

TightWat¹TM
Save Energy. Save Money.

User's Guide



IMPORTANT: READ IMMEDIATELY!

In order for your timer to function normally, it must be released from the in-store demo mode.

With the 9V battery back-up installed or connected to power, simultaneously press and hold both buttons for 5 seconds.

Do not perform this procedure unless the front cover is in place and there is no risk of electrical shock.

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I. Cautions / Warnings



DANGER - ELECTRICAL SHOCK HAZARD

Failure to follow instructions may result in personal injury and/or death.
Read and understand instructions before installation. Retain these instructions.



The jack underneath the battery cover is for TightWatt™ brand accessories only.
Plugging anything else into this jack will void the warranty and may damage the device.

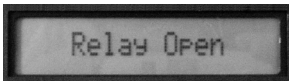
ATTENTION: READ CAREFULLY BEFORE ATTEMPTING TO INSTALL YOUR TIGHTWATT™ ENERGY-SAVING TIMER. FAILURE TO COMPLY COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE! RETAIN FOR FUTURE REFERENCE.

Thank you for purchasing a TightWatt™ energy-saving timer. This timer has been specifically designed to keep your pool looking beautiful year-round, while using a minimum amount of electricity. Our patent-pending technology automatically varies your filter run-time with the seasons - to save you money! By using less energy, you're also helping the environment.

General Safety Information

WARNING: Disconnect all power before installing or servicing this timer or its connected loads.

1. Follow all local electrical and safety codes, National Electrical Code (NEC), as well as Occupational Safety and Health Act (OSHA).
2. If the power disconnect point is out of sight, lock it in the "OFF" position and tag it to prevent unexpected application of power.
3. The timer case must be grounded if a metal case is used.
4. Do not exceed the maximum current carrying capacity of this time switch.
5. Always replace the top cover and Plexiglass® insulator before turning power "ON".
6. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.



The TightWatt timer contains a safety feature which allows the relay to remain in an open state. This is useful for situations when you want to be sure that the pump motor will not turn on automatically. To open the relay, press both buttons on the front panel at the same time, and "Relay Open" should appear on the screen (see image at left). As long as this message is on the display, the relay will be in an open state.

Automatic cycles will not begin while the timer is in the "Relay Open" state. Press any button to return to the normal mode of operation.



The "Relay Open" mode will open the relay. However, the line connections are still energized, and load connections may be energized dependent upon the wiring configuration. The "Relay Open" is intended as a method to force the pump to an off state, but is by no means a guarantee that circuits are not energized.

II. Installation



WARNING: THIS PRODUCT MUST BE INSTALLED IN AN ADEQUATE ENCLOSURE, SUITABLE FOR THE END-USE ENVIRONMENT

WARNING: DISCONNECT THE POWER TO THE TIMER AND THE LOADS BEFORE INSTALLING.

The TightWatt™ timer has been designed to meet the following environmental conditions: Pollution degree 2; Installation Category II; Altitude 2000m; Humidity 5-95% non-condensing; Temperature 0 degrees C to 40 degrees C.

Electrical Ratings:			
Model	Input Rating	Power Consumption	Load Rating
TW-PFC	120V or 240V AC 50/60 Hz +/- 10%	3 Watts maximum	120V or 240V AC Respectively 50/60 Hz 2 HP

Installation:

1. Mounting the enclosure. If the enclosure is already mounted, proceed to step 2. Mount the timer in the desired location using the mounting holes provided. Mount the timer at eye level, if possible, providing room to the left of the enclosure for the cover to swing open fully.
2. Enclosure access should be controlled. It is recommended that it be locked and not be accessible by children.
3. If desired, install the 9V battery back-up at this time. This will allow the clock to maintain the correct time and date should a loss of power occur. Replace the 9V battery back-up cover after installing the battery.
4. Installing the timer in the enclosure. Slide the timer into the enclosure with the top of the timer tilted slightly forward (image 1). After it comes to rest on the guides, push the top back (image 2), so that it latches on the spring latch (image 3).
5. Remove the top cover of the timer by removing the four screws which affix it to the base.



image 1




image 2



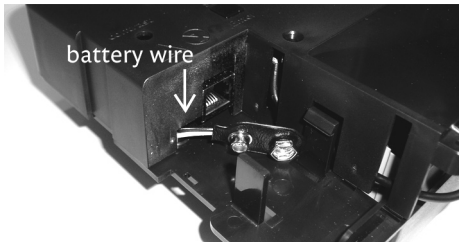
image 3

6. Strip the supply and load wires by removing 1/2 inch of insulation. DO NOT USE ALUMINUM WIRE. Insert the wire ends under the proper terminal plates and tighten the screws firmly. Ensure that supply and load wires are sized according to local electrical codes, National Electrical Code (NEC), and Canadian Electrical Code (CEC).

