable speed pumps

MultiWave is the newest addition to the Intermatic Wave Pool and Spa product line. It features wireless control for one, two and variable speed pumps. Five circuits control pool/spa equipment, plus any other landscape or backyard features from its hand-held control.

Setup is easy – just choose your equipment from the MultiWave equipment list, and the MultiWave automatically locates and sets up the equipment.

### Features:

- 5 Circuits
- Wireless control
- Controls Variable Speed, Two-Speed and Single-Speed pumps
- Plug and Play equipment detection and set-up – easy to initialize and use
- Handheld circuit display can be customized to suit your specific equipment control need

# Pool & Spa

## Upgrading and expanding to fit your pool, spa and backyard needs

Upgrading from a mechanical one circuit time switch is easy and affordable.

### P1353ME Series digital three circuit clock mechanism

- Features Three Separate Circuits – Program independent circuits to operate any Two-Speed pump. Use circuit one for HIGH speed, circuit two for LOW speed, and circuit three can be used for lighting, cleaners, water features, or any other backyard equipment that needs to be turned ON or OFF
- Pre-programmed modes for equipment combinations – Saves set up time
- Each circuit has Three ON/OFF Event Programs – Perfect for turning pump on either HIGH or LOW-Speed 2 times per day. For example: ON at 6:00 AM and OFF at 9:00 AM on HIGH-Speed, back ON at 8:00 P.M. and OFF at 11:00 PM on LOW-Speed (2 total events programmed)
- Manual Override – Allows you to turn equipment ON/OFF outside the programmed event
- Snaps into most existing Intermatic enclosures – Easy to install and contractor/user friendly

### Valve actuator controls for pool/spa combinations

Intermatic offers two separate valve actuator controls. The Intermatic P4243ME controls three separate valves simultaneously. This is a great control for pool/spa combinations and also offers two separate relays in addition to the valve controls, for control of pool/spa/backyard equipment. The P4043ME operates two valve actuators and is perfect for automating water features and pool/spa combinations.

### Wireless control

Intermatic offers a wireless control system upgrade consisting of PE650 and PE953 which can be added to existing Intermatic digital P1353ME series timer. Intermatic's new MultiWave PE653RC features wireless control built into the variable speed timer.

Wireless control allows the user to operate equipment and devices from a hand-held remote. Programming is set-up and operated on a user-friendly, waterproof remote control. Wireless control offers the following functions:

- ON/OFF switching of all five circuits
- Temperature control
- Activation of actuator controls for pool/spa combinations
- Lighting
- Water features
- Cleaners

The easy-to-read backlit remote offers time of day, water temperature setting and is water submersible

### Enclosures

Intermatic offers separate enclosures to house the individual components. Additionally, Intermatic offers enclosures for breaker panels and transformers. Intermatic makes the choice simple by packaging it all under one part number, or you can simply mix and match components with the enclosure you need.

### Accessories

Intermatic offers a full line of digital control accessories to make operating your pool and spa easy and affordable.

# Variable Speed & Two Speed Control Systems

**MULTI  
WAVE™**



**PE653RC**



**PE653**



**PE953**  
(See page 120-121)



## Wireless 5-Circuit Pool/Spa Control System PE653RC

The "MultiWave" Wireless Control System Controls Pools/Spas and now your Home!

Combine the PE653 MultiWave Controller with the PE953 MultiWave Hand Held Transceiver and automate your pool/spa and even your home with the most technologically advanced wireless control system in the market today!

The MultiWave is designed as a "plug and play" system. Install the water sensor PA122 (see page 121) and watch the MultiWave thermostat come alive to maintain your pool and/or spa water temperatures. Install the air sensor 178PA28A (see page 121) and let the MultiWave freeze protection system take over to protect your investment. Connect your equipment to the intelligent RS485 communication port and relax as the MultiWave recognizes and controls your equipment with ease.

### Included:

- Owner's Manual
- Three AA Batteries
- Small Flat Head Screwdriver
- Receiving PE653 Controller with 2T2485GA Enclosure
- Equipment Labels
- Hand Held PE953 Transmitter
- Water Sensor with Hose Clamp

### Specifications:

**Enclosure & Control:** NEMA 3R rated for Indoor/Outdoor installation in beige finish 9 $\frac{3}{8}$  in. (23.8 cm) H x 5 $\frac{1}{2}$  in. (14.0 cm) W x 3 $\frac{3}{8}$  in. (9.2 cm) D

**Enclosure Knockouts:** Combination  $\frac{1}{2}$  -  $\frac{3}{4}$  in. nominal knockouts, one on back and each side of enclosure and two on bottom

**Shipping Weight:** 5.4 lbs (2.3 kg)

**Agency Approval:** CSA/C-US

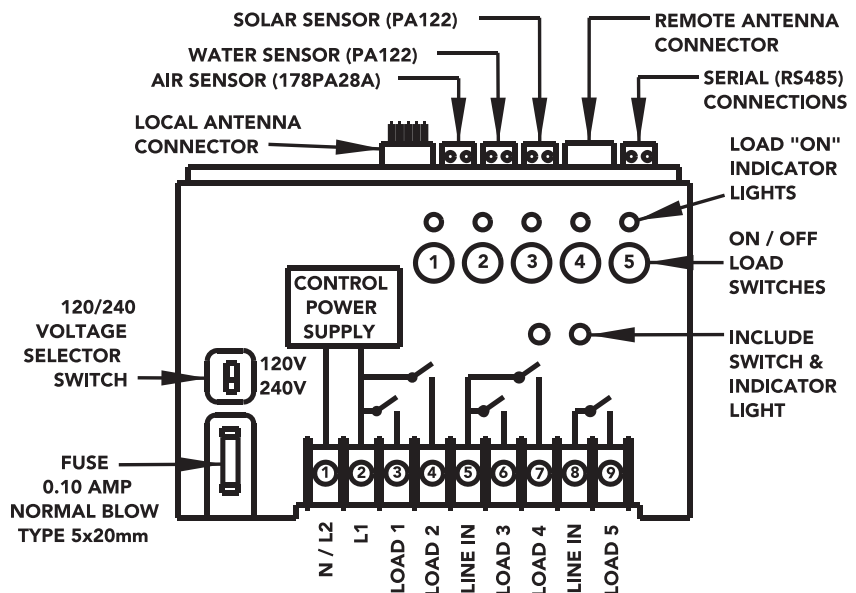
### Ratings:

**Control Supply:** 120, 240 VAC, 50/60Hz, 5-Watts Maximum

**Circuit #1:** 20 Amp Resistive (17 FLA, 80 LRA), 120, 240 VAC 50/60 Hz

**Circuit #2 thru #5:** 15 Amp Resistive (10 FLA, 60 LRA), 120, 240 VAC, 50/60 Hz

### Full Two-Speed & Variable Speed Controller

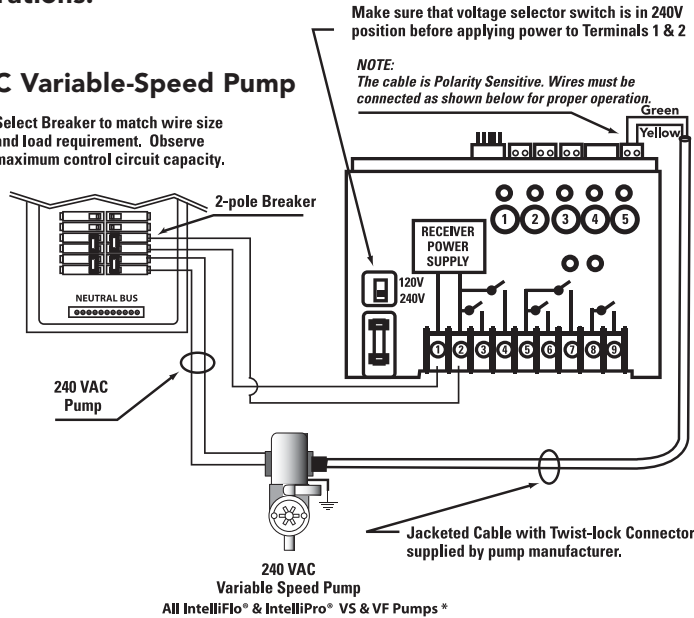


# MultiWave Accessories & Applications

There are many equipment pad configurations the MultiWave Control System can control. Below are a few of the most common configurations.

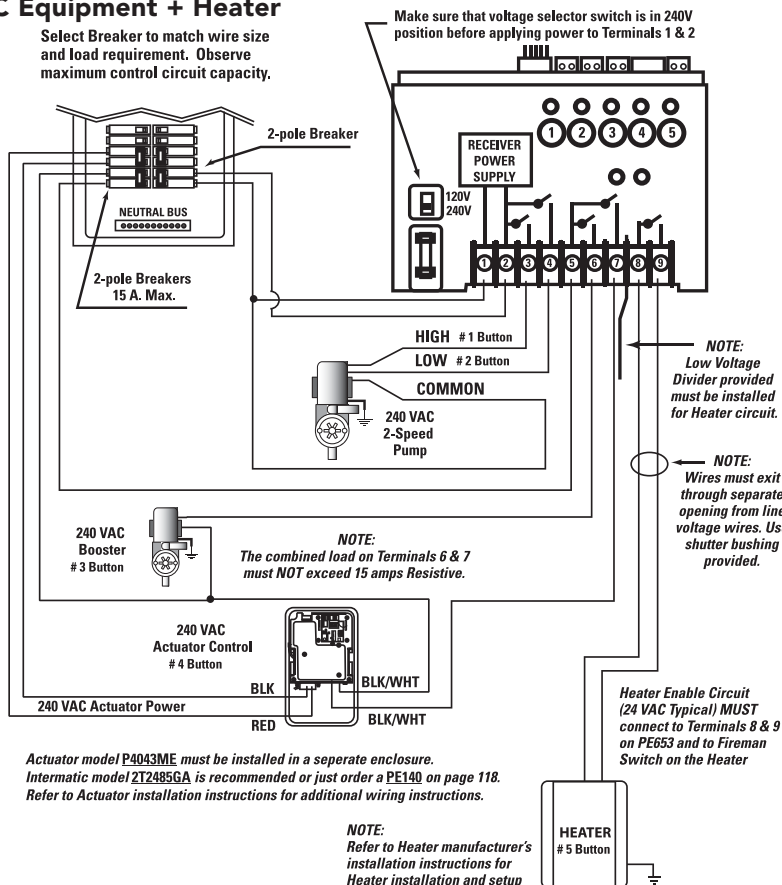
## 240 VAC Variable-Speed Pump

Select Breaker to match wire size and load requirement. Observe maximum control circuit capacity.



## 240 VAC 2-Speed Pump + 240 VAC Booster Pump + other 120 VAC Equipment + Heater

Select Breaker to match wire size and load requirement. Observe maximum control circuit capacity.

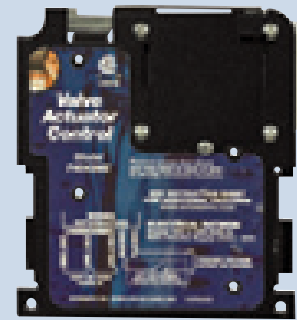


## Optional Controller Accessories: (Not Included)



### Freeze (Air Temperature) Sensor 178PA28A

Needed to sense and display outside air temperature and activate freeze protection. See page 121



### Actuator Control P4043ME

Needed to control actuators for pool and spa applications. (Rain Tight Enclosure Needed) See page 118-119



### Raintight Enclosure 2T2485GA

Needed to house the P4243ME Actuator Controller. (If no enclosure is present) See page 46, 131

# 60 Amp Variable Speed & Two Speed Control Systems



PE20065RC



PE24065RC

## PE20000RC Series Kits

### Wireless 5-Circuit Pool/Spa Control System with 60 Amp Breaker Base, Actuator Control & Two Actuators

Combine the features of the PE653RC MultiWave Control System with the convenience of the PE20000 60 Amp Intermatic Panel and create a powerful PE20065RC wireless control system kit for any pool or spa installation. The PE20000 series panel includes a four position 60 Amp breaker base to accommodate a variety of different equipment loads and one mechanism slot to accommodate the vast array of mechanisms Intermatic has to offer. In addition, there is a low voltage raceway for low voltage control lines (i.e. actuators, sensors, etc...), two décor knockouts for GFCIs and switches, and a convenient side knockout for an outdoor receptacle.

Order PE24065RC, which includes a P4043ME mechanism and two PE24VA actuators, and remotely control any pool and spa combination. With this addition, you can now switch both your water valves and heater thermostat settings between your pool and spa with a click on your wireless control. These are by far the most affordable and versatile control systems offered today.

#### Included in Kits:

- MultiWave Control System (PE653RC)
- Three AA Batteries
- Equipment Labels
- Water Sensor (PA122) with Hose Clamp
- P4043ME Actuator Controller (**PE24065RC only**)
- (2) PE24VA Water Valve Actuators (**PE24065RC only**)
- Owner's Manual
- Small Flat Head Screwdriver
- Hand Held (PE953) Transmitter
- PE20000 Enclosure w/60 Amp Base

#### Specifications:

**Enclosure & Control:** NEMA 3R rated for Indoor/Outdoor installation  
0.048 in. steel with electrostatically applied light beige finish.  
16½ in. (41.9 cm) H x 10⅞ in. (27.6 cm) W x 4¼ in. (10.8 cm) D

**Enclosure Knockouts:** Two 1.09 in. diameter through holes, six combination ½ – ¾ in. knockouts, and three combination ¾ – 1 in. knockouts on the bottom. Two combination ½ – ¾ in. on the left side and one combination ¾ – 1 in. on the back.

One knockout 1¾ x 2¾ in. on the right side for mounting switches or GFCI

**Panel Rating:** 60 Amp, 120, 240 VAC or 120, 208 VAC single phase

**Shipping Weight:** 5.4 lbs (2.3 kg)

**Agency Approval:** CSA/C-US

#### Ratings:

**Control Supply:** 120, 240 VAC, 50/60 Hz, 5-Watts Maximum

**Circuit #1:** 20 Amp Resistive (17 FLA, 80 LRA) 120, 240 VAC 50/60Hz

**Circuits #2 thru #5:** 15 Amp Resistive (10 FLA, 60 LRA) 120, 240 VAC 50/60 Hz

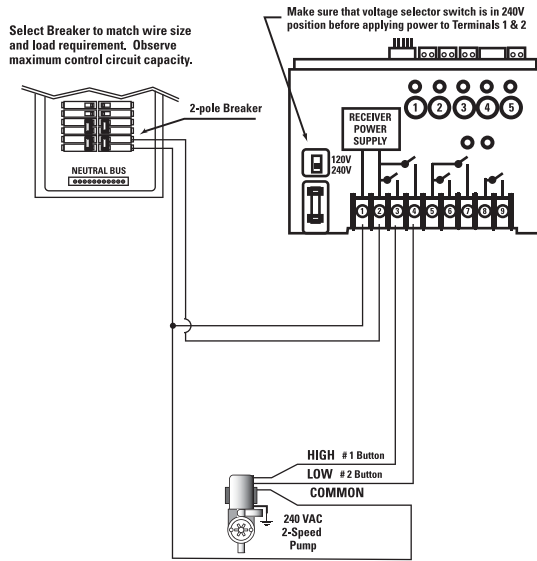
*Note: The following page refers to only a fraction of the most common applications of the MultiWave Control System. Contact your Intermatic representative or visit [www.intermatic.com](http://www.intermatic.com) and visit the Pool & Spa section of our website for more application ideas and details.*



