Wattstopper®

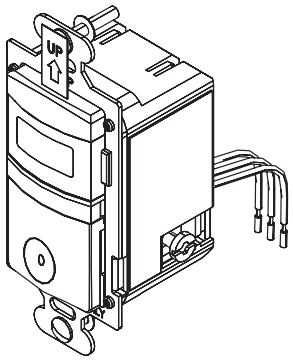
Programmable Countdown Time Switch

No: 24301 – 11/16 rev. 1

Installation Instructions • Instructions d'Installation • Instrucciones de Instalación

Catalog Number • Numéro de Catalogue • Número de Catálogo: RT-100

Country of Origin: Made in China • Pays d'origine: Fabriqué en Chine • País de origen: Hecho en China



SPECIFICATIONS

Voltage 120VAC, 60HZ
Load (Single Pole Circuit)
- Incandescent or fluorescent lamp ..... 0 - 600 Watt
- Fan motor 1/6HP

Time Delay ..... 5 minutes to 12 hours
Environment ..... Indoor use only
- Operating Temperature ..... 32° to 104°F (0° to 40°C)
- Humidity ..... 95% RH, non-condensing

Tools Needed
- Insulated Screwdriver
- Wire Strippers

DESCRIPTION AND OPERATION

The RT-100 is a time switch that turns **OFF** the connected light or fan (load) when the selected time expires. While the switch is **OFF** the pilot light behind the **ON/OFF** button illuminates and "**OFF**" appears in the display. When the switch is **ON**, the display shows the amount of time the load will remain **ON**.

For times up to 59 minutes and 59 seconds, the display shows a blinking colon between the minutes and seconds while the seconds count down continuously. For times between 1 hour and 12 hours, the display shows a blinking colon between the hours and minutes and the minutes portion of the display changes only once a minute. See **Fig. 1**.

The RT-100's lighted alphanumeric display is also used for programming functions. With the programming functions, you can decide:

- **Delay** – the amount of time the switch remains **ON** with the initial press of the **ON/OFF** button.
- **Sound** – whether the switch beeps for each button press and every 5 seconds for 1 minute before it turns **OFF**.
- **Flash** – if the lights flash to warn you that they are going to turn **OFF**. When Delay is set for 10 minutes or more, lights flash once at 5 minutes and once at 1 minute before turning **OFF**. When Delay is set for 5 minutes or less, lights flash once 1 minute before turning **OFF**.

Timer Countdown

Since the time-out period can be set for 5 minutes to 12 hours, the time is displayed in two different ways. For a countdown of less than an hour, the display shows minutes:seconds. The seconds count down continuously. For a countdown of more than an hour, the display shows hours:minutes, the colon flashes every second, and the display changes every minute..

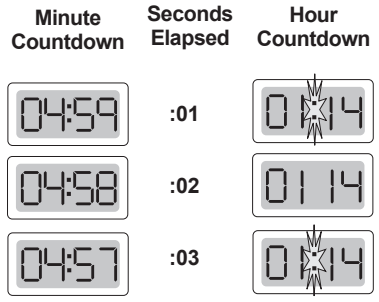


Figure 1

Manual ON

When you press the **ON/OFF** button, it activates the Delay timer. If you want to keep the switch **ON** for a time different from what is programmed, simply press and hold the **ON/OFF** button until the display shows the desired time. When you let go of the button the switch turns **ON**.

Manual OFF

While the switch is **ON** and the timer is running, press the **ON/OFF** button to turn **OFF** the connected load without delay.

Changing the amount of time: At any time, you can press and hold the **ON/OFF** button for 1 second to restart the timer. It goes immediately to the programmed Delay time; if you need a different amount of time, keep holding the button for at least 2 seconds. Hold the button until the display shows the desired time. Releasing the button starts the timer countdown.

INSTALLATION & WIRING

WARNING:

DISCONNECT POWER TO THE WALL SWITCH BOX BY TURNING OFF THE CIRCUIT BREAKER OR REMOVING THE FUSE FOR THE CIRCUIT BEFORE INSTALLING THE RT-100, REPLACING LAMPS, OR DOING ANY ELECTRICAL WORK.

