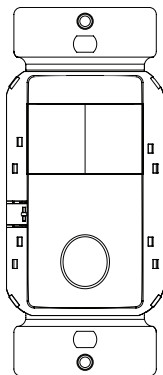


TS-400-24

InteliSwitch[®] Digital Time Switch
24VDC/VAC



SPECIFICATIONS

Voltages	24VAC, 24VDC, VAC Half Rectified
Current Consumption.....	Max. 15mA DC
.....	Max. 15mA AC
Outputs	
Isolated Relay.....	1A/30V SPDT
Pulse On/Off:	
Width.....	.150ms
Current.....	1.5A
Time-Out Adjustment	5 minutes to 12 hours
Time-Out Override0 to 1 hour in 5 minute increments
.....	1 hour to 12 hours in 15 minute increments
Operating Temperature.....	32° to 104°F (0° to 40°C)
Humidity	Rh 5% to 95%, non-condensing

U.S. Patent: 5,640,113

WattStopper[®]

Installation Instructions

UNIT DESCRIPTION AND OPERATION

The IntelliSwitch[®] 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 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.

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**, the colon flashes every second.

Minute Countdown	Seconds Elapsed	Hour Countdown
04:59	:01	01:14
04:58	:02	01:14
04:57	:03	01:14

INSTALLATION



CAUTION: TURN THE POWER OFF



AT THE CIRCUIT BREAKER BEFORE WIRING.

1. Connect the existing wires to the TS-400-24 terminals.

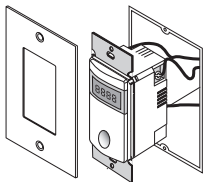
For Power Pack wiring:

- +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 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.

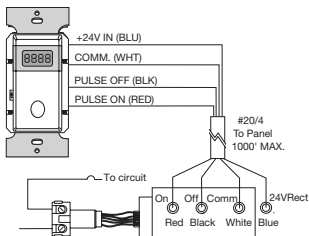


WARNING

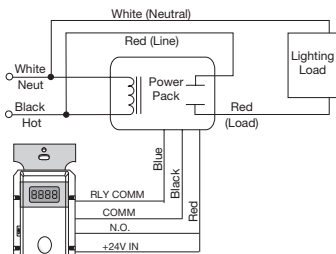


BE SURE THE GROUND WIRE IS SECURELY CONNECTED.

WIRING DIAGRAMS



Lighting Control Panel wiring



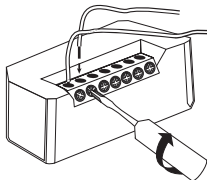
Power Pack wiring

WIRING

#16-#18

Strip Gauge

Insert wires as shown and tighten screw in the clockwise direction.



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 button. 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**.

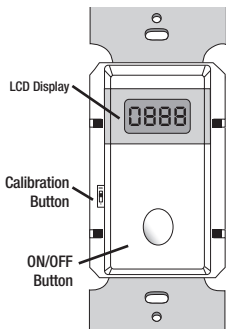
FLASH: ON or OFF

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.



TS-400-24

Call 800.879.8585 for Technical Support

TROUBLESHOOTING



CAUTION



**TURN OFF THE POWER AT THE CIRCUIT BREAKER
BEFORE WORKING WITH HIGH VOLTAGE**

Lights will not turn on:

1. Verify that the ground wire is tightly secured.
2. If lights still do not go 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 the timer is turned **OFF** and **ON** again.

Questions/Unsure?:

Call 800.879.8585 for Technical Support.

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ORDERING INFORMATION

TS-400-24	Digital Time Switch 24VDC/24VAC, 60HZ
ASP-211	Cover plate for single-gang box
ASP-422	Cover plate for double-gang box
ASP-432	Cover plate for double-gang box with switch option

TS-400 and cover plates are available in White (-W), Light Almond (-A), Grey (-G), Black (-B), and Ivory (-I).

Cover plates are not included.

WARRANTY INFORMATION

WattStopper warrants its products to be free of defects in materials and workmanship for a period of five 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.

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