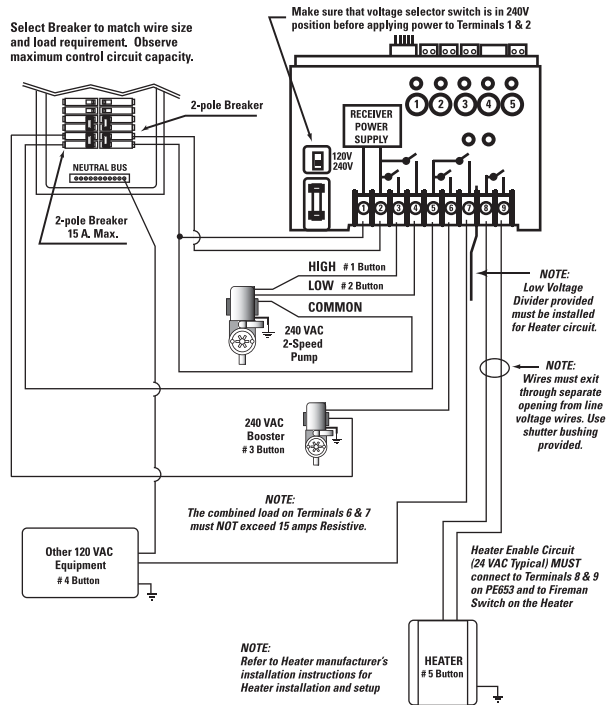
# Common PE2000RC Applications

## PE20065RC Applications

### 240 V 2-Speed Pump

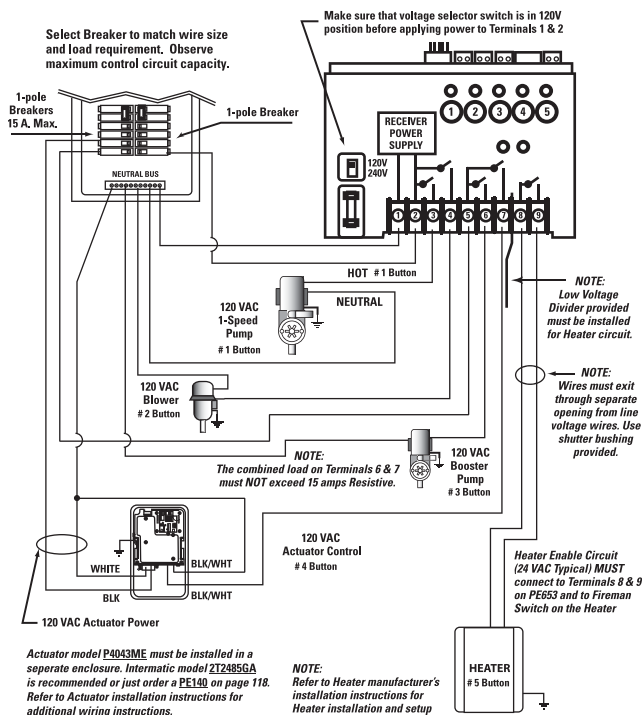


### 240 V 2-Speed Pump + 240 V Booster Pump + other 120 VAC Equipment + Heater

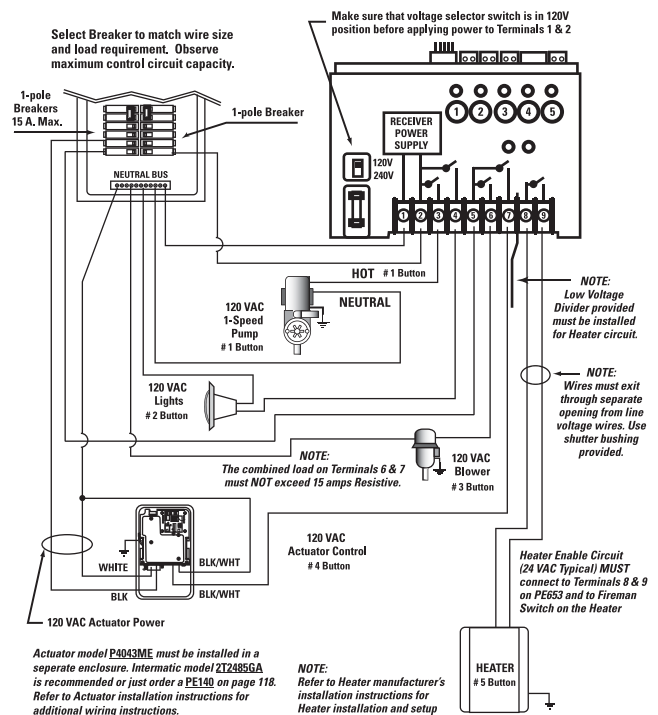


## PE24065RC Applications

### 120 V 1-Speed Pump + 120 VAC Blower or Lights + 120 V Booster Pump + 120 V Actuator + Heater



### 120 V 1-Speed Pump + 120 V Blower + 120V Lights + 120 V Actuator + Heater



# 80 Amp Variable Speed & Two Speed Control Systems



PE30065RC



PE34065RC

## PE30000RC Series Kits

### Wireless 5-Circuit Pool/Spa Control System with 80 Amp Breaker Base, Actuator Control & Two Actuators

Some heat pumps can consume between 40 and 60 Amps worth of power, therefore, it may be necessary to have a higher amperage breaker base to accommodate heat pumps. Combine the features of the PE653RC MultiWave Control System with the convenience of the PE30000 80 Amp Intermatic Panel and create a powerful PE30065RC wireless control system kit for any pool or spa installation. The PE30000 Series Panel includes an eight position 80 Amp breaker base to accommodate a variety of different equipment loads and two mechanism slots to accommodate the vast array of mechanisms Intermatic has to offer. In addition, there is a low voltage raceway for low voltage control lines (i.e. actuators, sensors, etc...), four décor knockouts for GFCIs and switches, and a convenient side knockout for an outdoor receptacle.

Order a PE34065RC which includes a P4043ME mechanism and two PE24VA actuators and remotely control any pool and spa combination. With this addition, you can now switch both water valves and heater thermostat settings between your pool and spa with a click on your wireless control. These are by far the most affordable and versatile control systems offered today.

#### Included in Kits:

- MultiWave Control System (PE653RC)
- Three AA Batteries
- Equipment Labels
- Water Sensor (PA122) with Hose Clamp
- P4043ME Actuator Controller (**PE34065RC only**)
- (2) PE24VA Water Valve Actuators (**PE34065RC only**)
- Owner's Manual
- Small Flat Head Screwdriver
- Hand Held (PE953) Transmitter
- PE30000 Enclosure w/80 Amp Base

#### Specifications:

**Enclosure & Control:** NEMA 3R rated for Indoor/Outdoor installations

0.048 in. steel with light beige finish

22 in. (55.9 cm) H x 14 $\frac{3}{4}$  in. (37.5 cm) W x 4 $\frac{1}{4}$  in. (10.8 cm) D

**Enclosure Knockouts:** Two 1.09 in. diameter through holes, six combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. knockouts, 2 combination  $\frac{3}{4}$ , 1, 1 $\frac{1}{4}$  in. knockouts, four  $\frac{1}{2}$  in. knockouts on the bottom. Two combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. knockouts on the left side and four combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. knockouts, two combination  $\frac{3}{4}$  – 1 in. on the back. One knockout 1 $\frac{3}{4}$  x 2 $\frac{3}{4}$  in. on the right side for mounting switches or GFCI.

**Panel Rating:** 80 Amp 120, 240 VAC or 120, 208 VAC single phase

**Shipping Weight:** 5.4 lbs (2.3 kg)

**Agency Approval:** CSA/C-US

#### Ratings:

**Control Supply:** 120, 240 VAC, 50/60 Hz, 5-Watts Maximum

**Circuit #1:** 20 Amp Resistive (17 FLA, 80 LRA) 120, 240 VAC 50/60 Hz

**Circuits #2 thru #5:** 15 Amp Resistive (10 FLA, 60 LRA) 120, 240 VAC 50/60 Hz

*Note: The following page refers to only a fraction of the most common applications of the MultiWave Control System. Contact your Intermatic sales representative or visit [www.intermatic.com](http://www.intermatic.com) and visit the Pool & Spa section of our website for more application ideas and details.*

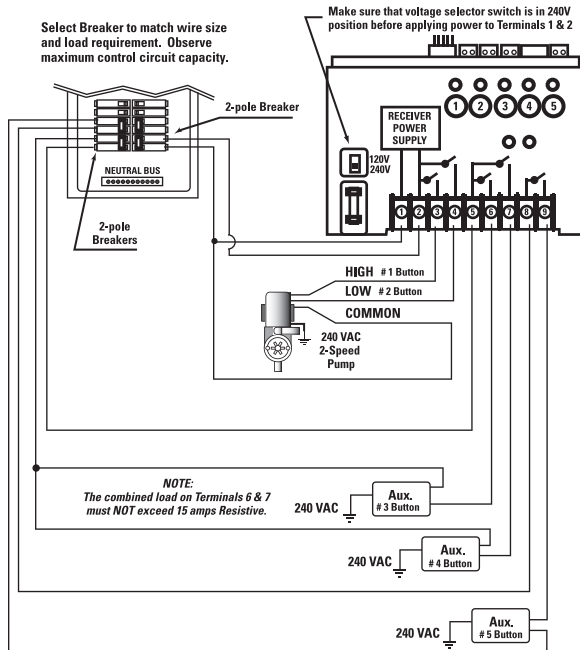




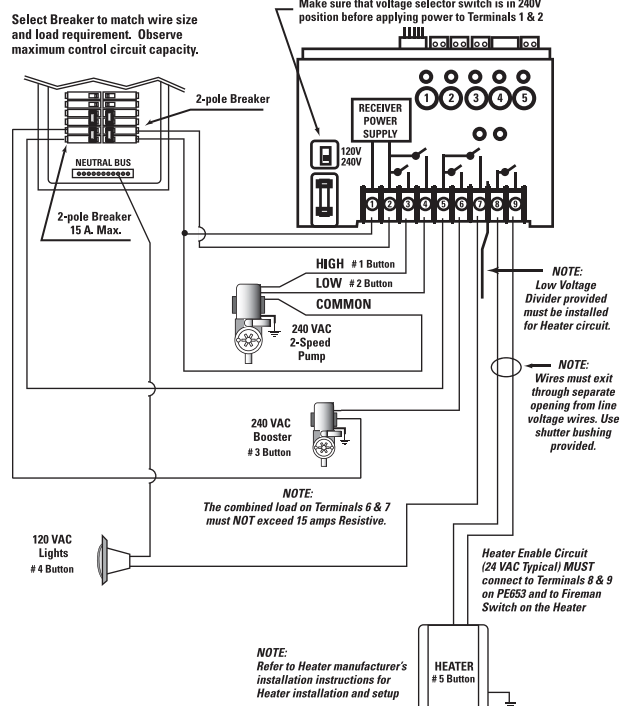
# Common PE3000RC Applications

## PE30065RC Applications

### 240 V 2-Speed Pump + any three 240 VAC Auxiliary Equipment

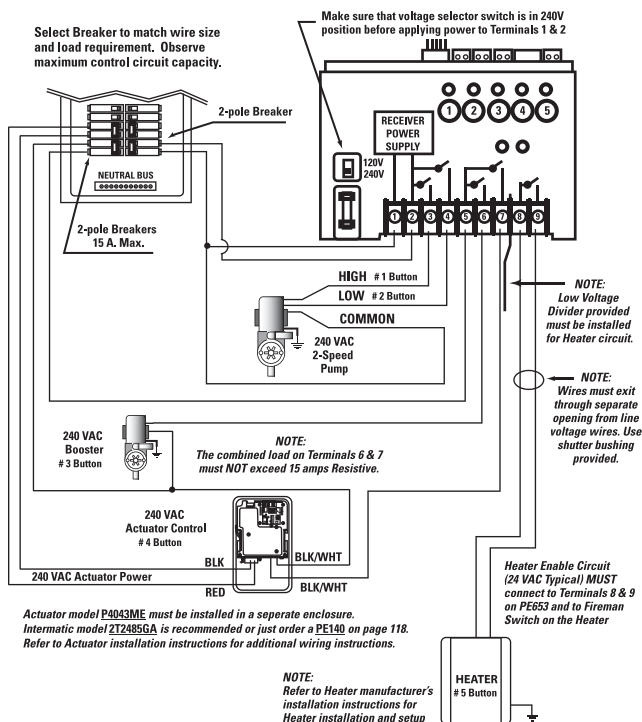


### 240 V 2-Speed Pump + Booster Pump + 120 V Light + Heater

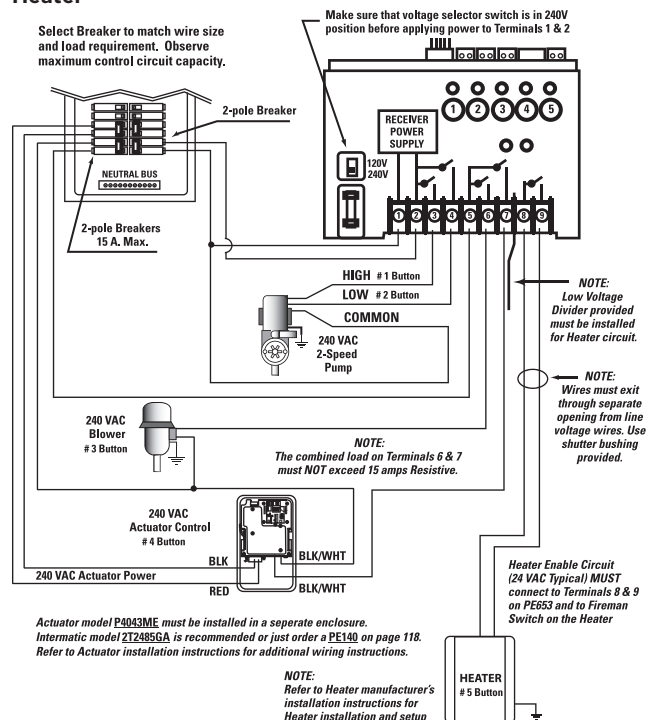


## PE34065RC Applications

### 240 V 2-Speed Pump + 240 V Booster Pump + 240 V Actuator + Heater



### 240 V 2-Speed Pump + 240 V Blower + 240 V Actuator + Heater



# Digital Two Speed Controller Mechanism



**P1353ME**

## Specifications:

- Three individual circuits
- Three ON/OFF events per day per circuit
- Seven pre-programmed modes for common pool & spa applications
- Input voltage 120, 208, 240 VAC
- Memory backup
- Freeze protection
- Heater protection (fireman switch)
- LCD readout
- Shipping weight: 3 lbs (1.4 kg)
- Agency approval: CSA/C-US

## CONTACT RATINGS — EACH CIRCUIT, ALL MODES

- 17 Amp Resistive, 120, 240 VAC, 50/60 Hz
- (20 FLA, 96 LRA) 120 VAC, 50/60 Hz
- (17 FLA, 80 LRA) 240 VAC, 50/60 Hz
- 5 Amps Tungsten, 120, 240 VAC, 50/60 Hz
- 5 Amps Ballast, 120, 240 VAC, 50/60 Hz



## P1353ME

### Three Circuit Clock Mechanism

Designed as an upgrade to your T100 Series time switch, the P1353ME mechanism can be installed into almost any Intermatic enclosure and has the ability to program up to three circuits. Choose between seven pre-programmed modes of operation, which include single speed pump or 2-speed pump/cleaner pump combinations. In addition, programmed modes that include auxiliaries can control pumps up to 3 HP as well as underwater, landscape and/or fountain lighting. Countdown and Override features allow cycle interruptions when pool/spa service is required. All timing and protection associated with filter pump/cleaner pump combinations and two-speed pumps has already been integrated into the software.

### Pre-Programmed Equipment Pad Modes

#### Mode 1 – (Aux1, Aux2, Aux3)

The time switch is a 3-circuit switch with all three switches controlling auxiliary devices.

#### Mode 2 – (Pump High, Pump Low, Aux3)

The time switch is a 2-circuit switch with the 1st & 2nd switch controlling a two-speed pump. The 3rd switch is controlling any auxiliary device. All protection associated with a two speed pump is pre-programmed into this mode.

#### Mode 3 – (Pump, Aux2, Cleaner Pump)

The time switch is a 3-circuit switch with the 1st switch controlling a single speed pump, the 2nd switch controls any auxiliary device, and the 3rd switch operates a booster/cleaner pump. All timing & protection associated with a filter pump/cleaner pump combination is pre-programmed into this mode.

#### Mode 4 – (Pump High, Pump Low, Cleaner Pump)

The time switch is a 2-circuit switch with the 1st & 2nd switch controlling a 2-speed pump. The 3rd switch is controlling a booster/cleaner pump. All protection associated with a 2-speed pump and booster/cleaner pump combination is pre-programmed into this mode.

#### Mode 5 – (Pump L1, Pump L2, Aux3)

The time switch is a 2-circuit switch with the 1st & 2nd switch controlling a 240V pump, where both L1 & L2 are required to be disconnected when the pump is OFF. The 3rd switch is controlling any auxiliary device.

### New Pre-Programmed Equipment Pad Modes

#### Mode 6 – (Aux1, Aux2, Aux3)

##### Heater green mode

The time switch performs identical to Mode 1 except this mode allows the heater to heat the water only when Circuit 1 (the filter pump) is manually turned on – not when the clock turns the pump on. This mode is helpful when you have Circuit 1 connected to a circulation pump in a spa. When the spa is not in use, the clock circulates the water to filter it, but does not turn ON the heater. When the spa is in use, the heater is also turned ON by manually switching Circuit 1 ON.

#### Mode 7 – (Pump High, Pump Low, Common)

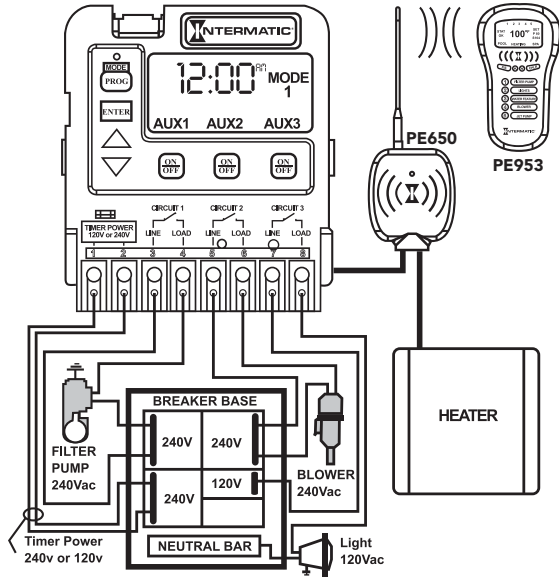
##### Break both lines

The time switch performs identical to Mode 2 except this mode allows the hook up to break both hot lines of a 240VAC two speed pump connection. In this mode the time switch becomes a single circuit device specifically designed to control a two-speed pump motor. The 1st & 2nd circuits connect to the High and Low lines of the two-speed pump respectively and the 3rd circuit connects to the second hot leg. All timing & protection associated with a two-speed pump is pre-programmed into this mode.

# P1353ME Mode Applications

## 3 Circuit Pre-Programmed Options

Setting up the P1353ME Series 3-circuit timer is easy. Intermatic has already pre-programmed the most popular pool/spa/auxiliary combinations for your convenience. Just choose the mode that best suits your needs!



### Mode 1 – (Aux1, Aux2, Aux3)

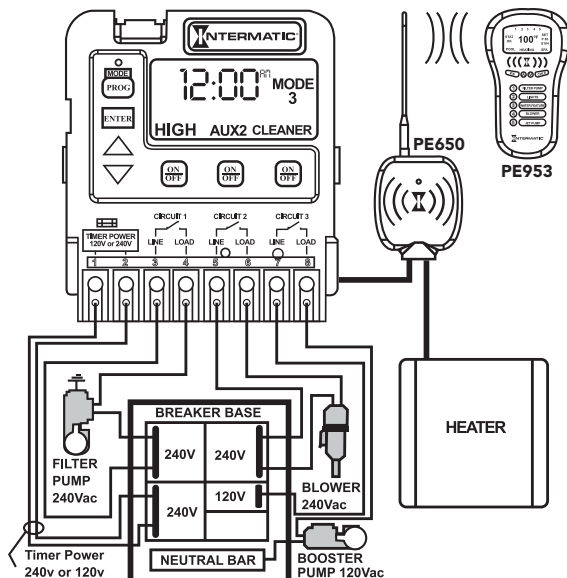
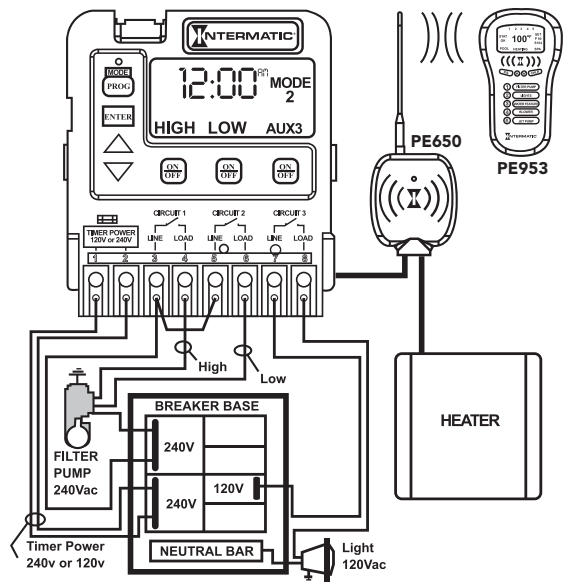
Each of the three single pole circuits are defined generically, and can control any load within each of its individual circuit ratings. All three circuits act independent of each other.

