SINOTIMER TM919TK

SINOTIMER TM919TK Astronomical Time Switch User Manual

Wide Voltage 85-265Vac Astronomical Time Switch for Automatic Calculation of Sunrise and Sunset

1. INTRODUCTION

The SINOTIMER TM919TK is an advanced astronomical time switch designed for automatic control of electrical loads based on sunrise and sunset times. It eliminates the need for manual adjustments to account for seasonal changes, providing precise and energy-efficient operation. This device features a wide voltage input range (85-265Vac) and a robust 16A, 3200 Watts capacity, making it suitable for various applications. Its replaceable battery design ensures long-term reliability.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Installation should only be performed by a qualified electrician.
- Ensure power is disconnected at the circuit breaker before installation or maintenance.
- Do not exceed the maximum load rating of 16A or 3200 Watts.
- This device is intended for indoor use only.
- Keep away from water and excessive moisture.

3. PRODUCT OVERVIEW

The TM919TK Astronomical Time Switch features a clear LCD display and intuitive buttons for programming. Below are key components and their functions.

Figure 3.1: Front view of the TM919TK timer, showing the display, control buttons, and wiring terminals.

Figure 3.2: Side view of the TM919TK, illustrating its compact design and the clear protective cover over the buttons.
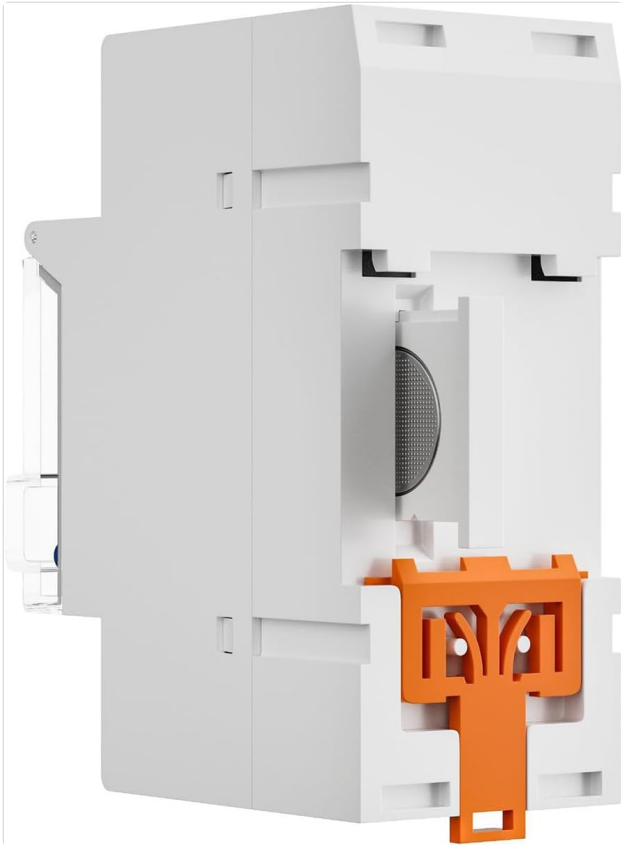

Figure 3.3: Side view revealing the replaceable battery compartment, ensuring easy maintenance.

4. SPECIFICATIONS

Feature	Detail
Model	TM919TK
Operating Voltage	85-265Vac, 50/60Hz
Max Load Current	16 A
Max Load Power	3200 Watts
Latitude Setting Range	North/South 0 - 70° (Accurate to 1 degree)
Longitude Setting Range	East/West -180° - 180° (Accurate to 1 degree)
Time Zone Range	12 ~ -12 (Positive for Eastern, Negative for Western)
Perpetual Calendar	2017 to 2042
Program Settings	8 ON/OFF programs (can be astronomical or fixed time)
Time Format	12/24 hour conversion
Dimensions	2.68 x 1.42 x 3.54 inches
Item Weight	4.2 ounces