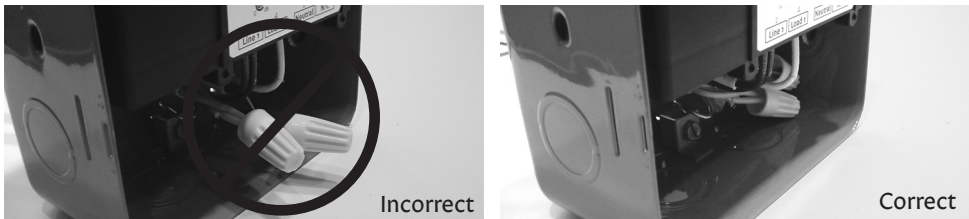
Model	2	4	6	8	Terminal Identification
TW-PFC	Line 1	Load 1	Line 2 /Neutral	Load 2	

7. Instructions for protecting earthing. The load ground must be connected to the incoming power ground to prevent a shock hazard in the connected load (in the event of a fault). All grounding wires must be sized according to the applicable electrical codes in order to handle the fault current. If using a metal enclosure, be sure that the enclosure itself is grounded.

8. Replace the top cover, taking care that the 9V battery wire feeds through the opening in the case to the left of the RJ-45 plug (see image below). Then secure the top cover in place with four screws provided.



9. Push wires toward the back of the enclosure, so that they will not interfere with the installation of the Plexiglass® insulator (see images below).



10. If using a smaller sized enclosure, it will be necessary to snap the Plexiglass® insulator along the scratch line for proper fit. With safety glasses on, simply place the line along a table edge, hold firmly in place and apply pressure to the overhanging section of Plexiglass® until it snaps apart (see images below).



11. Attach the Plexiglass® insulator to the TightWatt™ unit using the two screws provided.

12. After the TightWatt™ timer is installed, with the 9V battery cover in place, and Plexiglass® insulator in place, apply power to the timer by turning on the circuit breaker.

III. Quick Set-up Steps

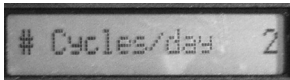
Standard Operation: Setting your year-long run schedule.



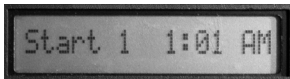
Step 1 | Set the current time: Press the **Set** button. Display will resemble image at left. Use the **Change** button to change the blinking value and the **Enter** button to advance to the next field. Use this procedure to set the current time.



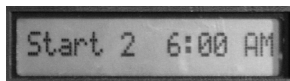
Step 2 | Setting the current date: After the current time has been set, the display will resemble image at left. Use the **Change** and **Enter** buttons to set the current date.



Step 3 | Set the number of cycles per day: Use the **Change** and **Enter** buttons to select how many filter cycles you want to run per day (maximum of 2).



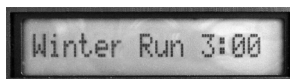
Step 4a | Set the 1st start time: This is the time your pump will turn on each day. A full pump cycle will run each day beginning at the designated start time.



Step 4b | Set the 2nd start time (optional): This is the time your pump will run the second daily cycle (if 2 start-times were selected in option 3). A full pump cycle will run at each of the designated start times.



Step 5 | Setting the summer run-time: After your start-time(s) has been set, you'll be prompted to set your **Summer Run**. This is the amount of time each cycle will run in the summer months. Use the **Change** and **Enter** buttons to set the **Summer Run**. (Consult a pool professional for the recommended summer run-time for your swimming pool.) If you choose to have 2 cycles per day, your filter will run a full cycle twice each day (cycle length varies based on time of year and Summer/Winter run-times).



Step 6 | Setting the winter run-time: After the **Summer Run** has been set you'll be prompted to set a **Winter Run**. This is the amount of time each cycle will run in the winter months. Use the **Change** and **Enter** buttons to program in the **Winter Run**. (Consult a pool professional for the recommended **Winter Run** for your swimming pool.) If you choose to have 2 cycles per day, your filter will run a full cycle twice each day (cycle length varies based on time of year and Summer/Winter run-times).



Set-up complete: After the **Winter Run** time has been set, the display will show the current time and date, and the colon between the hours and minutes should be blinking. This indicates that your timer is in normal operating mode. Be sure to close and lock the enclosure when finished.

Manual Operation: Turning your pump on.



Small pump icon will appear next to date when the pump is running.



At times, it is desirable to manually turn on your pool pump, such as: when adding chemicals or to freshen up after a storm. To run a pool filter cycle at any time, press the **On/Off** button, and your pool pump will run for one cycle. The pump will automatically turn off at the end of the cycle.

Running a manual cycle will have no effect on any programmed cycles. Programmed cycles will still run even if a manual cycle was started shortly before a programmed cycle. Be sure to close and lock the enclosure when finished.

When the pump is running, it is indicated by the animated pump icon on the right hand side of the display.

Manual Operation: Specifying duration of a manual cycle.

To specify the duration of a manual cycle after adding chemicals or for quick clean up, simply press and hold the **On/Off** button until your desired run time is displayed on the screen. Then release button. TightWatt™ will shut your pump off when the cycle is complete. Be sure to close and lock the enclosure when finished.