**Applications:** In Mode 1, the P1353ME Three Circuit Clock Mechanism is ideal for pool or spa only applications where each piece of equipment is independently controlled. With the addition of a PE650 Receiver and PE953 Transmitter, you can easily add wireless control to your equipment and thermostat control to your pool or spa. Each of the three circuits is rated for up to 3 HP and can handle both 120 VAC and 240 VAC equipment loads. This is the most versatile timer in the market today and can be added to almost all Intermatic control panels, both new and existing, making it ideal for upgrades to older Intermatic systems.

### Mode 2 – (Pump High, Pump Low, Aux3)

Circuits one and two are dedicated single pole outputs for a two-speed pump load. Circuits one and two will never be ON at the same time, consistent with a two-speed pump application. Circuit three is a single pole circuit for a generic load, and independent of circuits one and two.

**Applications:** In Mode 2, the P1353ME Three Circuit Clock Mechanism acts as a Two Speed Controller and can be used for two speed pool applications but is ideal for spa applications where the filter pump on the spa is used for filtering in low speed and used for jets in high speed. The remaining circuit can be used for spa lights or blower. With the addition of a PE650 Receiver and PE953 Transmitter, you can easily add wireless control to your equipment and thermostat control to your pool or spa.



### Mode 3 – (Pump, Aux2, Cleaner Pump)

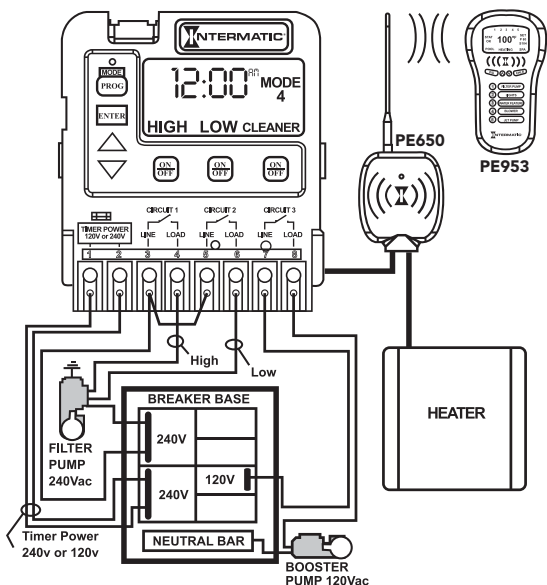
Circuits one and three are dedicated single pole outputs for a single speed pump working with a pressure side cleaner pump. Circuit three will never come ON unless circuit one is ON for at least one minute, consistent with a pressure side cleaner pump. Circuit two is a single pole circuit for a generic load, independent of circuits one and three.

**Applications:** In Mode 3, the P1353ME Three Circuit Clock Mechanism is ideal for pool applications where a Booster/Cleaner pump is being controlled. In this mode, if the Filter Pump is OFF, the Booster/Cleaner pump will activate the Filter Pump first and then turn itself ON when activated. This ensures adequate priming of the Booster/Cleaner pump. The remaining circuit can be used for lights. With the addition of a PE650 Receiver and PE953 Transmitter, you can easily add wireless control to your equipment and thermostat control to your pool.

# P1353ME Mode Applications

## 3 Circuit Pre-Programmed Options

### Continued



#### Mode 4 – (Pump High, Pump Low, Cleaner Pump)

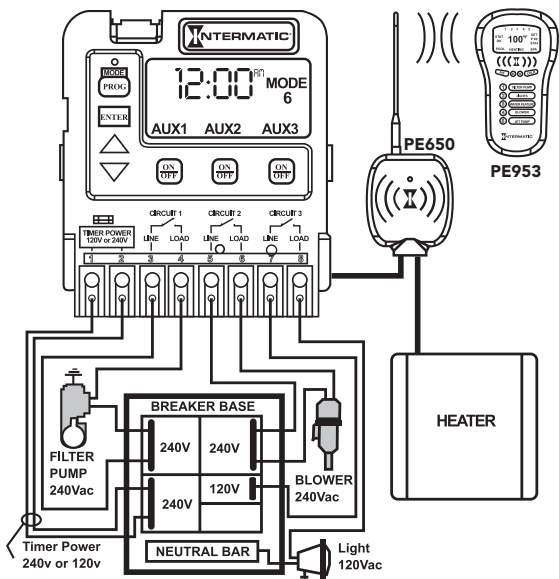
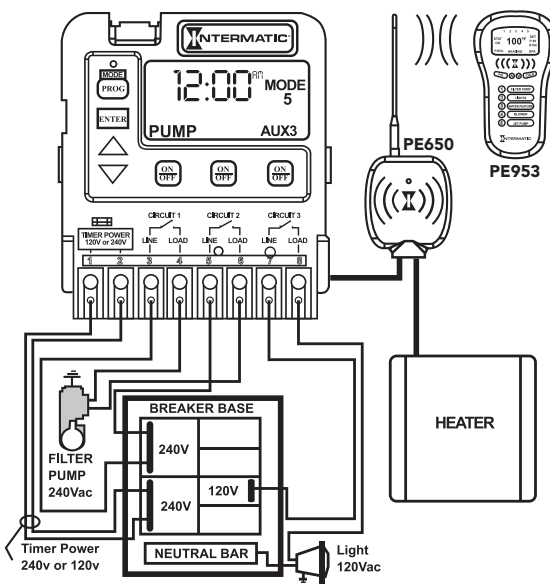
Circuits one and two are dedicated single pole outputs for a two-speed pump load. Circuits one and two will never be ON at the same time, consistent with a two-speed pump application. Circuit three is also a dedicated single pole output for a pressure side cleaner pump. Circuit three will never come ON unless circuit one is ON for at least one minute, consistent with a pressure side cleaner pump.

**Applications:** In Mode 4, the P1353ME Three Circuit Clock Mechanism acts as a Two Speed Controller and is ideal for pool applications where a booster/cleaner pump is being controlled. In this mode, if the filter pump is OFF or in low speed, the booster/cleaner pump will activate the filter pump in high speed first and then turn itself ON when activated. This ensures adequate priming of the booster/cleaner pump. With the addition of a PE650 Receiver and PE953 Transmitter, you can easily add wireless control to your equipment and thermostat control to your pool.

#### Mode 5 – (Pump, Pump, Aux3)

Circuits one and two are now coupled together making one circuit capable of switching the power source to one pump. The ON/OFF button for circuit one now controls both circuit one and two simultaneously. The ON/OFF button for circuit two is disabled. Circuit three remains a single pole circuit for a generic load, and is independent of circuits one and two.

**Applications:** In Mode 5, the P1353ME Three Circuit Clock Mechanism acts as a two circuit clock to allow the breaking of both hot legs in a 240 VAC equipment hookup on circuit #1. Even though the P1353ME is not a disconnect, and you can easily control a 240 VAC load by breaking only one leg, some wiring situations may dictate breaking both legs of a 240 VAC load. It is good service practice to always open the equipment circuit breaker and red tag it appropriately when working on pool or spa equipment. When working on equipment, DO NOT rely on any clock to disconnect power. The clock may be scheduled to turn ON during servicing.



#### Mode 6 – (Aux1, Aux2, Aux3)

Identical to Mode 1, in which each of the three single pole circuits are defined generically and can control any load within each of its individual circuit ratings, with all three circuits acting independent of each other. However, with Mode 6, the fireman switch closes only when Circuit 1 (the filter pump) is manually turned ON, not when the clock turns it ON. This mode is useful when you have Circuit 1 connected to a circulation pump in the spa. When the spa is not in use, the clock circulates the water to filter it, but does not turn ON the heater. When the spa is in use, the heater is also turned ON by manually switching Circuit 1 ON.

**Applications:** In Mode 6, the P1353ME Three Circuit Clock Mechanism is ideal for spa applications where you need to control three pieces of individual equipment (circulation pump, blower, light), but do not want to heat the spa while it's not in use.

# P1353ME Mode Applications

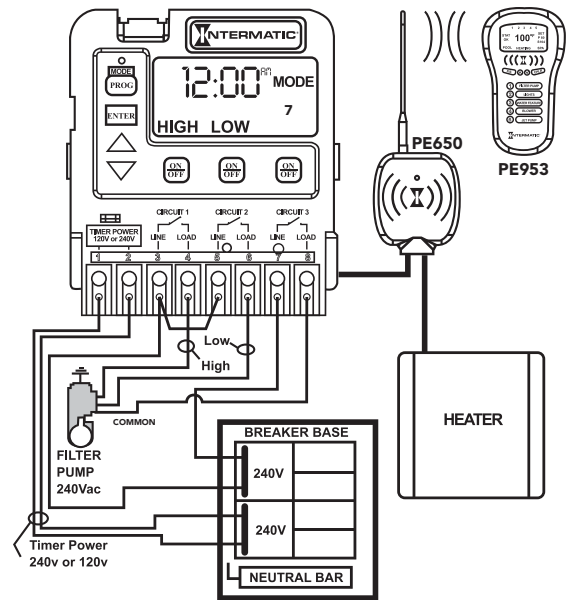
## 3 Circuit Pre-Programmed Options

### Continued

#### Mode 7 – (Pump High, Pump Low, Aux3)

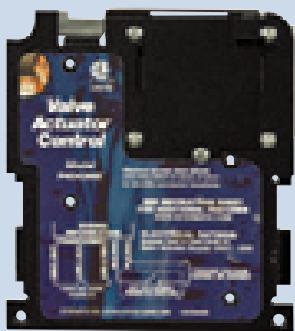
Circuits one and two are dedicated single pole outputs for a two-speed pump load. Circuits one and two will never be ON at the same time, consistent with a two-speed pump application. Circuit three is a single pole circuit tied to circuits one and two and used to control the common line of the two speed pump. In Mode 7, all three circuits are used to control the two speed pump and break both legs of a 240 Volt pump installation.

**Applications:** In Mode 7, the P1353ME Three Circuit Clock Mechanism acts as a two speed controller and can be used for two speed pool applications but is ideal for spa applications where the filter pump on the spa is used for filtering in low speed and used for jets in high speed. The remaining circuit is used to open the second hot leg of a 240 Volt two speed installation when the pump is turned to the OFF position. With the addition of a PE650 Receiver and PE953 Transmitter, you can easily add wireless control to your equipment and add thermostat control to your pool or spa.





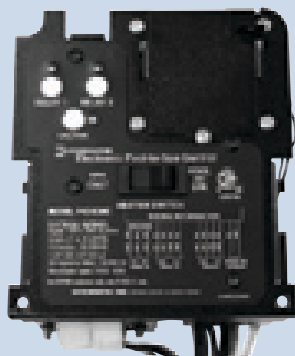
# Actuator Controller & Load Mechanisms



**P4043ME**



**PE140**



**P4243ME**

## P4000ME Series Actuator Control & Load Mechanisms

### Specifications:

- 120, 208, 240 VAC input voltage
- Controls up to three valve actuators
- Switches heater thermostat
- Remote control capabilities
- Agency approval: CSA/C-US
- Controls two circuits (**P4243ME only**)

### Contact Ratings – Each Circuit

- Valve Actuator Supply: 24 VAC, 40 VA
- 17 Amp Resistive, 120-240 VAC, 50/60 Hz (**P4243ME only**)
- 1.5 HP, 120 VAC, 50/60 Hz (**P4243ME only**)
- 3.0 HP, 240 VAC, 50/60 Hz (**P4243ME only**)
- 10 Amp Tungsten, 120, 240 VAC, 50/60 Hz (**P4243ME only**)

### P4043ME – Valve Actuator Control Mechanism

Have you ever wanted an affordable control that would only automate a set of water valves from the pool position to the spa position? Or maybe just turn a single water valve to engage a water feature?

Designed specifically for aftermarket and retro-fit applications, the P4043ME is ideal for controlling up to three water valve actuators with any latching or momentary contactor (**not provided**) capable of providing 120 VAC or 240 VAC. In addition, the P4043ME can switch the thermostat on most heaters between pool and spa when the actuators change position.

The P4043ME is ideal for those applications where only simple water valve control is required and can be triggered by any switching device you may provide (i.e. light switch, spring wound AUTO/OFF, wireless switch, relay, etc...). Installation is easy! Simply snap the P4043ME into any existing Intermatic enclosure that contains an available mechanism support bracket, hook up power to both the P4043ME and the trigger device, and plug in your 24 VAC water valve actuators behind the top door of the mechanism.

### PE140 – Valve Actuator Control

If you do not have an Intermatic enclosure, you can order the PE140 model which contains the P4043ME mechanism and the appropriate low voltage hardware for running your actuator cables.

### P4243ME – Valve/Pump Switch Mechanism

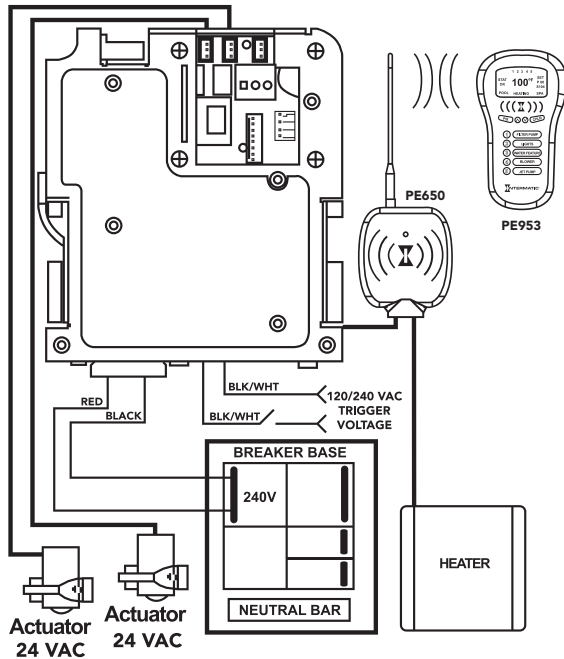
Designed as part of the I-Wave system and for aftermarket and retro-fit applications, the P4243ME does everything a P4043ME does and is most suited for controlling up to two different circuits associated with pool/spa combinations. It can also be used to control all the equipment typically needed in connection with water features, solar heating and other similar applications. This unit snaps into almost any Intermatic enclosure and controls pumps up to 3HP, 24 volt supply for up to three valve actuators, automatic HIGH/LOW water temperature selector, heater connection circuit and push button control for each load with indicator lights on the face of switch. In addition, the unit has connections for a hard wired or wireless remote and a master switch controller.

*Note: The following page refers to only a fraction of the most common applications of the MultiWave Control System. Contact your Intermatic sales representative or visit [www.intermatic.com](http://www.intermatic.com) and visit the Pool & Spa section of our website for more application ideas and details.*



# Actuator Controller & Valve/Pump Switch Applications

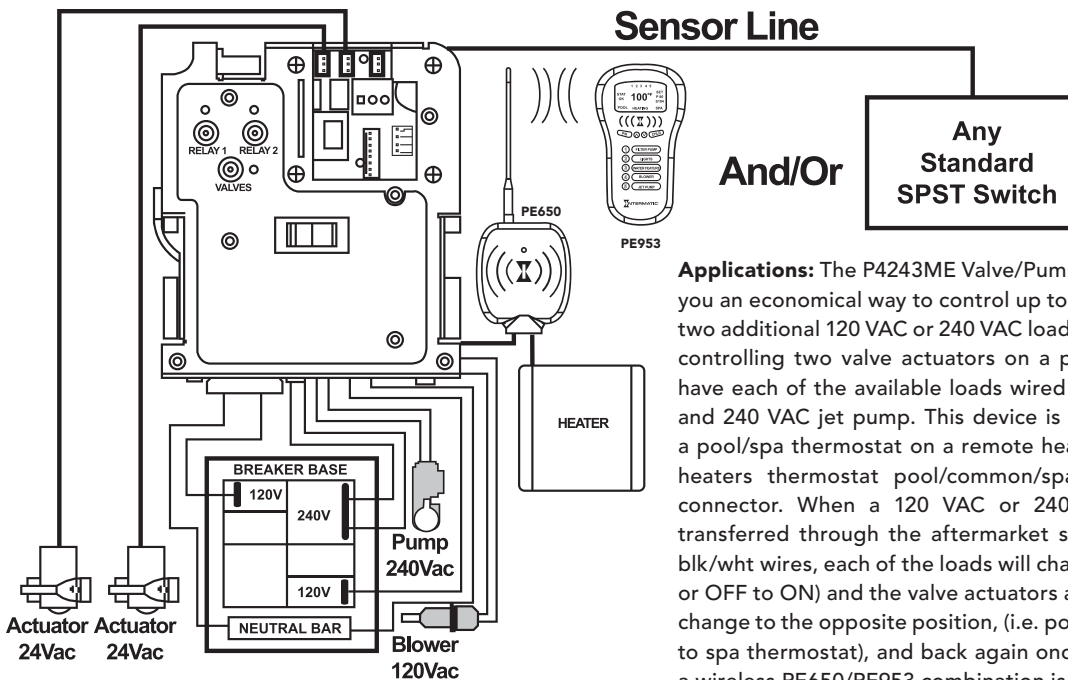
## P4043ME Application



**Applications:** The P4043ME Actuator Control Mechanism gives you an economical way to control up to three valve actuators with either a simple aftermarket switch, a sophisticated PE650/PE953 wireless control or both. In the example, we illustrate controlling two valve actuators most commonly found in a fountain control, solar control or pool/spa control system. This device is also capable of switching a pool/spa thermostat on a remote heater by wiring the remote heaters thermostat pool/common/spa wires to the onboard connector. When a 120 VAC or 240 VAC trigger voltage is transferred through the aftermarket switch to the mechanism's blk/wht wires, the valve actuators and heater thermostat will change to the opposite position, (i.e. pool to spa, pool thermostat to spa thermostat), and back again once the switch is opened. If a wireless PE650/PE953 combination is added to the mechanism, a wireless full thermostat control system along with actuator control would now be available.