1. Prepare the switch box.
2. After the power is turned off at the circuit breaker box, remove the existing wall plate and mounting screws. Pull the old switch out from the wall box.
3. Identify the type of circuit.
4. In a Single Pole Circuit (see Fig. 2), two single wires connect to two screws on the existing switch. A ground wire may also be present and connected to a ground terminal on the old switch. A neutral wire should also be present in the wall box.
5. Only connect the RT-100 to a Single Pole Circuit. The RT-100 is not suitable for 3-way switching. If the existing wiring does not match the description for a Single Pole Circuit, you should consult with a qualified electrician.
6. Prepare the Wires.
7. Tag the wires currently connected to the existing switch, so that they can be identified later. Disconnect the wires. Make sure the insulation is stripped off the wires to expose their copper cores to the length indicated by the “Strip Gage,” in Fig. 3 (approximately 1/2 inch).
8. Wire the time switch.
9. Twist the existing wires together with the wire leads on the time switch as indicated in the drawing. Cap them securely using the wire nuts provided. See Fig 4.
10. Connect the green or non-insulated (copper) GROUND wire from the circuit to the GROUND terminal on the RT-100.
11. Connect the power wire from the circuit (HOT) to the black wire on the RT-100.
12. Connect the power wire to the lamp or fan (LOAD) to the red wire on the RT-100.
13. Connect the NEUTRAL wires from the circuit to the white wire on the RT-100.
14. Put the RT-100 in the wall box with the display positioned above the **ON/OFF** button.
15. Secure it to the wall box with the screws provided.
16. Restore power to the circuit.
17. Turn **ON** the breaker or replace the fuse.
18. Make any necessary programming changes. See the Programming section for information.
19. Install industry standard decorator wall switch cover plate (not included).

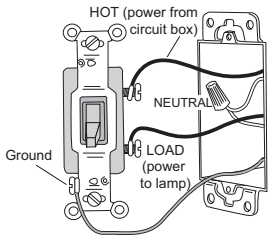


Figure 2: Typical Single Pole Switch Wiring

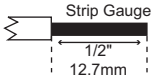


Fig 3: Wire Stripping

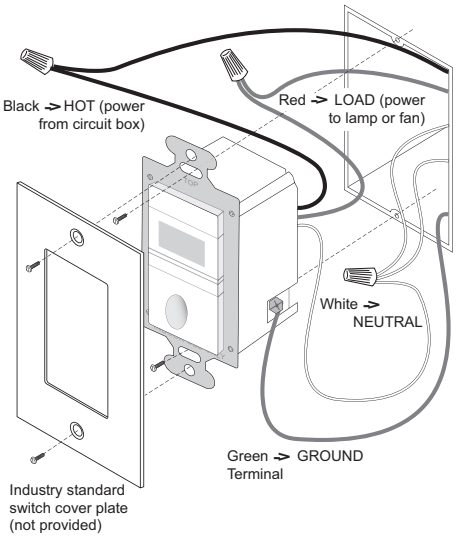


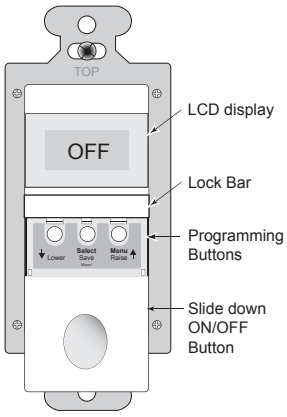
Fig 4: Switch orientation, wire connections and wall box assembly

WARNING:

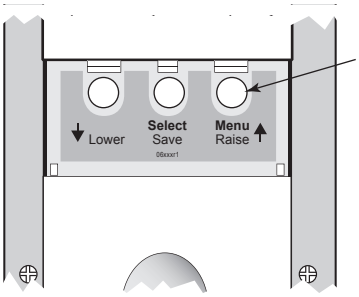
CONNECTING A PROPER GROUND TO THE TIME SWITCH PROVIDES PROTECTION AGAINST ELECTRICAL SHOCK IN THE EVENT OF CERTAIN FAULT CONDITIONS. IF A PROPER GROUND IS NOT AVAILABLE, CONSULT WITH A QUALIFIED ELECTRICIAN BEFORE CONTINUING INSTALLATION.

PROGRAMMING

To program the time switch, you must access the programming buttons that are located under the **ON/OFF** button. The wall switch cover plate must be removed to gain access to the programming buttons.