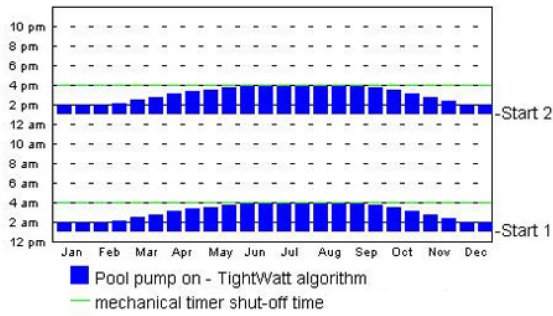
Manual Operation: Turning your pump off.



If you want to turn your pool pump off, simply press the **On/Off** button, and it will turn off. The **On/Off** button will terminate a manual cycle, and will also terminate an automatic cycle. Be sure to close and lock the enclosure when finished.

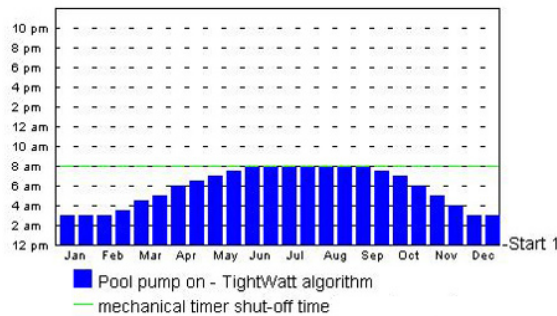
IV. Example Run-Times for TightWatt

Two Cycles Per Day



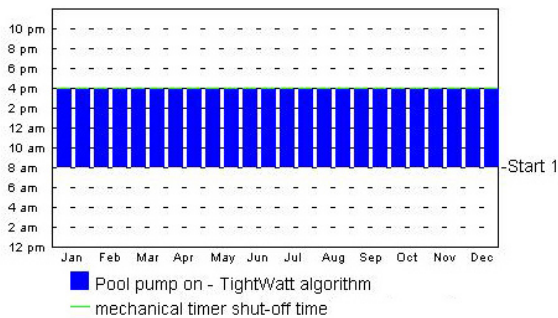
Cycles per day: 2
 Start 1: 1:00 am Summer Run: 3:00 hours
 Start 2 1:00 PM Winter Run: 1:00 hour

Single Cycle at Night - common for off-peak utility rate plans



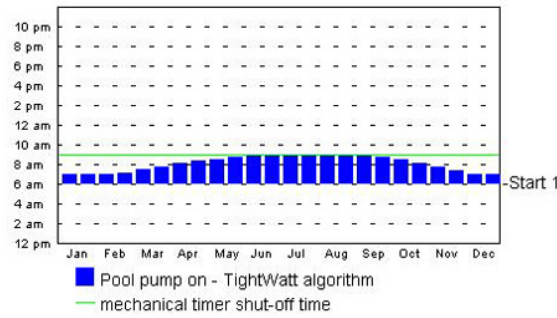
Cycles per day: 1 Summer Run: 8:00 hours
 Start 1:12:00 pm Winter Run: 3:00 hours

Same Run-Time Each Day (for temperate climates)



Cycles per day: 1 Summer Run: 8:00 hours
 Start 1: 8:00 am Winter Run: 8:00 hours

Ultra-Efficient Pool (small pool with DE filtration system)



Cycles per day: 1 Summer Run: 3:00 hours
 Start 1: 6:00 am Winter Run: 1:00 hour

V. Troubleshooting

Symptom	Possible Cause	Fix
Timer has no display	Contrast not adjusted	Adjust contrast with Phillips-head screwdriver.
Timer has no display	No Power*	Check circuit breaker.
Time/Date Incorrect	Dead battery	Replace 9V battery

*Have qualified electrical technician determine why there is a loss of power.

There are no user-servicable parts inside. Refer all service inquiries to the factory.

Cleaning:

Disconnect power at breaker. Wipe with a dry cloth only. Do not use any cleaning solutions as they may damage the display. Damage to the display is not covered by the warranty. Be sure to close and lock the enclosure when finished.

VI. LIMITED THREE-YEAR WARRANTY

If within three (3) years from date of purchase, this product fails due to a defect in material or workmanship, Allen Concepts, Incorporated will repair or replace, at its sole option, the unit free of charge. This warranty applies only to the original purchaser and is not transferable. The warranty does not apply to: (a) damage caused by accident, abuse, mishandling, dropping, natural disaster, or any negligent use; (b) units which have been subject to unauthorized repair, taken apart, or otherwise modified; (c) units not used in accordance with the direction; (d) damages exceeding the cost of the product. Some states do not allow a limitation of damages, so the foregoing limitation may not apply to you. This warranty gives you specific legal rights and you may have other rights that vary from state to state.

ALLEN CONCEPTS INCORPORATED WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY MODIFIED TO EXIST ONLY AS CONTAINED IN THIS LIMITED WARRANTY, AND SHALL BE OF THE SAME DURATION AS THE WARRANTY PERIOD STATED ABOVE.

This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased, or (b) mailing postage prepaid to:

Allen Concepts, Inc. 3030 N Cedar Springs Rd, Prescott Valley, AZ, 86314