## P4243ME Application

### Sensor Line



**Applications:** The P4243ME Valve/Pump Switch Mechanism gives you an economical way to control up to three valve actuators and two additional 120 VAC or 240 VAC loads. The example, illustrates controlling two valve actuators on a pool/spa combination and have each of the available loads wired to a 240 VAC spa blower and 240 VAC jet pump. This device is also capable of switching a pool/spa thermostat on a remote heater by wiring the remote heaters thermostat pool/common/spa wires to the onboard connector. When a 120 VAC or 240 VAC trigger voltage is transferred through the aftermarket switch to the mechanisms blk/wht wires, each of the loads will change state, (i.e. ON to OFF or OFF to ON) and the valve actuators and heater thermostat will change to the opposite position, (i.e. pool to spa, pool thermostat to spa thermostat), and back again once the switch is opened. If a wireless PE650/PE953 combination is added to the mechanism, a wireless full thermostat control system along with actuator control and individual load control would now be available.



# Wireless & Remote Control Accessories



PE650



PE953



133PE1484A

## I-Wave Remote Controls Panel-Mounted Transceiver (PE650) with Antenna (PA118)



Utilizing ground breaking Z-Wave® technology, Intermatic's Wireless Panel-Mounted Transceiver and Hand-Held Transceiver provide reliable two-way communication and long range ability that is unmatched by any other wireless protocols.

The main function of the Panel Mounted Transceiver is to take commands from the Wireless Hand Held Transceiver (PE953) and hand them off to two mechanisms (P1353ME and/or P4243ME).

### This unit can control:

- One P1353ME and one P4243ME
- One or two P1353ME units
- One or two P4243ME units
- Gas or electric heater thermostat

In cases where the two devices are too far apart for direct communication you can also purchase a (PA121) 35-ft. Antenna Extension Cable Assembly when structures impede transmissions between the Panel Mounted Transceiver and Hand Held Transceiver.

## Wireless Hand-Held Transceiver (PE953)

The primary function of the PE953 MultiWave wireless hand-held controller is to both transmit user commands and receive equipment data from a variety of different devices, including the PE650, PE653, specific OEM equipment and any Z-Wave compatible transceiver device. The PE953 is an all-in-one multitasking controller capable of communicating with all the above devices by toggling the screens on the controller to the appropriate device. With the addition of the new backlit display and improved features; the new PE953 MultiWave controller replaces the I-Wave PE950 controller.

### Features:

- Waterproof
- Replaces the PE950
- Backlit LCD display
- User friendly programming
- Improved programming capabilities
- New Z-Wave home automation features
- Controls the PE650, PE653, specific OEM equipment & Z-Wave devices
- Z-Wave certified capable of communicating with any Z-Wave certified devices

## Three-Button Wired Remote Control (133PE1484A)

The Three-Button Wired Remote Control 133PE1484A plugs into either the Three-Circuit Clock P1353ME or Valve/Pump Switch P4243ME and is normally installed as a spa-side remote. Most often the remote controls the filter pump, jets and lights, plus includes indicator lights on the face of the button. When installed as part of a system, it replaces the wireless method of controlling the three circuits within the mechanism. The Three-Button Wired Remote Control can also be installed where a third mechanism is needed in the enclosure, since the Wireless Hand-Held Transceiver (PE953) can only control two mechanisms.



# Control Accessories

## I-Wave Accessories

### Antenna (PA118)

The Intermatic Antenna PA118 installs on the top of the PE650 I-Wave receiver. All PE650 I-Wave receivers come with the antenna so you would only require a PA118 for replacement purposes. Only a PA118 antenna will work with the PE650 I-Wave Receiver.

### Water Temperature Sensor (PA122)

The Intermatic Water Temperature Sensor PA122 installs in the inlet side of the heater and monitors both pool and spa water temperature, depending on the position of the diverter valves. Installation is necessary for the thermostatic control to work. The sensor plugs into the Panel-Mounted Transceiver PE650 and the water temperature is displayed on the Hand-Held Transceiver PE953.

### Freeze (Air Temperature) Sensor (178PA28A)

Add the Intermatic Freeze or Air Temperature Sensor 178PA28A to installations where below-freezing outdoor temperatures are a concern. The sensor is designed to protect the pool and spa equipment and plumbing against freeze damage. The sensor plugs into the circuit board on the back of the P1353ME and turns ON the filter pump when air temperature drops below the programmed temperature. The freeze programming mode will not appear unless the sensor is plugged into the clock.

### 35-ft. Antenna Extension Cable Assembly (PA121)

When a structure impedes transmission between the Panel-Mounted Transceiver PE650 and Handheld Transceiver(s) PE953, you can use the 35-ft. Antenna Extension Cable Assembly PA121 to relocate the antenna from the Panel-Mounted Transceiver to the area of operation, ensuring that communication between the Hand-Held unit and the control center is successful.

Model #	Description	Case Qty.	Case Weight
PE650	Panel mounted transceiver	1	5.5 lbs. (2.5 kg)
PE953	Wireless hand held transceiver	1	5.5 lbs. (2.5 kg)
133PE1484A	Three-button wired remote control	1	3.1 lbs. (1.4 kg)
PA118	Antenna	1	0.2 lbs. (0.1 kg)
PA122	Water temperature sensor	1	0.3 lbs. (0.1 kg)
178PA28A	Freeze sensor	1	0.3 lbs. (0.1 kg)
PA121	Antenna extension	1	3.0 lbs. (0.1 kg)
PA120	Relay – DPST, 24 VAC coil	1	0.4 lbs. (0.2 kg)
143T145A	Relay – DPST, 24 VDC coil	1	0.4 lbs. (0.2 kg)



PA118



PA122



178PA28A



Antenna Extension  
Cable Accessory

PA121



143T145A

PA120



# Digital Two-Speed Controls PE Series

## PE100 Series

### P1353ME & NEMA 3R Enclosure with Available Options

- For 1 and 2-speed pumps
  - Controls 3 circuits
  - 3 ON/OFF events per day
  - 7 pre-programmed combinations to choose from
  - Add on other pool/spa related devices
- See pages 114-117 for specifications on P1353ME

#### Applications:

- Single Speed Pump/Booster Pump Combos
- Two-Speed Pump/Booster Pump Combos
- Pool & Spa Lighting
- Water Features
- Gardens & Fountains
- Landscape Lighting

#### Specifications:

**Enclosure:** NEMA 3R rated for Indoor/Outdoor installation in beige finish  
"P" suffix models are same dimensions, except made from outdoor grade plastic.

9<sup>3</sup>/<sub>8</sub> in. (23.8 cm) H x 5<sup>1</sup>/<sub>2</sub> in. (14.0 cm) W x 3<sup>5</sup>/<sub>8</sub> in. (9.2 cm) D

**Knockouts:** Combination 1/2 – 3/4 in. nominal knockouts, one on back and each side of enclosure and two on bottom

**Switch Rating (each circuit):** 20 Amp Resistive, 120-240 VAC, 50/60 Hz; (20 FLA, 96 LRA), 120 VAC, 50/60 Hz; (17 FLA, 80 LRA), 240 VAC, 50/60 Hz; 5 Amp Tungsten, 120-240 VAC, 50/60 Hz; 5 Amp Ballast, 120-240 VAC, 50/60 Hz

**Shipping Weight:** 3.7 lbs (1.7 kg)

**Agency Approval:** CSA/C-US

Model #	Description	Switch	Clock Supply Volts 50/60 Hz
PE153	Digital Time Clock in Metal Enclosure	3 - SPST	120, 240
PE153F	Digital Time Clock in Metal Enclosure with Freeze Protection Probe	3 - SPST	120, 240
PE153P	Digital Time Clock in Plastic Enclosure	3 - SPST	120, 240
PE153PW	Digital Time Clock in Plastic Enclosure with 100' Wired Remote Command	3 - SPST	120, 240
PE153PF	Digital Time Clock in Plastic Enclosure with Freeze Protection Probe	3 - SPST	120, 240
PE153PWF	Digital Time Clock in Plastic Enclosure with 100' Wired Remote Command & Freeze Protection Probe	3 - SPST	120, 240
PE153RC	Digital Time Clock in Metal Enclosure with Wireless Remote Command & Heater Control	3 - SPST	120, 240

Note: See page 120-121 for PE650 and PE953 specifications and pages 114-117 for P1353ME specifications.



PE153RC

# Digital Two-Speed Controls PE10000 Series

## PE 10000 Series Digital Pool or Spa Control Centers

For pool, spa or water feature applications, the PE Series Digital Controls include one P1353ME mechanism that controls a total of three timed circuits, including single speed or two-speed filter pumps, pool lights, spa lights and landscape lights. Countdown and override features allow programs to be interrupted for service and automatically resumed without reprogramming your system.

### Applications:

- Single Speed Pump/Booster Pump Combos
- Water Features
- Two-Speed Pump/Booster Pump Combos
- Gardens & fountains
- Pool & Spa Lighting
- Landscape Lighting

### Specifications:

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish.

14¾ in. (37.5 cm) H x 14¾ in. (37.5 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** One 1.09 in. diameter through hole, three ½ in. knockouts, seven combination ½ – ¾ in. knockouts, and two combination ¾ – 1 in. knockouts on the bottom. Two combination ½ – ¾ in. on the left side and one combination ¾ – 1 in. and one combination ½ – ¾ in. on the back. One knockout 1¾ x 2¾ in. on the right side for mounting switches or GFCI

**Switch Rating:** P1353ME – See page 114

**Shipping Weight:** See table

**Agency Approval:** CSA/C-US

Model #	Description/Mechanism	Switch	Clock Supply Volts 50/60 Hz	Shipping Weight
PE10000	None	None	120, 240	16.3 lbs (7.4 kg)
PE15300	P1353ME	3-SPST	120, 240	17.2 lbs (7.8 kg)
PE15300F	P1353ME w/Freeze Probe	3-SPST	120, 240	17.2 lbs (7.8 kg)

### Upgrade Solution & Options:

**Wireless – Add PE650 & PE953 (see page 120-121)**



PE10000



PE15300



PE15300F





# Digital Two-Speed Controls

## PE20000 Series

### Pool or Spa Wave



**PE2000**



**PE25300**



**PE25300F**



**PE25300RC**



### PE20000 Series

#### Digital Pool or Spa Control Panels

For pool, spa or water feature applications, the Pool or Spa Wave PE2 Series Wireless Control System includes one P1353ME mechanism that controls a total of three timed circuits, including single speed or two-speed filter pumps, cleaner/booster pumps, pool lights, spa lights and landscape lights. Countdown and override features allow programs to be interrupted for service and automatically resumed without reprogramming your system.

#### Applications:

- Single Speed Pump/Booster Pump Combos
- Two-Speed Pump/Booster Pump Combos
- Water Features
- Pool & Spa Lighting
- Gardens & Fountains
- Landscape Lighting

#### Specifications:

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
16½ in. (41.9 cm) H x 10⅞ in. (27.6 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** One 1.09 in. diameter through hole, six combination ½ – ¾ in. knockouts, and three combination ¾ – 1 in. knockouts on the bottom. Two combination ½ – ¾ in. on the left side and one combination ¾ – 1 in. on the back. One knockout 1¾ x 2¾ in. on the right side for mounting switches or GFCI

**Panel Rating:** 60 Amp, 120, 240 VAC or 120, 208 VAC single phase

**Switch Rating:** P1353ME – See page 114

**Agency Approval:** CSA/C-US

Model #	Description/ Mechanism	Switch	Clock Supply Volts 60 Hz	Shipping Weight
PE20000	None	None	120, 240	14.3 lbs (6.5 kg)
PE25300	P1353ME	3 - SPST	120, 240	18.3 lbs (8.3 kg)
PE25300F	P1353ME w/Freeze Probe	3 - SPST	120, 240	18.3 lbs (8.3 kg)
PE25300RC	P1353ME w/Wireless Remote Command and Heater Control	3 - SPST	120, 240	19.3 lbs (8.8 kg)

Note: See page 120-121 for PE650 and PE953 specifications and page 114-117 for P1353ME specifications.

#### Upgrade Options:

**Wireless – Add PE650 & PE953 (see page 120-121)**

# Digital Controls

## PE30000 Series Mini I-Wave

### PE30000 Series Digital Pool or Spa Control Panels

For pool, spa or water feature applications, the Mini I-Wave Series Digital Controls includes one P1353ME mechanism that controls a total of three timed circuits, including single-speed or two-speed filter pumps, cleaner/booster pumps, pool lights, spa lights and landscape lights. Countdown and override features allow programs to be interrupted for service and automatically resumed without reprogramming your system.

#### Applications:

- Single Speed Pump/Booster Pump Combos
- Two-Speed Pump/Booster Pump Combos
- Water Features
- Pool & Spa Lighting
- Gardens & Fountains
- Landscape Lighting

#### Specifications:

**Enclosure:** 0.048 in. steel with light beige finish

22 in. (55.9 cm) H x 14<sup>3</sup>/<sub>4</sub> in. (37.5 cm) W x 4<sup>1</sup>/<sub>4</sub> in. (10.8 cm) D

**Knockouts:** One 1.09 in. diameter through hole, six combination 1/2 – 3/4 in. knockouts, 2 combination 3/4, 1, 1 1/4 in. knockouts, four 1/2 in. knockouts on the bottom. Two combination 1/2 – 3/4 in. knockouts on the left side and four combination 1/2 – 3/4 in. knockouts, two combination 3/4 – 1 in. on the back. One knockout 1 3/4 x 2 3/4 in. on the right side for mounting switches or GFCI

**Panel Rating:** 80 Amp, 120, 240 VAC or 120, 208 VAC single phase

**Switch Rating:** P1353ME – See page 114

**Shipping Weight:** See table

**Agency Approval:** CSA/C-US

Model #	Description/Mechanism	Switch	Clock Supply Volts 50/60 Hz	Shipping Weight
PE30000	None	None	120 or 240	16.3 lbs (7.4 kg)
PE35300	P1353ME	3-SPST	120 or 240	19.0 lbs (8.6 kg)
PE35300RC	P1353ME w/Wireless Remote	3-SPST	120 or 240	29.0 lbs (13.2 kg)
<b>Command &amp; Heater Control</b>				
PE35343RC	P1353ME & P4243ME w/Wireless Remote Command, Heater Control & Two PE24VA Valve Actuators	3-SPST 2-DPST 3-Actuators	120 or 240	38.0 lbs (17.3 kg)

Note: See page 120-121 for PE650 and PE953 specifications and page 114-117 for P1353ME specifications.



PE30000



PE35300



PE35300RC



PE35343RC





# Digital Controls

## PE40000 Series I-Wave



**PE40000**



**PE45300**



**PE45343RC**



**PE45343RCT3**



### PE40000 Series I-Wave Wireless Pool/Spa Control Panels

For pool, spa or water feature applications, the I-Wave Series Digital Controls includes one P1353ME mechanism that controls a total of three timed circuits, including single speed or two-speed filter pumps, cleaner/booster pumps, pool lights, spa lights and landscape lights. Countdown and override features allow programs to be interrupted for service and automatically resumed without reprogramming your system.

For pool/spa combinations or pool/water feature combinations, the PE45343RC includes all the features of the PE Series Digital Controls plus two PE24VA valve actuators, Wireless Panel-Mounted Transceiver PE650 and Hand-Held Transceiver PE950 which allows the system to display the status of each of the five circuits (3 timed and 2 on-demand), pool and spa water temperature, pool and spa thermostat set point, heating status and overall communication status.

#### Applications:

- Pool/Spa Combinations
- Pool/Water Feature Combinations
- Pool/Spa Lighting
- Water Features
- Fountains
- Landscape Lighting

#### Specifications:

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
26.0 in. (66.3 cm) H x 18.0 in. (45.9 cm) W x 5.5 in. (14.0 cm) D

**Knockouts:** Two combination  $\frac{3}{4}$  – 1 –  $1\frac{1}{4}$  in. and eleven combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. knockouts on the bottom. Two  $\frac{3}{4}$  – 1 in. combination and four combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. knockouts on the back. Low voltage compartment has two combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. knockouts and one  $\frac{3}{4}$  in. hole with a shutter bushing installed. Two combination  $\frac{3}{4}$  – 1 in. and one combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. knockouts. One  $1\frac{3}{4}$  x  $2\frac{3}{4}$  in. knockout on the right side

