LAFAYETTE TDS-12

Lafayette TDS-12 12V Programmable Digital Timer User Manual

Model: TDS-12 | Brand: LAFAYETTE

Introduction

Thank you for choosing the Lafayette TDS-12 12V Programmable Digital Timer. This manual provides essential information for the safe and efficient use of your device. Please read these instructions carefully before installation and operation, and retain them for future reference.

Product Overview

The Lafayette TDS-12 is a versatile 12V programmable digital timer designed for controlling various electrical devices. It features multiple ON/OFF programs, a clear digital display, and relay contacts for flexible application in systems such as solar power, irrigation, lighting, and more.

Figure 1: Front view of the Lafayette TDS-12 Digital Timer. This image shows the digital display and control buttons.

Safety Information

- Ensure the power supply is 12V DC. Connecting to an incorrect voltage may damage the device.
- Installation should be performed by a qualified individual if you are unsure about electrical wiring.
- Do not expose the timer to water or excessive humidity.
- Do not attempt to open or repair the device yourself. Refer to qualified service personnel.
- Disconnect power before making any wiring connections or disconnections.

1. Setup

1.1 Unpacking

Carefully remove the timer from its packaging. Inspect the device for any signs of damage. If any damage is found, do not proceed with installation and contact your supplier.

1.2 Power Requirements

The Lafayette TDS-12 operates on a **12V DC** power supply. It is crucial to provide a stable 12V DC source to the timer's power input terminals. The internal battery maintains program settings but requires external 12V power to remain charged and for the timer to function correctly.

1.3 Wiring Connections

The timer features a terminal block on the rear for power input and relay output connections. Refer to the diagram below for proper wiring. Ensure all connections are secure and correctly polarized.

Figure 2: Example of wiring terminals on the Lafayette TDS-12. This image illustrates the power input and relay output connections.

- **Power Input:** Connect your 12V DC power supply to the designated '+' and '-' terminals. Observe correct polarity.
- **Relay Output:** The timer provides a set of dry contact relay outputs:
  - **COM (Common):** This is the common terminal for the relay switch.
  - **NO (Normally Open):** The circuit between COM and NO is open when the timer is OFF and closed when the timer is ON.
  - **NC (Normally Closed):** The circuit between COM and NC is closed when the timer is OFF and open when the timer is ON.
- **Important:** If you are controlling a 12V device, the 12V positive supply must also be connected to the COM terminal of the relay output. The device to be controlled will then connect between the NO (or NC) terminal and the 12V negative supply.

1.4 Initial Time Setting

1. Ensure the timer is powered on.
2. Press the **CLOCK** button.
3. Use the **HOUR** and **MINUTE** buttons to set the current hour and minute.
4. Use the **DAY** button to set the current day of the week.
5. Press the **CLOCK** button again to save the settings and exit time setting mode.

2. Operation

2.1 Display and Buttons

The timer features an LCD display showing the current time, day, and program status. The control panel typically includes buttons such as:

- **PROG:** Enters program setting mode.
- **CLOCK:** Returns to clock display, used with other buttons to set time.
- **DAY:** Selects day(s) of the week.
- **HOUR:** Adjusts hour.
- **MINUTE:** Adjusts minute.
- **MANUAL:** Manual override for ON/AUTO/OFF modes.
- **RESET:** Clears all settings (often a recessed button requiring a pointed object).

2.2 Programming ON/OFF Cycles

The TDS-12 supports up to 20 ON/OFF programs. Follow these steps to set a program:

1. Press the **PROG** button once. The display will show "1 ON" (for the first ON program).
2. Use the **DAY** button to select the desired day(s) for this program. Options include individual days, weekdays, weekends, or all days.
3. Use the **HOUR** and **MINUTE** buttons to set the desired ON time.
4. Press **PROG** again. The display will show "1 OFF" (for the first OFF program).
5. Repeat steps 2 and 3 to set the desired OFF time for the first program.
6. Continue pressing **PROG** to cycle through "2 ON", "2 OFF", up to "20 ON", "20 OFF", setting each program as needed.
7. After setting all desired programs, press the **CLOCK** button to exit program setting mode and return to the current time display.

Note: If you do not set an OFF time for an ON program, or vice-versa, the timer will ignore that specific program step.

2.3 Manual Override

The **MANUAL** button allows you to override the programmed settings temporarily or permanently. Pressing this button cycles through different modes:

- **AUTO:** The timer operates according to the programmed ON/OFF cycles.
- **ON:** The output relay is continuously ON, overriding all programs.
- **OFF:** The output relay is continuously OFF, overriding all programs.

Select **AUTO** for normal programmed operation.

3. Maintenance

3.1 Internal Battery

The TDS-12 contains an internal rechargeable battery that retains time and program settings during power outages. This battery is charged when the timer is connected to its 12V DC power supply. If the timer is left unpowered for an extended period, the battery may discharge, requiring you to reset the time and programs upon reconnection.

3.2 Cleaning

To clean the timer, wipe the exterior with a soft, dry cloth. Do not use abrasive cleaners, solvents, or immerse the device in water.

3.3 Environmental Conditions

Operate the timer within typical indoor temperature and humidity ranges. Avoid extreme temperatures, direct sunlight, and high moisture environments to ensure optimal performance and longevity.

4. Troubleshooting

Problem	Possible Cause	Solution
Timer display is blank or not responding.	No 12V DC power supply, or internal battery is fully discharged.	Check 12V DC power connections. Ensure power supply is active. If battery was discharged, connect to power and allow time to charge.
Programs are not executing.	Timer is in MANUAL ON or MANUAL OFF mode. Incorrect time setting. Programs not saved correctly.	Press **MANUAL** button until "AUTO" is displayed. Verify current time and day. Re-enter and save programs if necessary.
Output device is not switching.	Incorrect wiring of the relay contacts. Device requires more power than the timer can handle.	Review the wiring diagram in Section 1.3. Ensure the COM terminal is correctly connected to the power source for the controlled device. Check the power rating of the controlled device against the timer's relay specifications.
Timer resets unexpectedly.	Unstable 12V power supply. Faulty internal battery.	Ensure a stable 12V DC power source. If the problem persists, the internal battery may need replacement (contact support).
Partial display segments are missing.	Possible internal component issue, potentially due to environmental factors (e.g., moisture).	Ensure the timer is in a dry environment. If the issue persists, contact support.

If you encounter problems not listed here or if the suggested solutions do not resolve the issue, please contact customer support.

5. Specifications

Feature	Detail
Model Number	TDS-12 (f07-ELE09.0008)
Brand	LAFAYETTE
Power Supply	12V DC
Number of Programs	Up to 20 ON/OFF cycles
Output Type	Dry contact relay (NO/NC/COM)
Dimensions (L x W x H)	14.6 x 9.6 x 5 cm
Weight	9.07 g
Color	White
Display Features	Wireless (as per product specifications, likely refers to display technology)

6. Warranty & Support

6.1 Warranty Information

The Lafayette TDS-12 Digital Timer is covered by a standard manufacturer's warranty against defects in materials and workmanship. The warranty period typically begins from the date of purchase. Please retain your proof of purchase for warranty claims. This warranty does not cover damage caused by improper installation, misuse, unauthorized modifications, or environmental factors.

6.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact your retailer or the manufacturer's customer support. Please have your model number (TDS-12) and purchase details ready when contacting support.

Contact information (e.g., phone number, email, website) would typically be provided here by the manufacturer.