DESCRIPTION AND OPERATION

The InteliSwitch® TS-400-24 is a digital time switch that automatically turns lights OFF after a preset amount of time. The lights can also be turned OFF anytime during the timer’s countdown by pushing the ON/OFF button. The Digital Time Switch has four user-adjustable features: time-out period, time scroll direction, time-out visual, and audible warnings.

Time-Out Period
The timer can be adjusted to hold lights ON for five minutes to 12 hours. The default setting is 3 hours. See the DELAY switch adjustment to set the length of the time-out period.

Time Scrolling
The user can manually and temporarily override the time-out period without changing the DELAY adjustment. The SCROLL adjustment determines whether the user’s override options decrease from a longer time to a shorter time (scroll down) or increase from a shorter time to a longer time (scroll up). To choose the scrolling direction, consider the time-out DELAY setting, and then whether the usual temporary need will be for more or less time.

Override Operation: Holding the ON/OFF button for longer than 4 seconds causes the timer to scroll through time increments, starting from the time-out DELAY setting. Releasing the ON/OFF button resumes the countdown from that point. The minimum override setting is 5 minutes, maximum 12 hours.

The timer resets automatically to the time-out DELAY setting when the countdown runs out, or when the ON/OFF button is pushed.

Visual (Flash) Option
If this option is on there are two occasions when the controlled lights flash. They flash one time when the countdown reaches 5 minutes and twice when the countdown reaches 1 minute.

Audible (Sound) Option
If this option is ON, the timer beeps every 5 seconds during the last minute of the time-out period.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Voltages</th>
<th>24VAC, 24VDC, VAC Half Rectified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Consumption</td>
<td>Max. 15mA DC</td>
</tr>
<tr>
<td>Outputs</td>
<td></td>
</tr>
<tr>
<td>Isolated Relay</td>
<td>1A/30V SPDT</td>
</tr>
<tr>
<td>Pulse On/Off:</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>150ms</td>
</tr>
<tr>
<td>Current</td>
<td>1.5A</td>
</tr>
<tr>
<td>Time-Out Adjustment</td>
<td>5 minutes to 12 hours</td>
</tr>
<tr>
<td>Time-Out Override</td>
<td>0 to 1 hour in 5 minute increments</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>32° to 104°F (0° to 40°C)</td>
</tr>
<tr>
<td>Humidity</td>
<td>Rh 5% to 95%, non-condensing</td>
</tr>
</tbody>
</table>

U.S. Patent: 5,640,113

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. For a countdown of more than an hour, the display shows hours:minutes:seconds. The colon flashes every second.

<table>
<thead>
<tr>
<th>Minute Countdown</th>
<th>Seconds Elapsed</th>
<th>Hour Countdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:459</td>
<td>:01</td>
<td>0:14</td>
</tr>
<tr>
<td>0:458</td>
<td>:02</td>
<td>01:14</td>
</tr>
<tr>
<td>0:457</td>
<td>:03</td>
<td>01:14</td>
</tr>
</tbody>
</table>
SWITCH ADJUSTMENT

Enter Settings Mode by pressing the Calibration Button (located on the left, behind the faceplate).
- If no input occurs within four seconds the display flashes then moves to the next setting.
- Press the Calibration Button to view the settings without making changes.
- Press the ON/OFF button within four seconds to change the setting.

DELAY: 5 min. to 12 hr.
DELAY sets the time-out period. The selections begin at the currently set time (3 hours, default). When the time is less than an hour, the time increases by 5 minutes each time you press the ON/OFF switch. When the time is more than an hour, it increases by 15 minutes. When the selection passes 12 hours, it restarts the selection scrolling at 5 minutes.

SCROLL: UP or DOWN (dn)
To have the user’s time override options decrease from a longer time to a shorter time, set Scroll for dn (down). To increase from a shorter time to a longer time, set Scroll for UP.