**Panel Rating:** 125 Amp, 120, 240 VAC or 120, 208 VAC single phase

**Switch Rating:** P1353ME (page 114) and P4243ME (pages 118-119)

**Shipping Weight:** See Table

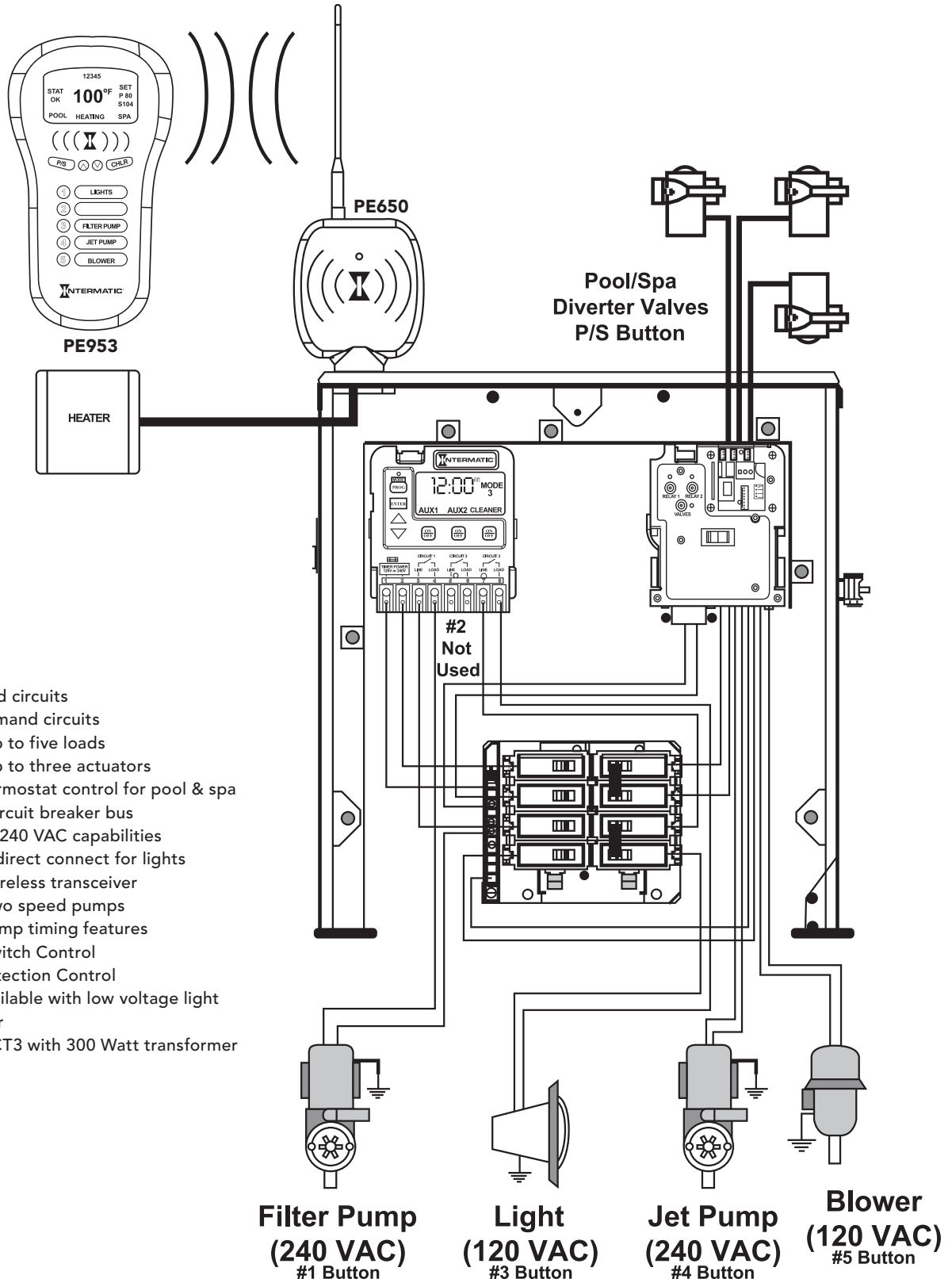
**Agency approval:** CSA/C-US

Model #	Mechs/ Description	Circuits	Transformer	Volts 50/60 Hz	Shipping Weight
PE40000	None	None	None	120, 240	42.0 lbs. (19.1 kg)
PE45300	P1353ME	3 – SPST	None	120, 240	44.0 lbs. (19.8 kg)
PE45343RC	P1353ME w/Wireless Remote Command, Heater Control & (2) Actuators	3 – SPST 2 – DPST 2 – Actuators	None	120, 240	52.0 lbs. (23.6 kg)
PE45343RCT3	P1353ME w/Wireless Remote Command, Heater Control & (2) Actuators w/300 Watt 12 V Transformer	3 – SPST 2 – DPST 2 – Actuators	300 Watt	120, 240	61.0 lbs. (27.5 kg)

Note: See pages 120-121 for PE650 and PE953 specifications, page 114 for P1353ME, pages 118-119 for P4243ME specifications and page 148 for PE24VA Valve Actuator specifications.

# Digital Control Applications

## I-Wave Application PE45343RC & PE45343RCT3



### Features

- Three timed circuits
- Two on-demand circuits
- Controls up to five loads
- Controls up to three actuators
- Heater thermostat control for pool & spa
- 125 Amp circuit breaker bus
- 120 VAC & 240 VAC capabilities
- Approved direct connect for lights
- Z-Wave® wireless transceiver
- Controls two speed pumps
- Booster pump timing features
- Fireman Switch Control
- Freeze Protection Control
- Models available with low voltage light transformer
- PE45343RCT3 with 300 Watt transformer



# Digital Controls PE1500RC Series Mini-Wave

## PE1500RC Series Mini-Wave Wireless Pool/Spa Control Panels

For pool/spa combinations or pool/water feature combinations, the PE1541RC includes a PB313E one circuit electronic timer for controlling the filter pump, two PE24VA valve actuators, Wireless Panel Mounted Transceiver PE650 and Hand-Held Transceiver PE950, which allows the system to display the status of each of the four on-demand circuits, pool and spa water temperature, pool and spa thermostat set point, heating status and overall communication status. PE1501RC does not include actuators and is designed for pool or spa applications.

### Specifications:

**Panel Rating:** 100 Amp, 120, 240 VAC or 120, 208 VAC single phase

**Switch Rating:** 17 Amp Resistive, 120, 240 VAC, 50/60 Hz; 1.5 HP, 120 VAC, 50/60 Hz; 3.0 HP, 240 VAC, 50/60 Hz; 10 Amp Tungsten, 120, 240 VAC, 50/60 Hz

**Shipping Weight:** 24.3 lbs. (10.9 kg)

**Agency Approval:** CSA/C-US



PE1541RC



PE1501RC



PA120

143T145A

Model #	Timer	Circuits	Actuators	Switch	Clock Supply Volts 50/60 Hz
PE1541RC	PB313E	4	2	4 - DPST	120, 240
PE1501RC	PB313E	4	None	4 - DPST	120, 240

Note: See Page 120-121 for PE650 and PE953 specifications.

## PA120 Relay (24 VAC Coil) Booster/Cleaner Pump, Water Feature or Extra Circuit

If you need to control a booster/cleaner pump, water feature or just require an additional circuit, the PA120 can be added as circuit #3 to your Mini-Wave Control Center. If used as a booster/cleaner pump relay, you will need to program your PE953 Wireless Hand-Held Transceiver to lock out the booster/cleaner pump whenever your valve actuators change from the pool position to the spa position. This relay requires a 24 VAC coil, not a 24 VDC coil like the remaining four relays.

## 143T145A (24 VDC Coil) Replacement Relay

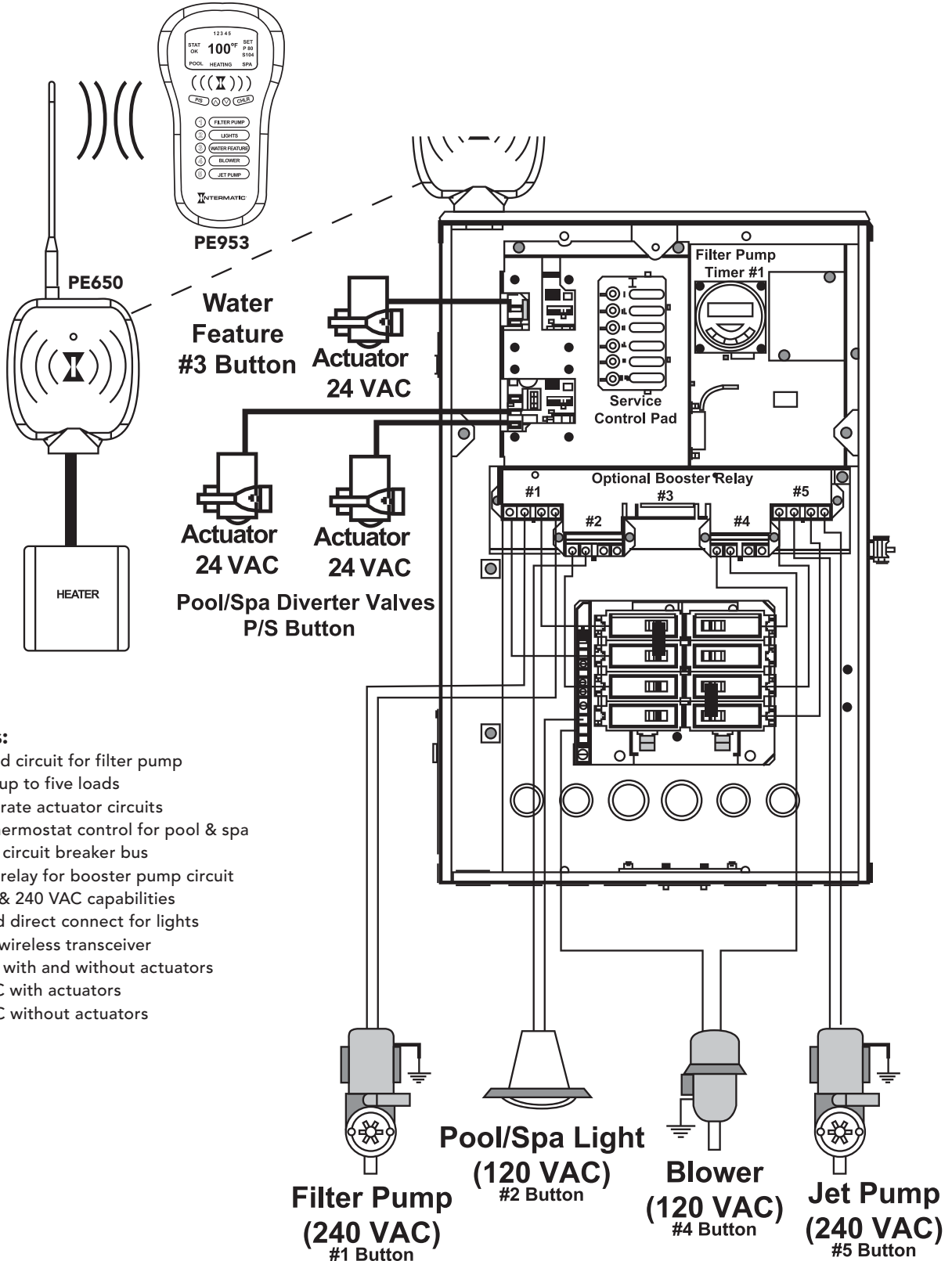
The 143T145A is the replacement relay for the I-Wave, Mini-Wave or most any other competitors control system available on the market today. Capable of controlling up to a 3 HP motor, it has a 24 VDC coil, and comes equipped with a 10 in. red/black lead wire and two pin connector suitable for most control systems.

Model #	Description	Case Qty.	Case Weight
PA120	Relay – DPST, 24 VAC coil	1	0.4 lbs. (0.2 kg)
143T145A	Relay – DPST, 24 VDC coil	1	0.4 lbs. (0.2 kg)



# Mini-Wave Applications

## Mini-Wave Application PE1541RC & PE1501RC

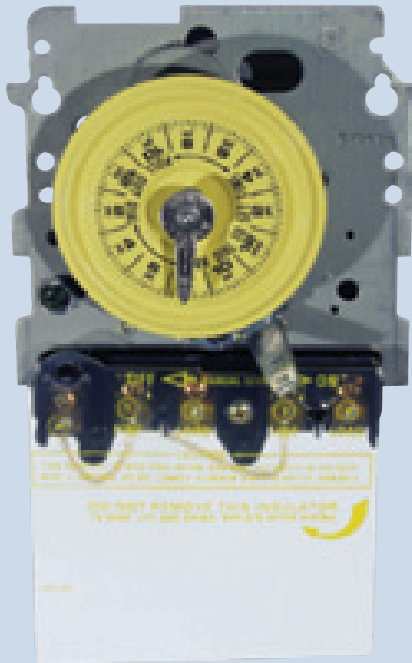


### Features:

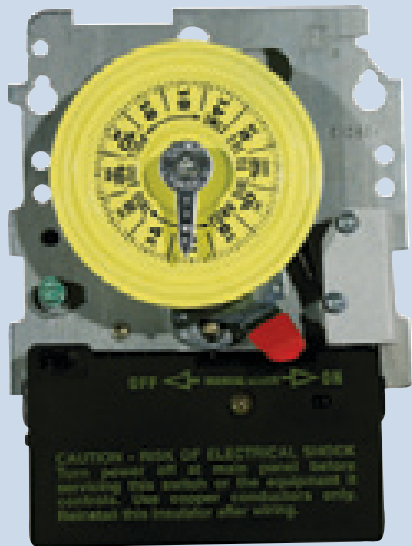
- One timed circuit for filter pump
- Controls up to five loads
- Two separate actuator circuits
- Heater thermostat control for pool & spa
- 100 Amp circuit breaker bus
- Optional relay for booster pump circuit
- 120 VAC & 240 VAC capabilities
- Approved direct connect for lights
- Z-Wave® wireless transceiver
- Available with and without actuators
- PE1541RC with actuators
- PE1501RC without actuators



# Mechanical Time Switches



T104M



T104M201



## T100M Series 24 Hour Mechanical Time Switch Mechanisms

These heavy duty Time Switch Mechanisms are designed for commercial, industrial and residential applications, and have the highest motor load ratings in the industry. They provide up to 12 ON/OFF operations each day with minimum ON/OFF time of 1 hour. All models are equipped with ON and OFF trippers and can be installed in almost all Intermatic enclosures.

**Applications:**

- Filter Pumps
- Heat Pumps
- Lighting

**Specifications:**

**Switch Rating:** 40 Amp Resistive each pole, 120-480 VAC; 40 Amp Tungsten, Inductive or 1000 VA Pilot Duty each pole 120-277 VAC; 2 HP (24 FLA) 120 VAC; 5 HP (28 FLA) 240 VAC

**Shipping Weight:** See Table

**Agency approval:** CSA/C-US

Model #	Description/ Mechanism	Switch	Clock Supply Volts 60 Hz	Shipping Weight
T101M	Mechanism only	SPST	120	1.4 lbs (0.6 kg)
T102M	Mechanism only	SPST	208-277	1.4 lbs (0.6 kg)
T103M	Mechanism only	DPST	120	1.4 lbs (0.6 kg)
T104M	Mechanism only	DPST	208-277	1.4 lbs (0.6 kg)
T106M	Mechanism only	SPDT	208-277	1.4 lbs (0.6 kg)

for 2-speed pump applications

## T100M201 Series 24 Hour Mechanical Time Switch Mechanism with Heater Protection

This Time Switch Mechanism provides coordinated control for heater and filter pump operations. It is designed to turn OFF a gas fired swimming pool heater approximately 20 minutes before the filter pump shuts down. This eliminates the problem of pounding and knocking due to overheated water, reduces scale and lime deposits and extends the service life of the heater. The 24-hour dial allows up to 12 ON/OFF operations each day. One set of ON and OFF trippers is supplied with each switch. Minimum ON/OFF time is one hour. Can be installed in almost all Intermatic enclosures.

**Applications:**

- Pool and/or spa pumps with gas fired heaters

**Specifications:**

**Switch Rating:** 40 Amp Resistive each pole, 120-480 VAC; 40 Amp Tungsten, Inductive or 1000 VA Pilot Duty each pole 120-277 VAC; 2 HP (24 FLA) 120 VAC; 5 HP (28 FLA) 240 VAC

**Heater Control Circuit:** 10 Amp, 240V. max

**Shipping Weight:** See Table

**Agency approval:** CSA/C-US

Model #	Description/ Mechanism	Switch	Clock Supply Volts 60 Hz	Shipping Weight
T104M201	Mechanism only with heater protection	DPST	208-277	1.4 lbs (0.6 kg)

# Mechanical Time Switches

## T100 Series Pool/Spa Time Switches

These heavy-duty Mechanical Time Switches are designed for commercial, industrial and residential applications and have the highest motor load ratings in the industry. They provide up to 12 ON/OFF operations each day with a minimum ON/OFF time of 1 hour. All models are equipped with ON and OFF trippers and are available in either plastic or metal indoor/outdoor enclosure.

T100R201 and T100P201 Series Time Switches are designed to turn OFF a gas fired swimming pool heater approximately 20 minutes before the filter pump shuts down. This eliminates the problem of pounding and knocking due to overheated water, reduces scale and lime deposits and extends the service life of the heater.

### Applications:

- Booster Pumps
- Fans
- Heat Pumps
- Lighting
- Air Conditioning
- Swimming Pool and/or Spa Filter Pumps with Gas Fired Heaters
- Hydro Chlorinators
- Music and Signal Systems

### Specifications:

**Enclosure:** NEMA 3R rated for Indoor/Outdoor installation. 0.034 in. drawn steel in beige finish

9 $\frac{3}{8}$  in. (23.8 cm) H x 5 $\frac{1}{2}$  in. (14.0 cm) W x 3 $\frac{5}{8}$  in. (9.2 cm) D

"P" models are the same as above, except made from outdoor grade plastic

**Knockouts:** Combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. nominal knockouts, 1 on back and each side of enclosure and 2 on bottom

**Switch Rating:** 40 Amp Resistive each pole, 120-480 VAC; 40 Amp Tungsten, Inductive or 1000 VA Pilot Duty each pole, 120-277 VAC; 2 HP (24 FLA) 120 VAC; 5 HP (28 FLA) 240 VAC

**Heater Protection Circuit:** 10 Amp, 240 V max

**Agency Approval:** CSA/C-US



Model #	Description	Switch	Clock Supply Volts 60Hz
2T2485GA	Metal enclosure only	None	NA
2T2502GA	Plastic enclosure only	None	NA
2TP3352A	Plastic enclosure only with safety door	None	NA
T101P3	Time switch in plastic enclosure	SPST	120
T104P3	Time switch in plastic enclosure	DPST	208-277
T101R3	Time switch in metal enclosure	SPST	120
T101PCD82	Time switch in plastic enclosure w/see-through cover	SPST	125
T103PCD82	Time switch in plastic enclosure w/see-through cover	DPST	125
T104PCD82	Time switch in plastic enclosure w/see-through cover	DPST	125
T104R3	Time switch in metal enclosure	DPST	208-277
T101P201*	Time switch in plastic enclosure w/heater protection	SPST	120
T104P201*	Time switch in plastic enclosure w/heater protection	DPST	208-277
T101R201*	Time switch in metal enclosure w/heater protection	SPST	120
T104R201*	Time switch in metal enclosure w/heater protection	DPST	208-277

\* The heater protection switch (fireman switch) is closed when the time switch contacts are open to allow remote operation of the heater. A flow or pressure switch must always be part of the heater control circuit.

For additional trippers (1 ON/1 OFF per pack), order No. 156T1978A.

For additional OFF trippers (25 OFF per pack), order No. PA115.

Note: See page 130 for a detailed list of replacement mechanisms.





# Mechanical Controls



**T10000R**



**T10004R**



**T10404R**



## T10000R Series Pool/Spa Control Centers

The T10000R Series Control Centers feature an all-weather enclosure and contain one or two heavy-duty timer mechanisms. In addition, they have provision to install switches or GFCI receptacle on the side and additional switches inside. The enclosure accepts any combinations of P1353ME or P4243ME or T100M or RC2000M or PF1000M Series mechanisms.