5. INSTALLATION

The TM919TK is designed for DIN rail mounting. Follow the wiring diagram carefully to ensure correct and safe installation.
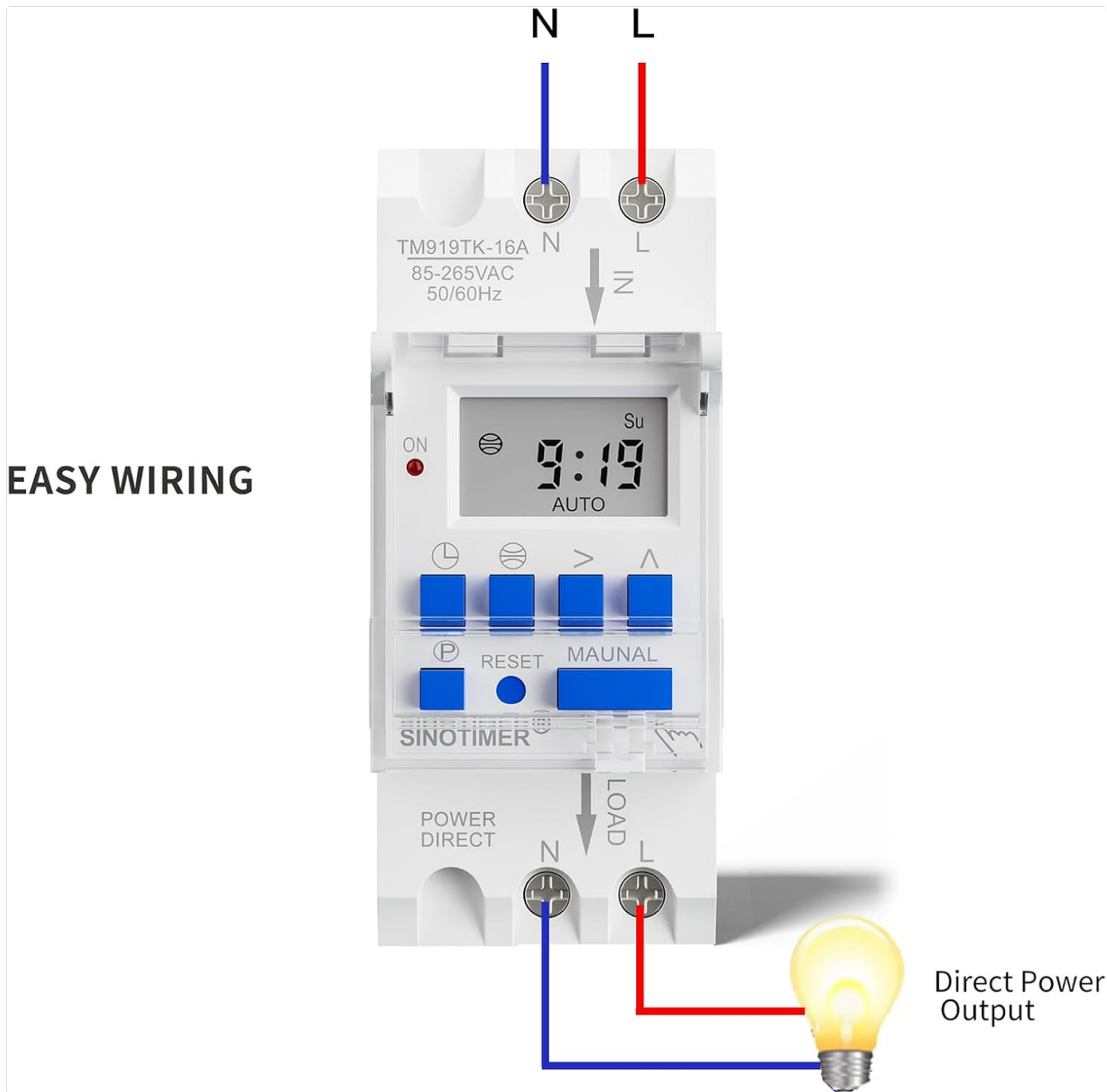
5.1 Wiring Diagram

Figure 5.1: Wiring connections for the TM919TK. Connect the incoming Neutral (N) and Live (L) wires to the 'IN' terminals. Connect the load's Neutral (N) and Live (L) wires to the 'LOAD' terminals.

Important: Always ensure the main power supply is turned off before attempting any wiring. Verify all connections are secure before restoring power.