FLASH: ON or OFF
SOUND: ON or OFF
When the setting selection is complete the unit will either:
- Beep once and display END if the calibration button is being held; release the button to continue.
- Beep three times while it displays END. This gives you a chance to press the ON/OFF button to restart the setting procedure. If you don’t press either button within three seconds, the unit exits the Settings Mode and resumes its previous state.

INSTALLATION

1. Connect the existing wires to the switch terminals.

   For Power Pack wiring:
   - +24VDC supply to +24V IN
   - +Supply Common to COMM

   Isolated Relay uses N.O., N.C, and RLY COMM terminals.

   For Control Panel wiring:
   - +24VAC or +24VDC supply (BLU) to +24V IN
   - +Supply Common (WHT) to COMM.
   - On (RED) to PULSE ON
   - Off (BLK) to PULSE OFF

2. Mount the switch in the wall box with the 2 mounting screws provided.
3. Turn on power to the time switch.
4. 5-10 seconds after power is supplied to the time switch, it will be ready to function. The time switch beeps and the word OFF appears in the display. Push the ON/OFF switch to activate the lights. The timer begins its countdown. Push the ON/OFF switch during countdown to turn the lights OFF.
5. Select feature settings using the Switch Adjustment procedures.
6. Install cover plate.

WARNING: TURN THE POWER OFF AT THE CIRCUIT BREAKER BEFORE WIRING.

WARNING: BE SURE THE GROUND WIRE IS SECURELY CONNECTED.

WIRING
TROUBLESHOOTING

Lights will not turn on:
1. Verify that the ground wire is tightly secured.
2. If lights still do not turn ON, call 800.879.8585 for technical support.

Lights will not turn off:
1. Do the lights turn OFF when you press the ON/OFF button?
   • If yes, check that the time-out period is set to the correct time-out. If the time-out period is adjusted to maximum, the lights will remain ON for 12 hours.
   • If no, call 800.879.8585 for technical support.
2. To test if the unit is operating properly, set the time-out period to minimum. Lights should turn OFF after five minutes.
3. If lights still do not turn OFF, call 800.879.8585 for technical support.

Re-adjusting the Time-out Period:
To re-adjust the time-out period, set the new time delay in the user settings. If this is done while the timer is counting down a prior setting, the new setting will not be recognized until the present countdown has expired, or until the timer is turned OFF and ON again.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS-400-24</td>
<td>Digital Time Switch 24VDC/24VAC, 60HZ</td>
</tr>
<tr>
<td>ASP-211</td>
<td>Cover plate for single-gang box</td>
</tr>
<tr>
<td>ASP-422</td>
<td>Cover plate for double-gang box</td>
</tr>
<tr>
<td>ASP-432</td>
<td>Cover plate for double-gang box with switch option</td>
</tr>
<tr>
<td>BZ-50</td>
<td>Power Pack: 120/277VAC, 50/60Hz, 20A ballast or incandescent</td>
</tr>
<tr>
<td>BZ-150</td>
<td>Power Pack: 120/277VAC, 50/60Hz, 20A ballast or incandescent, with Hold-On and Hold-Off capability</td>
</tr>
<tr>
<td>BZ-200</td>
<td>Power Pack: 120/277VAC, 50/60Hz, 20A Ballast/ELV/MLV/Incandescent/LED, 16A, E-Ballast/CFL/Plug Load</td>
</tr>
<tr>
<td>BZ-250</td>
<td>Power Pack: 120/277VAC, 50/60Hz, 20A, Ballast/ELV/MLV/Incandescent/LED, 16A E-Ballast/CFL/Plug Load, with Hold-On/Hold-Off capability</td>
</tr>
<tr>
<td>BZ-250-347</td>
<td>Power Pack: 120/347VAC, 50/60Hz, 16A Ballast/ELV/MLV/Incandescent/LED/ E-Ballast/CFL, 15A Plug Load, with Hold-On/Hold-Off capability</td>
</tr>
</tbody>
</table>

TS-400-24 and cover plates are available in White (-W), Light Almond (-LA), Grey (-G), Black (-B), and Ivory (-I).
Cover plates are not included.
Warranty Information

Wattstopper warranties its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of Wattstopper for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.