### Applications:

- Filter Pumps/Booster Pump Combinations
- Filter Pump/Light Controls
- Pool/Spa Combinations
- Landscape or HID Lighting
- Signs

### Specifications:

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
12 in. (30.5 cm) H x 12 in. (30.5 cm) W x 4 1/4 in. (10.8 cm) D

**Knockouts:** Five combination 1/2 – 3/4 in. and two combination 3/4 – 1 in. knockouts on the bottom. One combination 1/2 – 3/4 in. on the left side and one combination 3/4 – 1 in. on the back. One knockout 1 3/4 x 2 3/4 in. on the right side for mounting switches or GFCI

**Center Rating:** 92 Amp per leg, 168 Amp Max. 120-240 VAC or 120-208 VAC single phase, 60 Hz

**Time Switch Rating:** 30 Amp Resistive/Inductive, Tungsten or 1000 VA Pilot Duty each pole 120, 208, 240 VAC; 2 HP (24 FLA), 120 VAC; 5 HP (28 FLA), 240 VAC

**Shipping Weight:** See Table

**Agency Approval:** CSA/C-US

Model #	Description/ Mechanism	Switch	Clock Supply Volts AC, 60 Hz	Shipping Weight
T10000R	Enclosure Only	None	NA/NA	9.3 lbs (4.2 kg)
T10004R	One T104M	NA/DPST	NA/240	10.5 lbs (4.7 kg)
T10101R	Two T101M	SPST/SPST	120/120	11.0 lbs (5.0 kg)
T10404R	Two T104M	DPST/DPST	240/240	11.0 lbs (5.0 kg)
T10604R*	T106M & T104M	SPDT/DPST	240/240	11.0 lbs (5.0 kg)
T12404R**	T104M201 & T104M	DPST/DPST	240/240	11.0 lbs (5.0 kg)

\* For 2 Speed Pump Applications.

\*\* The heater protection switch (fireman switch) is closed when the time switch contacts are open to allow remote operation of the heater. A flow or pressure switch must always be part of the heater control circuit.

For additional trippers ( 1 ON 1 OFF per pack), order No. 156T1978A.

For additional OFF trippers (25 OFF per pack), order No. PA115.

For stand-offs for décor knockouts (4 stand-offs per pack), order No. 21T156A.

Note: See page 130 for a detailed list of replacement mechanisms.

# Mechanical Controls

## T20000R Series 60 Amp Pool/Spa Control Panels

The T20000R Series Control Panels features an all-weather enclosure and contain a 4 circuit breaker base, an equipment grounding bar and a mechanical time switch mechanism. The circuit breaker base accepts interchangeable type breakers made by a several manufacturers. In addition, the enclosure has provision for installing additional switches or GFCI receptacles on the side and inside.

### Applications:

- Filter Pumps
- Lights
- Ventilating Systems
- Signs
- Air Conditioners
- Heaters

### Specifications:

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
16 $\frac{3}{4}$  in. (42.6 cm) H x 8 $\frac{7}{8}$  in. (22.5 cm) W x 4 $\frac{3}{8}$  in. (11.1 cm) D

**Knockouts:** Five combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. and three  $\frac{3}{4}$  – 1 in. on the bottom, one combination  $\frac{1}{2}$  –  $\frac{3}{4}$  in. on the left side, one  $\frac{3}{4}$  – 1 in. on the back and one combination  $1\frac{3}{4}$  x 2 $\frac{3}{4}$  in. knockout on the right side for mounting switches or GFCI

**Panel Rating:** 60 Amp, 120, 240 VAC or 120, 208 VAC; Single Phase, 60 Hz

**Time Switch Rating:** 30 Amp Resistive/Inductive, Tungsten or 1000 VA Pilot Duty each pole, 120, 208, 240 VAC; 2 HP (24 FLA), 120 VAC; 5 HP (28 FLA), 240 VAC

**Shipping Weight:** See table

**Agency Approval:** CSA/C-US

Model #	Description/Mechanism	Switch	Clock Supply Volts AC, 60 Hz	Shipping Weight
T21000R	Enclosure only	None	NA	11.2 lbs (5.0 kg)
T21001R	T101M	SPST	120	12.2 lbs (5.5 kg)
T21004R	T104M	DPST	240	12.2 lbs (5.5 kg)
T20004R*	T104M	DPST	240	11.6 lbs (5.3 kg)

\* T20004R has a limited availability, T21004R is the replacement model.

For additional trippers ( 1 ON 1 OFF per pack ), Order No. 156T1978A.

For additional OFF trippers (25 OFF per pack), order No. PA115.

For stand-offs for décor knockouts (4 stand-offs per pack), order No. 21T156A.

Note: See page 130 for a detailed list of replacement mechanisms.



T21000R



T21004R



T20004R





# Mechanical Controls

## T30000R Series 100 Amp Pool/Spa Control Panels

The T30000R Series Control Panels reduce installation costs and provide all of the electrical requirements for any pool and/or spa installation. They offer an all-in-one electrical control center which can be custom wired for a wide variety of requirements, and eliminate the need for additional junction boxes and service panels. The enclosure accepts any combination of P1353ME or P4243ME or T100M or RC2000M or PF1000M Series mechanisms.

### Applications:

- Filter Pumps
- Booster Pumps
- Heating Systems
- Lights
- Cleaning Systems
- Security Systems
- Fountains
- Sprinkler Systems
- Landscape or HID Lighting

### Specifications:

**Enclosure:** 0.048 in. steel with electrostatically applied beige finish  
16½ in. (41.9 cm) H x 10⅞ in. (27.6 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** Two ½ in., three combination ½ – ¾ in., and two combination ¾ – 1 in. knockouts on the bottom. Four ½ in., three combination ½ – ¾ in. on the back. One combination ¾ – 1 in. on the left side. One 1¾ x 2¾ in. knockout on the right side for mounting switches and GFCI

**Panel Rating:** 100 Amp, 120, 240 VAC or 120, 208 VAC single phase, 60 Hz.

**Time Switch Rating:** 30 Amp Resistive/Inductive, Tungsten or 1000 VA Pilot Duty each pole, 120, 208, 240 VAC; 2 HP (24 FLA), 120 VAC; 5 HP (28 FLA), 240 VAC

**Shipping Weight:** See table

**Agency Approval:** CSA/C-US

Model #	Description/ Mechanism	Switch	Clock Supply Volts AC, 60 Hz	Shipping Weight
T30000R5	Enclosure Only	None	NA/NA	15.5 lbs (7.0 kg)
T30004R	One T104M	None/DPST	NA/240	16.4 lbs (7.4 kg)
T30401R	T104M & T101M	DPST/SPST	240/120	17.3 lbs (7.8 kg)
T30404R	Two T104M	DPST/DPST	240/240	17.3 lbs (7.8 kg)
T30604R	T106M & T104M	SPDT/DPST	240/240	17.3 lbs (7.8 kg)
T32404R*	T104M201 & T104M	DPST/DPST	240/240	17.3 lbs (7.8 kg)

\* The heater protection switch (fireman switch) is closed when the time switch contacts are open to allow remote operation of the heater. A flow or pressure switch must always be part of the heater control circuit.

For additional trippers ( 1 ON 1 OFF per pack), order No. 156T1978A.

For additional OFF trippers (25 OFF per pack), order No. PA115.

For stand-offs for décor knockouts (4 stand-offs per pack), order No. 21T156A.

Note: See page 130 for a detailed list of replacement mechanisms.



T30000R5



T30004R



T32404R



# Mechanical Controls

## T40000R Series 125 Amp Pool/Spa Control Panels

The T40000R Series Control Panels reduce installation costs and provide all of the electrical requirements for any pool and/or spa installation. They offer an all-in-one electrical control center which can be custom wired for a wide variety of requirements, and eliminate the need for additional junction boxes and service panels. The enclosure accepts any combination of P1353ME or P4243ME or T100M or RC2000M or PF1000M Series mechanisms.

### Applications:

- Filter Pumps
- Booster Pumps
- Heating Systems
- Lights
- Cleaning Systems
- Security Systems
- Fountains
- Sprinkler Systems

### Specifications:

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
20¾ in. (52.7 cm) H x 12¾ in. (32.4 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** Seven combination ½ – ¾ in. and three combination ¾ – 1 in. knockouts on the bottom. Five combination ½ – ¾ in. on the left side. One 1¾ x 2¾ in. knockout on the right side for mounting switches and GFCI

**Panel Rating:** 125 Amp max. 120, 240 VAC or 120, 208 VAC single phase, 60 Hz

**Timer Switch Rating:** 30 Amp Resistive/Inductive, Tungsten or 1000 VA Pilot Duty each pole, 120, 208, 240 VAC; 2 HP (24 FLA), 120 VAC; 5 HP (28 FLA), 240 VAC

**Shipping Weight:** See table

**Agency Approval:** CSA/C-US

Model #	Description/ Mechanism	Switch	Clock Supply Volts AC, 60 Hz	Shipping Weight
T40000R	Enclosure Only	None	NA	16.0 lbs (7.2 kg)
T40004R	One T104M	DPST	NA/240	20.5 lbs (9.2 kg)
T40404R	Two T104M	DPST	240/240	21.2 lbs (9.5 kg)

For additional trippers ( 1 ON 1 OFF per pack ), order No. 156T1978A.

For additional OFF trippers (25 OFF per pack), order NO. PA115.

For additional stand-offs for décor knockouts (4 stand-offs per pack), order No. 21T156A.

## T40000R4 Series 100 Amp Specialty Control Panels

These specialty Control Panels are the same as the T40000R Series, except they have been designed for specialty applications. Models include a factory installed GFCI, or stainless steel panel for high corrosive environments or an inside wiring compartment for two devices. These enclosures accept any combination of T100M, P1353ME, P4243ME or T100M or RC2000M or PF1000M Series mechanisms.

### Specifications:

**Enclosure, Knockouts, Timer Switch Rating & Agency Approval:** Same as above

**Panel Rating:** 115 Amp, 120, 240 VAC or 120, 208 VAC single phase, 60 Hz

**Shipping Weight:** See table

Model #	Description/ Mechanism	Switch	Clock Supply Volts AC, 60 Hz	Shipping Weight
T40000R4*	Inside Compartment	None/None	NA/NA	19.4 lbs (8.7 kg)
T40004RSS**	One T104M	None/DPST	NA/240	20.5 lbs (9.2 kg)
T40004R5	One T104M & GFCI Installed	None/DPST	NA/240	21.6 lbs (9.7 kg)
T40404R5	Two T104M & GFCI Installed	DPST/DPST	240/240	24.6 lbs (11.0 kg)

\* Enclosure only with inside wiring compartment for twist-lock receptacle and GFCI.

\*\* Stainless Steel Enclosure.

For additional trippers ( 1 ON 1 OFF per pack ), order No. 156T1978A.

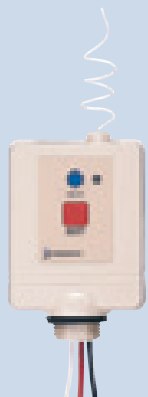
For additional OFF trippers (25 OFF per pack), order NO. PA115.

For additional stand-offs for décor knockouts (4 stand-offs per pack), order No. 21T156A.

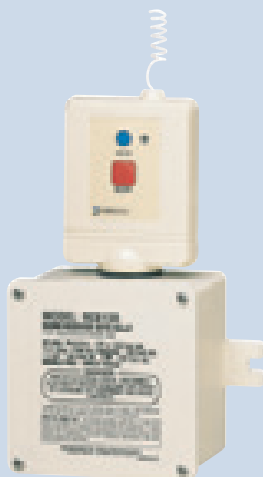




# Radio Remote Controls



**RC613L**



**RC613R**



**RC939**



## RC600 & RC900 Series Outdoor Radio Remote Controls

These Modular Radio Receivers are one half of a two part remote control system. They operate as ordinary ON/OFF switches but they also respond to the signals of a hand held transmitter — the other half of the system. The modules are designed for indoor or outdoor use, and can handle a variety of switching applications. By the push of a button on the face of the transmitter, the user is able to turn ON/OFF the connected load (lights, pump, etc.) from any remote location, inside or outside of the house, safely and conveniently. In addition, a single transmitter can operate up to three receivers and is able to “teach” each module a different code (Transmitter model RC939 sold separately).

### Applications:

- Pool/Spa Pumps, Lights & Heaters
- Pool/Spa Combinations
- Outdoor Lighting
- Air Blowers
- Fountain Pumps
- Motorized Gates
- Signs
- Water Features
- Motorized Valves

### Specifications:

**Enclosure:** Beige outdoor grade plastic

**Electrical Rating:** See table

**Maximum Range:** 100 ft. See transmitter model RC939 for details

**Agency Approval:** CSA/C-US

Model #	Description	Electrical Rating	Size	Shipping Weight
RC613	Receiver with ON/OFF button	15 Amp Resistive, 10 Amp (1200 W) Tungsten, 1 HP, motor load, 120 VAC	4½ in. H (11.4 cm), 3 in. W (7.6 cm), 1¼ in. D (4.0 cm)	0.5 lbs (0.2 kg)
RC613L	RC613 with (3) 36 in. long leads	Same as RC613	Same as RC613	0.7 lbs (0.3 kg)
RC613R	Heavy duty receiver module	20 Amp Resistive, 120, 240 V, 12.5 Amp (1500 W); 1.5 HP, 120 VAC; 3 HP, 240 VAC; DPST Contacts	7¾ in. H (19.7 cm), 4 in. W (10.7 cm), 3½ in. D (8.9 cm)	1.4 lbs (0.6 kg)
RC615	Timer Interface Module without manual button	Same as RC613	Same as RC613	0.5 lbs (0.2 kg)

## Hand Held Radio Transmitter

This hand held radio transmitter operates the shared equipment of a pool/spa combination by the touch of a button. Additional buttons are available on the transmitter to turn ON/OFF a booster pump, blower and lights.

### Applications:

- Pool/Spa Pumps, Lights & Heaters
- Pool/Spa Combinations
- Outdoor Lighting
- Air Blowers
- Signs
- Motorized Gates
- Fountain Pumps
- Water Features
- Motorized Valves

### Specifications:

**Enclosure:** Beige plastic, 4¾ in. (11.1 cm) H x 2¾ in. (7.0 cm) W x 1 in. (2.5 cm) D

**Agency Approval:** CSA/C-US

Model #	Description	Range*	Battery	Shipping Weight
RC939	3 Channel Radio Transmitter	100 ft..	9 V Transistor type	0.5 lbs (0.2 kg)

\* The range is 100 feet but depends on many factors including age of battery, proximity of large metal objects, location of the receiver and environmental conditions at the time of transmission.



# Air Operated Controls

## RC Series Single Circuit Air Switches & Accessories

These Air Switches are designed to control one piece of equipment with one air button. The switch can safely control loads without electricity at the pool, spa or tub side, for example a pump, blower or light. Each time pressure is applied to the remote air button the connected equipment will operate as described in the table. Model with suffix "T" has a built-in 10-minute automatic shut down timer. However, the operation can be stopped any time during the cycle by simply pressing the air button.

### Applications:

- Pumps
- Air Blowers
- Heaters
- Lights

### Specifications:

**Enclosure:** Plastic for Indoor/Outdoor installations

4 1/8 in. (10.5 cm) H x 4 1/8 in. (10.5 cm) W x 3 3/8 in. (8.6 cm) D

**Electrical Rating:** 20 Amp, Resistive 120, 240 VAC, 1 HP, 120 VAC; 2 HP, 240 VAC

**Voltage:** All models (except as noted) operate either on 120 VAC., (Line and Neutral) or 240 VAC., (Line 1, and Line 2 and Neutral). On 50 Hz operation, models with suffix "T" will time out in 11 minutes

**Maximum Range:** See table and note

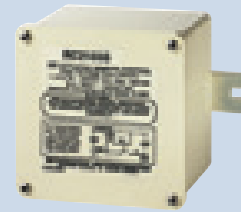
**Shipping Weight:** See table

**Agency Approval:** CSA/C-US



*Note: The actual distance between the control and air button depends on the amount of displaced air, the inside diameter of the air hose and other factors beyond the control of the manufacturer.*

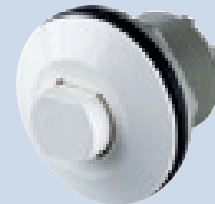
Model	Description	Switch	Distance	Shipping Weight
RC2103S	ON/OFF	SPST	100 ft.	2.0 lbs (0.09 kg)
Model	Description	Distance/Length	Case Qty	Case Weight
RC4G	Air button for gunite spas	100 ft.	10	1.0 lbs (0.5 kg)
RC6F	Air button – universal	150 ft.	10	1.0 lbs (0.5 kg)
RC117	Air tubing	75 ft.	10	12.0 lbs (5.4 kg)
RC150	Air tubing	500 ft.	10	15.0 lbs (6.7 kg)
RC122B	Air tubing and RC4G	25 ft.	10	4.5 lbs (2.0 kg)
RC127B	Air tubing and RC4G	75 ft.	10	13.0 lbs (5.9 kg)
RC510	(10) Air tubing coupler	N/A	1	0.1 lbs (0.05 kg)



RC2103S



RC4G



RC6F



RC150



RC122B



RC510



# Air Operated Controls



**RC2343PT**  
**RC2123PT**

## RC2000 Series Multi-Function Air Switch Mechanisms

These Air Switches provide remote control for one, two or three separate loads. A push button connected to the mechanism with a flexible air hose enables the user to operate a pump, a blower and a light up to 75 feet away. Models with a "T" suffix have a 24-hour digital, multiple program timer that turns a single or two-speed pump ON/OFF several times per day. The air buttons and air hose are not included and must be purchased separately.

The RC2403RT model controls a single speed or two-speed filter pump, a blower and an independent 30 Amp circuit. Comes complete with 2 air buttons and 75 ft. air hose.

