



# TD200 Digital Programmable Timer

## Installation and Operation Instructions

### DESCRIPTION AND FUNCTIONAL SUMMARY

Solid-state interval timer designed to control lighting and motor loads. Momentarily pressing the start/stop button located on the front of the unit will turn the load ON and start the count-down time (set by the user utilizing the Dip Switches) at the end of which the load will turn OFF. If there is a need to turn the load OFF before the count down time has expired, press the start/stop button momentarily. The unit can be programmed via Dip Switch settings to flicker the load (lights), and/or beep as a warning indicating that the load is about to turn OFF. A scroll option can be set to temporarily change the preset count down time by pressing and holding down the start/stop button for more than 3 seconds.

**Dual Voltage Input:** 120/277VAC (No Minimum Load)

#### Environment:

- Operating Temperature: 0 – 100 deg. F
- Operating Humidity: 90% RH Non-condensing

#### Contact Rating:

TYPE OF LOAD	120VAC	277 VAC
Tungsten	800W	-
Ballast	800W	1200W
Motor	1/6 HP	-
Pilot Duty	240 VA	-

*Note: No minimum load required.*

### FEATURES

- LCD display stands out strongly in lighted areas and is backlit for visibility in dark areas.
- Tamper resistant time-on interval can be preset. In addition, a manual scroll-up mode (in 10 minute intervals) can override the dip switch setting temporarily-this feature can be disabled, thereby providing a fixed interval timer.
- In addition to a numerical read-out the LCD displays 10 bars at start of time on period. As interval counts down, one bar at a time turns off in 10% decrements.
- Flicker of lights and/or beep warning begins 2 minutes before time out (either or both can be disabled).
- Zero Power switching prolongs life of relay contacts by switching high inrush equipment at or close to zero power.
- Compatible with electronic ballasts, incandescent lighting, or motor loads.
- Decorator type face with matching wallplate included.

### SETTINGS (See configuration charts below)

- Tamper resistant time-on interval can be preset. In addition, a manual scroll-up mode (in 10 minute intervals) can override the dip switch setting temporarily – this feature can be disabled, thereby providing a fixed interval timer.
- Flicker of lights and/or beep warning begins 2 minutes before time out (either or both can be disabled).

*It is essential that you select your settings before installing the unit in the box.*

- COUNT DOWN TIME PERIOD – Set the desired count down time period using dipswitches #1,2, and 3.
- FLICKER WARNING BEFORE TIME OUT – Set Dip Switch #4 (UP) to disable warning Flicker feature. Set Dip Switch #4 (DOWN) to enable warning Flicker feature.
  - Flicker warning if enabled, occurs at 2 minutes and 1 minute before timing out.
- BEEPER WARNING BEFORE TIME OUT – Set Dip Switch #5 (UP) to disable warning beep feature. Set Dip Switch #5 (DOWN) to enable warning Beep feature.
  - Beeper warning starts 2 minutes before timing out and every 12 seconds. Thereafter.
- SCROLL – Set Dip Switch #6 (UP) to disable Scroll feature. Set Dip Switch #6 (DOWN) to enable Scroll feature.

### INSTALLATION

**CAUTION: BEFORE WIRING AND SERVICING, POWER TO THIS TIME SWITCH AND EQUIPMENT IT CONTROLS MUST BE TURNED OFF AT THE MAIN PANEL.**

**WARNING: UNIT MUST BE PROPERLY GROUNDED TO OPERATE CORRECTLY.**

1. Connect wires as shown in wiring diagram below.
2. Cap unused ground wire.
3. Mount the timer inside electrical box using 2 mounting screws provided.
4. Install enclosed cover plate.
5. Turn power on at the electrical panel.
6. Allow 25 second warm-up time after unit is powered up.
  - LCD message "OFF" will be displayed as a default and load will be switched to OFF.

**OPERATION**

1. To turn load ON, depress START/STOP button momentarily.
  - The LCD will display the count-down time interval selected at the dip-switches. Time interval will start counting down.
  - In addition to numerical read-out LCD displays 10 bars at start of time on period. As interval counts down, one bar at a time turns off in 10% decrements.

**Note:** Intervals up to 60 minutes inclusive will be displayed in the following format: 59:50, where the 2 left digits represent minutes and 2 right digits represent seconds. Colon will not be flashing. Intervals longer than 1hr. will be displayed in the following format: 11:59, where 2 left digits represent hours and 2 right digits represent minutes. Colon will be flashing, indicating seconds counting down. If count-down time is longer than 1 hour the format time will automatically change from (HH:MM) to (MM:SS) as soon as remaining time is less than 1 hour (59:59).

2. To turn off load during the count-down, depress the START/STOP button for 2 seconds and release when the original interval is displayed.
3. To reset the timer to its initial start value, any time during count-down, depress the START/STOP button for 2 seconds and release when the original interval is displayed.
4. To Scroll to another interval, press and hold down START/STOP button for more than 3 seconds. If the scroll feature is enabled by dip switch, the display will scroll through intervals starting at 10:00 mins. And finishing at 12:00 hrs. The scrolling is done in ascending order in 10 min. increments. Release the START/STOP button to start selected count-down time. Scrolling is continuous as long as the start/stop button is depressed. When scrolled to the maximum time, the time will restart from 10:00 as long as the START/STOP button remains depressed.
5. Percent time remaining bar graph will be displayed each time the interval is started. All 10 bars will be ON at start indicating 100% time remaining. As the interval is counting down, the bars will be turned OFF one bar at a time (10%) starting at the right side of the LCD display. At the end of count-down time, all bars will be OFF.
6. To change dip switch configuration:
  - a. Turn POWER OFF AT THE MAIN CIRCUIT BREAKER.
  - b. Remove wall cover plate and pull out the unit from the wall box. Dip Switches should now be accessible.
  - c. Set the desired Dip Switch configuration.
  - d. Reinstall the unit and wall cover plate.
  - e. Turn POWER AT MAIN CIRCUIT BREAKER.

**TROUBLESHOOTING**

1. To test unit, set dip switch to minimal time out interval (5 minutes).
2. Unit does not function:
  - a. Check GROUND wire, make sure it is attached properly and make sure the box has good ground.
  - b. Check all other wiring to make sure connection is secure.
  - c. Check if power is turned back on at the main circuit breaker panel.
  - d. If unit still does not function, consult factory.
3. Load will not turn off automatically: Check if the load goes ON/OFF when pressing start/stop button. If not, check red wire for good connection. If load does go ON/OFF, consult factory.

**ABBREVIATED OPERATING INSTRUCTIONS**

The start/stop push button is located on the face of the unit.

1. To turn on load push the button momentarily. The LCD will display the preset interval and begin counting down. Intervals up to 1 hour will display minutes and seconds. Intervals over 1 hour will display hours and minutes.
2. To turn on load push the button momentarily. The LCD will display the preset interval and begin counting down. Intervals up to 1 hour will display hours and minutes.
3. To reset up to its original preset interval while the load is on hold the button in for 1 or 2 seconds.
4. If the scroll feature is enabled, other than the preset interval can be temporarily set. Hold the button in for over 3 seconds and timer begins to scroll up in 10 minute increments. Release the button at the desired setting.
5. To turn load off at any time, push the button momentarily.



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