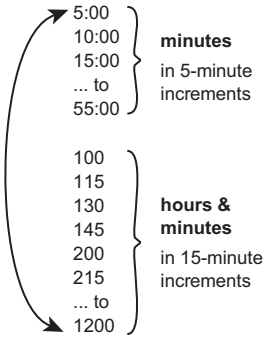
1. Firmly grasp the side edges of the Lock Bar and gently pull it away from the switch face until it clicks. Do NOT attempt to pull the Lock Bar off of the switch!
2. Push the **ON/OFF** button downward so that it slides down approximately 1/2 inch to expose the multi-function programming buttons. The buttons are labeled from right to left:
   - Menu/Raisep: provides access to the program items and shows their current settings. With the first press it shows Delay time, second shows Sound setting, third shows Flash setting. After an item is Selected, the Raise button can increase the setting or change it from **OFF** to **ON**. For the Delay setting, when you reach 1200 (12 hours), pressing Raise brings the display around to 5:00 (5 minutes).
   - Select/Save: press this while a program item is displaying to change the setting for the item. When the correct setting is in the display, press this again to Save the setting for that item.
   - **Lower**q: After an item is Selected, the Lower button can reduce the setting or change it from **ON** to **OFF**. For the Delay setting, when you reach 5:00 (5 minutes), pressing Lower brings the display to 1200 (12 hours).



Programming Menu:

Delay 5:00 minutes
to 1200 hours
Sound ON or off
Flash on or off
return to normal operation

Setting the Initial Time Delay



1. Press the Menu/Raise button ONCE to see the current Delay setting. The factory setting for the Delay is 5 minutes, the minimum setting.
2. To change the setting, press the Select/Save (middle) button.
3. Press the **Menu**/Raise button. The time increases 5 minutes each time you press the Raise button, until the time reaches 1 hour (100). After 1 hour, the time increases 15 minutes each time you press the button, until it reaches 12 hours (1200), then it goes back to 5 minutes (5:00). You can go backward at any point to reduce the time, using the q Lower button.
4. When the desired time shows in the display, press the Select/**Save** button to save the setting and exit the programming mode.

Setting the Sound

1. Press the Menu/Raise button TWICE to see the current Sound setting.
2. To change the setting, press the Select/Save (middle) button.
3. Press the Menu/Raise button to turn **ON** the warning and keypress sounds. Press the q Lower button to turn **OFF** the warning and keypress sounds.
4. When the desired setting shows in the display, press the Select/Save button to save the setting and exit the programming mode.

Setting the Flash

1. Press the Menu/Raise button THREE times to see the current Flash setting. If a fan is connected to the switch, Flash should be **OFF**.
2. To change the setting, press the Select/Save (middle) button.
3. Press the Menu/Raise button to turn **ON** the warning flash. Press the q Lower button to turn **OFF** the warning flash.
4. When the desired setting shows in the display, press the Select/Save button to save the setting and exit the programming mode.

TROUBLESHOOTING

To test the time switch:

The pilot light behind the **ON/OFF** button should be **ON** when the switch is **OFF** and **OFF** should appear in the display. Press the **ON/OFF** button. The connected light or fan comes **ON**. The display shows the amount of time that the switch will remain **ON**.

The connected light or fan should turn **OFF** in the number of minutes indicated by the display. You can turn it **OFF** sooner by pressing the **ON/OFF** button again.

Light or fan will not turn ON (pilot light is visible):

Press **ON/OFF** button. The connected light or fan should turn **ON**. If not:

- Press and hold the button a second longer.
- Check the light bulb and/or motor switch on the fan mechanism.
- Turn **OFF** power to the circuit then check wire connections.

Light or fan will not turn ON (no pilot light or display is visible):

- Shade the switch from external light to make sure that the pilot light and display are not **ON**.
- Make certain that the circuit breaker is **ON** and functioning.
- Turn **OFF** power to the circuit then check wire connections.
- Call 888.817.0517 for technical support.

Light or fan will not turn OFF:

- Press the **ON/OFF** button. If the connected light or fan does not turn **OFF**, press the button and hold it a second longer.
- Turn **OFF** power to the circuit then check wire connections.

COVER PLATES

Wattstopper RT wall switches fit behind industry standard decorator style switch cover plates.

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