### Applications:

- Filter Pumps
- Jet Pumps
- Lights
- Booster Pumps
- Blowers
- Heaters

### Specifications:

**Enclosure:** For Indoor/Outdoor installations, beige plastic, 9<sup>3</sup>/<sub>8</sub> in. (23.8 cm) H x 5<sup>1</sup>/<sub>2</sub> in. (14.0 cm) W x 3<sup>3</sup>/<sub>4</sub> in. (9.5 cm) D

**Knockouts:** Four combination 1/2 - 3/4 in., one on each side of enclosure and two on bottom

**Electrical Rating:** 20 Amp Resistive, 120, 240 VAC; 1 HP, 120 VAC; 2 HP, 240 VAC; each circuit

**Voltage:** All models operate on 120 VAC (Line and Neutral) or 240 VAC (Line 1, Line 2 and Neutral)

### Shipping Weight:

RC2123PT – 3.0 lbs (1.4 kg)

RC2343PT – 3.25 lbs (1.5 kg)

**Agency Approval:** CSA/C-US

Model #	Description	Switch	Clock Supply Volts AC, 60Hz
RC2123PT	ON/OFF or HIGH LOW, w/timer	SPDT	120/240
RC2343PT	Two circuit sequential w/timer	4-function	120/240



# Air Operated Controls

## RC2100 Series

### Air or Remote Operated Pool/Spa Controls

This line of Air or Remote Operated Controls is specially designed to control pool/spa combinations economically and reliably away from the equipment. With one touch, these units automatically override the 24 HR. timer and turn ON the filter pump, switch the valves from pool-filter mode to the spa/water feature mode and switch the compatible dual thermostat on the heater/heat pump from the pre-set pool temperature to the pre-set spa temperature. Comes complete with two PE24VA 24-Volt valve actuators.

#### Applications:

- Pool/Spa Combinations
- Pool/Water Feature Combinations

#### Specifications:

##### RC2163BE, RC2163BFE

**Enclosure:** 0.048 in. steel with electrostatically applied beige finish  
16½ in. (41.9 cm) H x 10⅞ in. (27.6 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** Two ½ in., three combination ½ – ¾ in., and two combination ¾ – 1 in. knockouts on the bottom. Four ½ in., three combination ½ – ¾ in. on the back. One combination ¾ – 1 in. on the left side. One 1¾ x 2¾ in. knockout on the right side for mounting switches and GFCI

**Panel Rating:** 100 Amp, 120, 240 VAC. or 120, 208 VAC single phase, 60 Hz

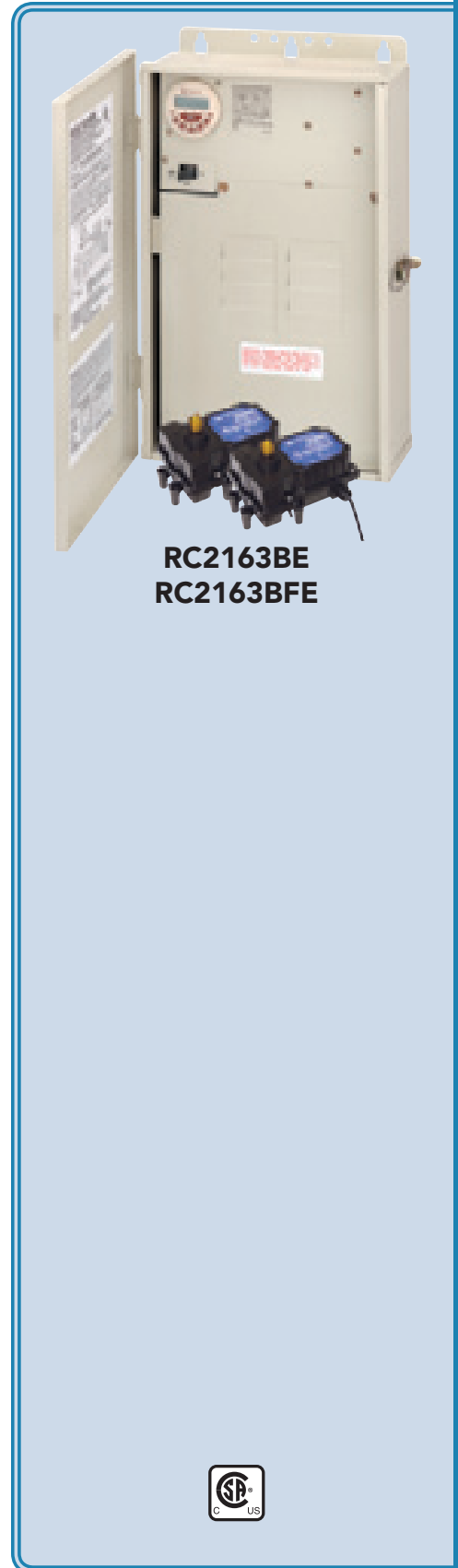
**Electrical Rating:** See table below. Actuator Circuit: 24 V, 40 Amp Max

**Shipping Weight:** See table below

**Agency Approval:** CSA/C-US

Specifications/Features	RC2163BE	RC2163BFE
<b>Voltage</b>	120/240	120/240
<b>Remote Command</b>	1-Air	Any Switch*
<b>Filter Pump</b>		
Timer Controlled in Pool Mode	Y	Y
Single Speed Only	Y	Y
1.5 HP – 120V; 3HP – 240V.		
Single or Two Speed	NA	NA
1 HP – 120V; 2 HP – 240V.		
<b>Heater Control</b>	Y	Y
<b>Number of Valve Actuator Connections</b>	3	3
<b>Blower</b>		
1 HP – 120V; 2 HP – 240V.	NO	NO
<b>Number of Breaker Spaces</b>	8/16	8/16
<b>Shipping Weight (lbs)</b>	24.3 (10.9 kg)	24.3 (10.9 kg)

\* Can use spring wound timer, toggle switch or wireless receiver (RC613) with transmitter (RC939) to operate equipment.



**RC2163BE  
RC2163BFE**





# Freeze Protection Controls



PF1102M



PF1102



PF1103MT



PF1103T



## PF1100 Series Single Circuit Freeze Protection Controls

These Freeze Protection Controls are designed to protect pool and spa equipment and plumbing against freeze damage. They turn the pump and heater ON when the outdoor temperature drops below the temperature set by the user-adjustable thermostat.

Models without timer connect to a timing or switching device and they control operation of the equipment, as well as protect it against freeze damage. Models with timer provide both automation and protection for the equipment.

### Applications:

- Filter Pumps
- Filter Pump/Booster Pump Combinations
- Waterfalls
- Water Features

### Specifications:

**Enclosure:** 0.034 in. drawn steel, electrostatically coated, beige color

Hasp, with hole for lock, holds permanently attached side-hinged door closed  
9<sup>3</sup>/<sub>8</sub> in. (23.8 cm) H x 5<sup>1</sup>/<sub>4</sub> in. (14.0 cm) W x 3<sup>5</sup>/<sub>8</sub> in. (9.2 cm) D

**Knockouts:** 1/2 – 3/4 in. combination knockouts, one back, one on each side, two bottom

**Thermostat Range:** 45°F – 32°F with 5 degrees differential

**Electrical Rating:** See table.

**Agency Approval:** CSA/C-US

Model #	Description	Input Rating	HP	Shipping Weight
PF1102	Thermostat only for 240 VAC installation	240 VAC	3	3.7 lbs (1.7 kg)
PF1102M	mechanism only	240 VAC	3	2.0 lbs (0.9 kg)
PF1102T	Timer with thermostat for 240 VAC installation	240 VAC	3	4.5 lbs (2.0 kg)
PF1102MT	mechanism only	240 VAC	3	2.5 lbs (1.1 kg)
PF1103	Thermostat only for 120/240 VAC installation	120/240 VAC*	1.5/3	3.7 lbs (1.7 kg)
PF1103M	mechanism only	120/240 VAC*	1.5/3	2.0 lbs (0.9 kg)
PF1103T	Timer with thermostat for 120/240 VAC installation	120/240 VAC*	1.5/3	4.5 lbs (2.0 kg)
PF1103MT	mechanism only	120/240 VAC*	1.5/3	2.5 lbs (1.1 kg)

\* Neutral must be installed.

# Freeze Controls

## PF1100 & PF1200 Series Multi-Circuit Freeze Protection Control Centers & Panels

These heavy-duty Freeze Protection Controls are designed specifically for pools requiring one or two time switches and protect the pool and spa equipment and plumbing against freeze damage. They turn the pump and heater ON when the outdoor temperature drops below the temperature set by the user-adjustable thermostat. In addition, they have a provision to install switches inside or GFCI receptacle on the side of enclosure.

### Applications:

- Filter Pumps
- Filter Pump Booster Pump
- Fountains
- Combinations
- Pool-Spa Combinations

### Specifications:

#### PF1112T, PF1202T

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
12 in. (30.5 cm) H x 12 in. (30.5 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** Five combination ½ – ¾ in. and two combination ¾ – 1 in. knockouts on the bottom. One combination ½ – ¾ in. on the left side and one combination ¾ – 1 in. on the back. One knockout 1¾ x 2¾ in. on the right side for mounting switches or GFCI

**Center Rating:** 92 Amp per leg, 168 Amp Max. 120, 240 VAC or 120, 240 VAC single phase, 60 Hz.

**Electrical Rating:** See table

**Thermostat Range:** 44°F – 32°F with 5 degrees differential

**Shipping Weight:** See table

#### PF1222TB

**Enclosure:** 0.048 in. steel with electrostatically applied beige finish  
16½ in. (41.9 cm) H x 10⅜ in. (27.6 cm) W x 4¼ in. (10.8 cm) D,

**Knockouts:** Two ½ in., three combination ½ – ¾ in., and two combination ¾ – 1 in. knockouts on the bottom. Four ½ in., three combination ½ – ¾ in. on the back. One combination ¾ – 1 in. on the left side. One 1¾ x 2¾ in. knockout on the right side for mounting switches and GFCI

**Panel Rating:** 85 Amp max., 120, 240 VAC or 120, 208 VAC single phase, 60 Hz

**Electrical Rating:** See table

**Thermostat Range:** 44°F – 32°F with 5 degrees differential

**Shipping Weight:** See table

**Agency Approval:** CSA/C-US

Model #	Description	Electrical Input	Rating HP	Shipping Weight
PF1112T	For pools requiring one time switch	240 VAC	3	8.0 lbs (3.6 kg)
PF1202T	For pools with cleaner, requiring two time switches	240 VAC	3	10.0 lbs (4.5 kg)
PF1222TB	Same as a PF1202T with 4/8 breaker base and heater protection	240 VAC	3	17.0 lbs (7.7 kg)

For additional trippers (1 ON 1 OFF per pack), Order No. 156T1978A.

For additional OFF trippers (25 OFF per pack), Order No. PA115.

For stand-offs for décor knockouts (4 stand-offs per pack), order No. 21T156A.

Note: See page 130 for a detailed list of T100M replacement mechanisms and page 140 for freeze switch mechanisms.

See pages 122-124 for digital freeze protection devices.



PF1112T



PF1202T



PF1222TB





# Safety Transformers

## PX100, PX300 & PX600 Series Safety Transformers

These Safety Transformers are specifically designed to supply 12 volts to pool/spa lights, submersible fixtures and outdoor garden lights. A grounded shield between the primary and secondary windings assures safe operation and the built-in circuit protection will disconnect power to the transformer in case of defect or overload.

### Applications:

- Pool Lights
- Spa Lights
- Garden Lights
- Fountain Lights

### Specifications:

#### PX100/S, PX300/S

**Enclosure:** Stainless steel or steel with electrostatically applied light beige finish  
 Mounting brackets top and bottom

7.25 in. (19.4 cm) H x 5.25 in. (13.3 cm) W x 4.5 in. (11.4 cm) D

**Knockouts:** Total of ten combination 1/2 – 3/4 in. knockouts, (2) right side, (2) left side, (2) back, (4) bottom

**Electrical Rating:** See table

**Shipping Weight:** See table

#### PX600/S

**Enclosure:** Stainless steel or steel with electrostatically applied light beige finish.  
 Mounting brackets top and bottom

10 in. (25.4 cm) H x 10 in. (25.4 cm) W x 5 in. (12.7 cm) D

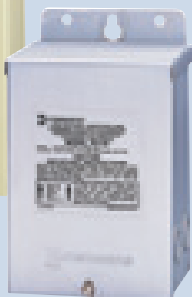
**Knockouts:** Two combination 1/2 – 3/4 in., and 4 combination 3/4 – 1 in. knockouts on the bottom. Total of six combination 1/2 – 3/4 in. knockouts, 2 right side, 2 left side, 2 back

**Electrical Rating:** See table

**Shipping Weight:** See table



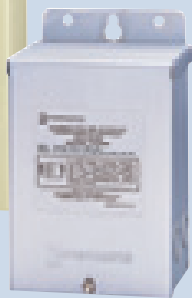
PX100



PX100S



PX300



PX300S



PX600



PX600S



Model #	Description	Input 60 Hz	Output	Shipping Weight
PX100	100 W Beige Steel Enclosure	120 VAC, 1 Amp	12 or 13 V	7.0 lbs (3.2 kg)
PX100S	100 W Stainless Steel Enclosure	120 VAC, 1 Amp	12 or 13 V	7.0 lbs (3.2 kg)
PX300	300 W Beige Steel Enclosure	120 VAC, 3 Amp	12, 13 or 14 V	13.0 lbs (5.9 kg)
PX300S	300 W Stainless Steel Enclosure	120 VAC, 3 Amp	12, 13 or 14 V	13.0 lbs (5.9 kg)
PX600	600 W Beige Steel Enclosure	120 VAC, 6 Amp	12, 13 or 14 V	26.0 lbs (11.7 kg)
PX600S	600 W Stainless Steel Enclosure	120 VAC, 6 Amp	12, 13 or 14 V	26.0 lbs (11.7 kg)

# Mechanical Controls With Safety Transformers

## T10000RT, T40000RT & PE45343RCT

### Series

#### Pool Panels with Transformer

These Panels with Transformer offer an all-in-one, easy to wire and extremely cost effective electrical control center for any pool or spa installation. Inside the enclosure are the time switch, the transformer and other components needed for the completion of this installation. The T40000RT Series panels will accept additional Intermatic mechanisms and/or components.

The PE45343RCT Series includes all the features of the PE Series Digital Controls plus two PE24VA valve actuators, Wireless Panel-Mounted Transceiver (PE953), which allows the system to display the status of each of the five circuits (3 timed and 2 on demand), pool and spa water temperature, pool and spa thermostat set point, heating status and overall communication status. (See pages 120-121)

#### Applications:

- Filter Pumps
- Blowers
- Low Voltage Pool/Spa Lighting
- Low Voltage Outdoor Lighting
- Fountains

#### Specifications:

##### T10000RT Series

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
12 in. (30.5 cm) H x 12 in. (30.5 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** Five combination ½ – ¾ in. and two combination ¾ – 1 in. knockouts on the bottom. One combination ½ – ¾ in. on the left side and one combination ¾ – 1 in. on the back. One knockout 1¾ x 2¾ in. on the right side for mounting switches or GFCI

**Center Rating:** 62 Amp per leg, 168 Amp Max., 120, 240 VAC or 120, 208 VAC single phase, 60 Hz

**Shipping Weight:** See table

##### T40000RT Series

**Enclosure:** 0.048 in. steel with electrostatically applied light beige finish  
20¾ in. (52.7 cm) H x 12¾ in. (32.4 cm) W x 4¼ in. (10.8 cm) D

**Knockouts:** Seven combination ½ – ¾ in. and three combination ¾ – 1 in. knockouts on the bottom. Five combination ½ – ¾ in. on the left side. One 1¾ x 2¾ in. knockout on the right side for mounting switches and GFCI

**Panel Rating:** T40000RT Series — 100 Amp, 120, 240 VAC or 120, 208 VAC single phase, 60 Hz

**Time Switch Rating:** T40000R Series – See page 130

**Transformer Rating:** See table

**Shipping Weight:** See table

Model #	Transformer Watts	Input 60 Hz	Output	Mechanism	Shipping Weight
T10004RT1	100	120 VAC, 1 Amp	12 V, 13 V,	T104M	14.0 lbs (6.3 kg)
T10004RT3	300	120 VAC, 3 Amp	12 V, 13 V, 14 V	T104M	20.0 lbs (9.0 kg)
T40003RT3	300	120 VAC, 3 Amp	12 V, 13 V, 14 V	T103M	32.0 lbs (14.4 kg)
T40004RT1	100	120 VAC, 1 Amp	12 V, 13 V,	T104M	26.0 lbs (11.7 kg)
T40004RT3	300	120 VAC, 3 Amp	12 V, 13 V, 14 V	T104M	32.0 lbs (14.4 kg)

For additional trippers ( 1 ON 1 OFF per pack ), Order No. 156T1978A.

For additional OFF trippers (25 OFF per pack), Order No. PA115.

For stand-offs for décor knockouts (4 stand-offs per pack), Order No. 21T156A.

Note: See Page 130 for a detailed list of T100M replacement mechanisms.

**See page 114 for Digital Controls**



**T10004RT1**



**T40004RT3**





# Mechanical Replacement Timers



**PB913N**



**PB913N66**



**PB913N84**



**PB873MKZ**



## PB800 & PB900 Series Mechanical Timer Mechanisms

These timers provide automatic control for pumps, cleaners and other types of loads. Timers have three-way mounting; flush in round opening, raised in rectangular opening or on base. Quick connect terminals for easy installation.

### Applications:

- Filter Pumps
- Booster Pumps
- Sprinkler Systems
- Heating Systems
- Lights
- Fountains
- Cleaning Systems
- Security Systems

### Specifications:

**Size:** 3 1/3 in. (84.8 cm) H x 2 13/16 in. (71.4 cm) W x 1 61/64 in. (49.6 cm) D

**Electrical Rating:** 20 Amp Resistive, 120-277 Volt; 1250 Watt Tungsten 125 VAC; 1 HP (16 FLA), 120 VAC; 2 HP (12 FLA), 240 VAC; 360 VA Pilot Duty, 120-240 VAC.

**Timing Cycle:** 24 hour dial – minimum ON time 1 hour, maximum ON time 23 hours, increments of 30 minutes. 7-day dial – minimum ON time 6 hours, maximum ON time 162 hours, in increments of 3 hours

**Color:** Black housing with white screening and orange trippers

**Shipping Weight:** 8 oz (0.22 kg) All mechanisms are shipped in bulk (36 per carton) unless otherwise specified

**Agency Approval:** UL, CSA

Model #	Switch	Dial	Volts AC, 60 Hz	# of Trippers	Manual Override
PB873MKZ	SPST	7 day	120	56*	No
PB913N	SPST	24 hour	120	48*	No
PB913N66	SPST	24 hour	120	48**	Yes
PB913N84	SPST	24 hour	120	4**	Yes
PB914N	SPST	24 hour	208-277	48*	No
PB914N66	SPST	24 hour	208-277	48*	Yes

The standard mechanisms listed above have four 1/4 in. male quick connect terminals (two for the load and two for the independent clock motor).

\* Permanently attached orange trippers.

\*\* For additional trippers (2 ON 2 OFF per pack), order No. 156PB10398A.

### Cross Reference Table for Discontinued Models

Old Model #	Replaced By	Notes	Old Model #	Replaced By	Notes
PB813MZ56	<b>PB913N</b>		PB913N50	<b>PB913N</b>	
PB815MZ52	<b>PB913N</b>	1	PB913N68	<b>PB913N66</b>	
PB873MKZ25	<b>PB873MKZ</b>		PB913N70	<b>PB913N</b>	
PB873MKZ26	<b>PB873MKZ</b>		PB913N82	<b>PB913N66</b>	
PB878MKZ25	<b>PB374EB</b>	2	PB913N83	<b>PB913N84</b>	
PB879MKZ25	<b>PB373EB</b>	2	PB913P68	<b>PB913N66</b>	3
PB913M3	<b>PB913N</b>		PB913P69	<b>PB913N66</b>	3
PB913M9	<b>PB913N</b>	3	PB913N86	<b>PB913N66</b>	
PB913M56	<b>PB913N</b>	3	PB914N50	<b>PB914N</b>	
PB913N22	<b>PB913N</b>		PB915M81	<b>PB913N</b>	
PB913N25	<b>PB913N</b>		PB918N26	<b>PB314E</b>	2
PB913N26	<b>PB913N</b>		PB918N50	<b>PB314E</b>	2
PB913N27	<b>PB913N</b>		PB918N83	<b>PB314E</b>	2

Note: Replacement mechanisms may or may not have the same tripper colors and may require different method of connections.

1 – Original timer has gold plated contacts.

2 – Replacement is 50/60 Hz electronic timer.

3 – Original timer lead connections must be changed to 1/4 in. quick connects.



# Portable Outdoor Timers With GFCI & Photo Control

## P1100 Series

### Portable Outdoor Timers & Heavy-Duty Outdoor Timers

These portable outdoor timers are specially designed to control the filter pump of a portable pool or spa, but they can also be used to turn ON and OFF outdoor decorations, engine block heaters and other appliances, indoors or outdoors.

#### Applications:

- Filter Pumps
- Air Conditioners
- Signs
- Lights
- Engine Block Heaters
- Fans

#### Specifications:




**Enclosure:** Outdoor grade plastic

5 in. (12.7 cm) H x 5½ in. (13.97 cm) W x 3¾ in. (9.52 cm) D

**Cord:** 3 wire, outdoor grade, 22 in. long, with grounded plug

**Timer:** 24 hour with 23½ hour maximum ON time. Two ON, two OFF trippers: standard. Dial will accept up to 12 sets of trippers

**Shipping Weight:** 1.7 lbs (0.7 kg)

Model #	Description	Electrical	Plug & Receptacle
P1101	Timer	15 Amp (1800 W), Resistive or Tungsten; 1 HP Air Conditioner, (15 FLA, 90 LRA), Motor Load	5-15 
P1121	Timer	15 Amp (1800 W), Resistive or Tungsten; 1 HP Air Conditioner, (15 FLA, 90 LRA), Motor Load	5-15 
P1131	Heavy-Duty Timer w/Twist-Lock Plug & Receptacle	20 Amp Resistive, 1 HP, (15 FLA, 90 LRA) Motor Load	5L-20 

For additional trippers (2 ON 2 OFF per pack), order No. 156PB10398A.

## P1200 Series

### Two-Circuit Portable Outdoor Timer

These portable two-circuit above ground pool timers incorporate a plug in for a timed circuit (normally used for a pool pump) and a plug-in for a live circuit (typically used for a pool light). GFCI protected circuits and a three-prong grounded plug for the time switch supply are also built-in.

#### Applications:

- Above Ground Pool Pumps
- Above Ground Pool Lights

#### Specifications:



**Enclosure:** NEMA 3R rated for Indoor/Outdoor installation

9¾ in. (23.8 cm) H x 5½ in. (14.0 cm) W x 3¾ in. (9.2 cm) D

**Knockouts:** Combination ½ – ¾ in. nominal knockouts, one on the back and each side of enclosure, two pre-cut on bottom

**Timer:** 24 hour with 23½ hour maximum ON time. Two ON, two OFF trippers standard. Dial will accept up to 12 sets of trippers

Shipping Weight: 2.8 lbs. (1.3kg)

Model #	Description	Electrical	Plug & Receptacle
P1251P	PB913N84 Timer	15 Amp (1800 W), Resistive or Tungsten; 1 HP (15 FLA, 90 LRA) Motor Load w/photo control	5-15 
P1261P	PB913N84 Timer	15 Amp (1800 W), Resistive or Tungsten; 1 HP (15 FLA, 90 LRA) Motor Load	5-15 

For additional trippers (2 ON 2 OFF per pack), order No. 156PB10398A.



P1101



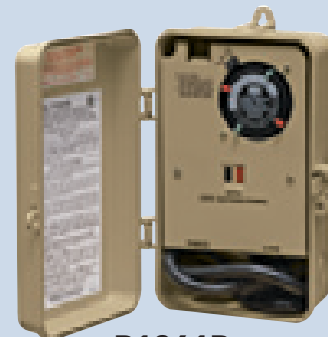
P1121



P1131



P1251P



P1261P





# Electronic Replacement Timers



**PB313E  
PB313EK  
PB314E  
PB314EK**



**PB373E  
PB374E**



## PB300 Series Electronic Timer Mechanisms

These compact Electronic Timers are specially suited for applications where equipment needs to be cycled ON and OFF up to 8 times per day, and where automatic operation of the equipment requires occasional override by someone other than a qualified service professional. They offer rugged construction, resistance to surges and humidity, operate between wide temperature extremes and come with a 5 year service life replaceable lithium battery. A light indicator illuminates when the timer is in the ON position. Select feature allows timers to be continuously ON, OFF or in AUTO mode.

PB300EK Series Electronic Timer kits are designed for applications where PB Series Mechanical Timers need to be replaced. The connected load must not exceed the ratings of these timers. The kits contain all the necessary hardware for a speedy repair or exchange.

### Applications:

- Filter Pumps
- Booster Pumps
- Sprinkler Systems
- Heating Systems
- Lights
- Fountains
- Cleaning Systems
- Security Systems

### Specifications:

**Enclosure:** Beige electrical grade plastic

**Size:** PB300 Series: 2<sup>3</sup>/<sub>8</sub> in. (6.0 cm) High and Wide

EB suffix: 1<sup>1</sup>/<sub>8</sub> in. (28 cm) Deep

E suffix: 7/8 in. (2.2 cm) Deep

### Electrical Rating:

A = 16 Amp Resistive, 0.5 HP motor load 24, 120 or 240 VAC, 50/60 Hz

B = 20 Amp Resistive, 10 Amp (1200 Watt) Tungsten, 1 HP (16 FLA), motor load;  
720 VA Pilot Duty, 120 VAC, 50/60 Hz

C = 20 Amp Resistive, 2 HP (12 FLA), 240 VAC, 50/60 Hz

**Shipping Weight:** 0.3 lbs. (0.14 kg)

**Agency Approval:** UL

Model #	Description	Switch	Rating	Volts AC 50/60 Hz
PB313E	24 hour	SPDT	A	120
PB313EK	PB Series replacement kit	SPDT	A	120
PB314E	24 hour	SPDT	A	240
PB314EK	PB Series replacement kit	SPDT	A	240
PB373E	7 day	SPST	B	120*
PB374E	7 day	SPST	C	240*

\* Output voltage is the same as supply voltage.

# Electronic Time Switches

## P1000 & P7000 Series Electronic Time Switches and Mechanisms

This line of electronic time switches in safety enclosures is specially suited for applications where there is a need to turn equipment up to 8 ON and OFF cycles daily, and where the automatic operation of the equipment requires occasional override by someone other than a qualified service professional. Electronic technology allows up-to-the-minute programming accuracy. The unique "door within the door" provides safe access to the timer control buttons, but prevents entry into the wiring compartment. Light indicator illuminates when timer is in ON position. An override feature is provided to allow pool service without interruption of ON/OFF settings. "Select feature" allows timer to be continuously ON, OFF or in Auto mode. The addition of a radio receiver (Model P1203FR) provides a 2nd circuit for any other load (light, blower etc.) requiring control from a remote location. Typical application for the clock circuit would be the pool pump, and a pool light for the radio circuit. In case of power failure, a replaceable lithium battery preserves programming for up to three years.

### Applications:

- Filter Pumps
- Pool/Spa Lights
- Water Features
- Fountains

### Specifications:

#### Mechanism Specifications:

**Size:** Standard mechanism fits in all standard Intermatic time switch enclosures and swimming pool control panels

#### Rating:

P7103ME – 1.5 HP, 120 VAC; 3.0 HP, 240 VAC

**Shipping Weight:** 1.41 lbs (0.6 kg)

**Enclosure Specifications:** All plastic NEMA 3R rated for Indoor/Outdoor installation. 9<sup>3</sup>/<sub>8</sub> in. (23.9 cm) H x 5<sup>1</sup>/<sub>2</sub> in. (14.0 cm) W x 3<sup>5</sup>/<sub>8</sub> in. (9.2 cm) D in beige finish

**Knockouts:** Combination 1/2 – 3/4 in. nominal knockouts, 1 on back and each side of enclosure, and 2 on bottom

**Shipping Weight:** 3.75 lbs (1.7 kg)

**Agency Approval:** CSA/C-US

Model #	Description	Switch	Supply Voltage 50/60 Hz
P1103FE	24-Hour Electronic Time Switch Enclosure	One DPST	120 V for clock 120 V, 240 V for load

Note: See pages 46-47 for available metal and plastic enclosures.



**P7103ME**

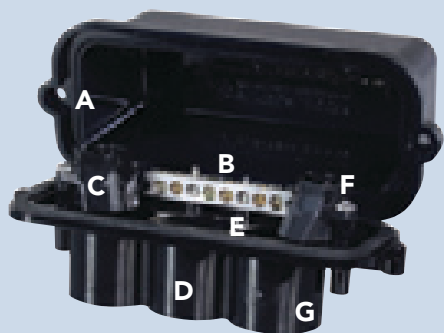


**P1103FE**

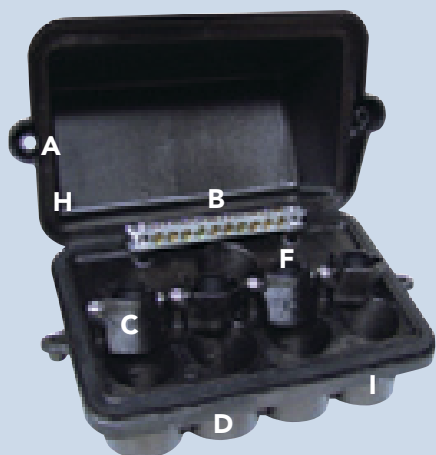




# Pool/Spa Junction Boxes & Water Valve Motorized Actuator



**PJB2175**



**PJB4175**



**PE24VA**



## PJB Series

### Pool/Spa Junction Box & Mounting Bracket

These polymeric, water tight, multi-fixture Junction Boxes are specially designed for pools, pool-spa combinations and landscape applications. The PJB4175 provides safe and reliable connection for up to four lights, while the PJB2175 supports up to two lights. They will accommodate flexible cords from #16-3 up to #12-3 and #10-3 in any combination and non-metallic conduits from 1/2 to 1 in., including one for supply conductor feed. An optional wall/post mounting bracket is also available.

#### Applications:

- Pool Lights
- Spa Lights
- Landscape Lights

#### Specifications:

**Enclosure:** Outdoor grade plastic. PJB4175 – 7.5 in. L x 4.75 in. W x 5.0 in. D  
PJB2175 – 7.0 in. L x 3.0 in. W x 4.0 in. D

*Note: Bracket sold separately.*

#### Photo call outs:

- A. Only two screws required to attach lid to base
- B. Easy access ground bar
- C. Innovative strain relief design
- D. Accepts multiple conduit sizes
- E. Platform design offers ease of installation
- F. One external bonding lug
- G. Supports up to two pool/spa lights
- H. Sloped platform design provides ultimate convenience
- I. Supports up to four pool/spa lights

Model #	Description	Light Connection	Case Qty.	Shipping Weight
PJB2175	Pool/Spa Light Junction Box	2	24	19.2 lbs (8.6 kg)
PJB4175	Pool/Spa Light Junction Box	4	12	13.2 lbs (6.0 kg)
PA114	Wall/Post Mounting Bracket	—	10	5 lbs (2.3 kg)

## 24-Volt Valve Actuator

Designed with quality in mind, Intermatic's 24-Volt valve actuators provide reliable control of 2-way and 3-way diverter valves for pool/spa combinations and water features. The water flow can be altered for specific applications through the adjustable cam, which rotates diverter valves to multiple degree settings. The cam settings can be easily adjusted by simply removing the lid.

These valve actuators are compatible with all pool/spa valves currently offered in the industry and will retrofit into all pool/spa control systems.

#### Applications:

- Pools
- Spas
- Fountains
- Water Features

#### Standard Features:

- Automates compatible diverter valves for pool/spa & pool/water feature combinations
- Adjustable cam rotates diverter valves to multiple degree settings
- Retrofits into all pool/spa control systems on the market

#### Specifications:

**Shipping Weight:** See table

**Case Quantity:** 6

Model #	Description	Voltage	Shipping Weight Each
PE24VA	Valve Actuator	24 VAC	3.5 lbs (2.2 kg)

# Pool/Spa Accessories

## Emergency Shut Off Switch PA600

The revised Article 680-12 of the National Electrical Code (NEC) now requires the installation of a disconnect switch "...located within sight from all pools, spas..." This Safety Switch is intended for disconnecting electrical equipment from its power source, quickly and safely, in case of emergency. Any person, even if not familiar with the installation or safety procedures, can shut down the connected equipment by simply moving the large red lever to the OFF position. It fits in a single-gang junction box and is rated for outdoor installations.

### Specifications:

**Electrical Rating:** 1 HP, 120V; 3 HP, 240V; 20 Amp Resistive, 120, 240V DPST

**Shipping Weight:** 0.5 lbs (0.2 kg)

**Housing:** Electrical grade plastic.

**Face Plate:** Beige powder coated steel

**Agency Approval:** CSA/C-US

## Fireman Switch 156T4042A

This switch provides coordinated control for any pool/spa heater and any filter pump. It is designed to turn OFF a gas fired pool/spa heater approximately 20 minutes before the filter pump shuts down. This eliminates the problem of pounding and knocking due to overheated water, reduces scale and lime deposits and extends the service life of the heater.

## Nonmetallic Hub Kits

**156PA13713A (1/2 in.), 156PA13714A (3/4 in.),  
156PA13715A (1 in.)**

All Intermatic Control Centers and Control Panels are approved for direct underwater light connection, eliminating the need for additional junction boxes. These Nonmetallic Hub Kits provide direct connection to 12 Volt and 120 Volt underwater luminaries.

## Metallic Hub Kit

**156PA14336A (1/2 in.)**

The Metallic Hub Kit is used for the same type of applications as the Nonmetallic Hub Kits, but is designed for applications that require red brass conduit.

## Stand-Off Posts

**21T166A (2), 21T156A (4)**

Stand-Off Posts are used for mounting toggle switches inside any Intermatic Pool/Spa Control Center and Control Panel. The switches are normally used for on-demand control pool/spa lighting, landscape lighting, water features, etc. The dead front is detached, the switch knockout is removed from the dead front and the stand-off post is secured to the back panel of the enclosure. The switch is then mounted to the posts with standard mounting screws and the dead front is re-attached.

## Back-Feed Retainer Kit

**22T904A**

A recent revision to the breaker base in all Intermatic Pool/Spa Control Panels now allows installers to back-feed the branch circuits using one breaker, single or double pole, as a main disconnect. In accordance with NEC Article 408.36 (F) -2005, the installation requires an additional fastener/retainer kit.



**PA600**



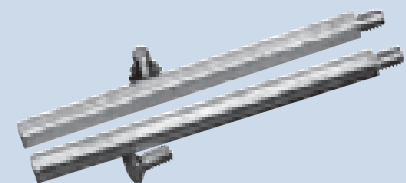
**156T4042A**



**156PA13713A  
156PA13714A  
156PA13715A**



**156PA14336A**



**21T166A  
21T156A**



**22T904A**

# Pool/Spa Accessories

Model #	Description	Where Used
124T1948	Insulator for T101 & T102 Series – Clear	All T101 & T102 Series Time Switches and Mechanisms
124T1952	Insulator for T103 & T104 Series – Clear	All T103 & T104 Series Time Switches and Mechanisms
124T2411A	(10) Insulators for T100 Series – Black, Rigid	All T100 Series Time Switches and Mechanisms
143T135	DPST Relay with 240 V Coil	All PF1102 Series Controls and Mechanisms, PF1200 Series Controls, P7102ME Electronic Mechanism
143T136	DPST Relay with 120 V Coil	All PF1103 Series Controls and Mechanisms, RC2200E Series Air Controls, RC2403RT Air Control, RC613R Receiver, P7103ME Electronic Mechanism
143RC151	DPST Relay with 24 VDC Coil	RC2100FE and RC2100E Series Air Controls
156PB10398A	2 ON and 2 OFF Trippers	All P1100 Series Timers, P1261P Portable Outdoor Timer, PB913N84 Series Mechanism
156T1978A	1 ON and 1 OFF Tripper	All T100 Series Time Switches and Mechanisms
156T6738A	(10) Insulators for Time Switch Manual Lever	All T100 Series Time Switches and Mechanisms
22T338GR	Snap-In Time Switch Mounting Bracket	All Pool/Spa Enclosures and T100 Series Time Switches
PA115	(25) OFF Trippers and Screws only	All T100 Series Time Switches and Mechanisms
WG1570-10D	120 Volt Clock Motor	T100 Series Time Switches and Mechanisms
WG1573-10D	208-277 Volt Clock Motor	T100 Series Time Switches and Mechanisms



124T1952



124T2411A



143T135



143T136



143RC151



156PB10398A



156T1978A



156T6738A



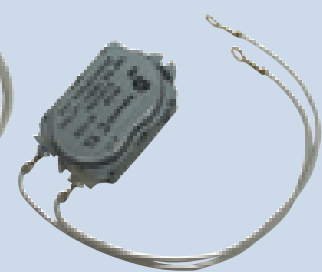
22T338GR



PA115



WG1570-10D



WG1573-10D