6. OPERATING INSTRUCTIONS

This section details how to set up and program your TM919TK Astronomical Time Switch.

6.1 Initial Preparation and Basic Settings

Before programming, ensure the timer is powered on and reset. You will then set the current date, time, and your geographical coordinates (latitude and longitude).

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Video 6.1: Demonstrates how to press the "RESET" button to turn on the timer and then set the latitude, longitude, date, and current time. This is the first step in preparing the timer for operation.

1. **Power On and Reset:** Press the "RESET" button to activate the timer and clear any previous settings.
2. **Set Latitude/Longitude:** Navigate through the settings to input your precise latitude and longitude. This is crucial for accurate sunrise/sunset calculations.
3. **Set Date and Current Time:** Adjust the year, month, day, and current time to ensure the timer's internal clock is synchronized.

6.2 Astronomical Function Setting

The astronomical function allows the timer to automatically turn ON/OFF at local sunrise and sunset times, which are calculated based on your set latitude and longitude.

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Video 6.2: Illustrates how to set the astronomical function. This includes entering the local sunrise/sunset time and adjusting for any desired advance or delay in the ON/OFF operation.

1. Press the "P" button to enter the programming mode.
2. Press the "globe" button (or equivalent) to access the astronomical settings.
3. You can set the ON/OFF times relative to sunrise/sunset, including options to advance or delay the operation by a specific duration.

6.3 Time Mode Setting (Fixed Programs)

In addition to astronomical settings, you can program up to 8 fixed ON/OFF schedules for specific times of the day.

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Video 6.3: Shows how to set fixed time programs. The display will first show the astronomical timer program, then allow setting or clearing of up to 8 ON/OFF programs.

1. Press the "P" button to cycle through the program settings.
2. For each program (1 ON, 1 OFF, 2 ON, 2 OFF, etc.), set the desired time and day(s) of the week.
3. You can set or clear these programs as needed.

6.4 Canceling Programs

If you need to remove a previously set program, follow these steps:

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Video 6.4: Demonstrates how to cancel both fixed time programs and astronomical programs. For fixed programs, press "P" then "MANUAL". For astronomical programs, press "P" then the "globe" button until the symbol disappears.

6.4.1 Canceling Fixed Time Programs

1. Press "P" to enter the time setting mode.
2. Navigate to the specific program you wish to cancel.
3. Press the "MANUAL" button to cancel the program.

6.4.2 Canceling Astronomical Programs

1. Press "P" to enter the time setting mode.
2. Press the "globe" button (or equivalent) repeatedly until the astronomical symbol disappears from the display,

indicating the program is canceled.

7. MAINTENANCE

7.1 Cleaning

To clean the device, wipe it with a soft, dry cloth. Do not use abrasive cleaners or solvents, as these may damage the casing or display.

7.2 Battery Replacement

The TM919TK features a replaceable battery to maintain time and settings during power outages. If the display becomes dim or settings are lost frequently, the battery may need replacement.

1. **Disconnect Power:** Ensure the main power supply to the timer is completely disconnected.
2. **Locate Battery Compartment:** Refer to Figure 3.3 for the location of the battery compartment on the side of the unit.
3. **Replace Battery:** Carefully open the compartment and replace the old battery with a new one of the same type. Observe polarity.
4. **Secure Compartment:** Close the battery compartment securely.
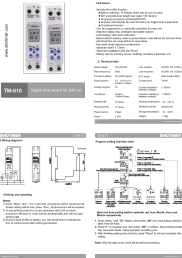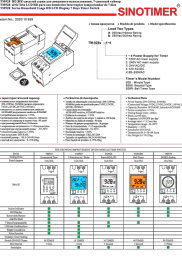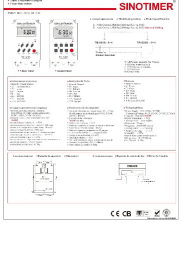5. **Restore Power:** Reconnect the main power supply and verify the timer functions correctly.
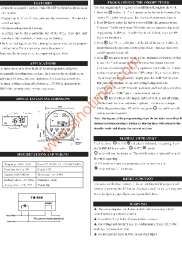
8. TROUBLESHOOTING

| Problem	Possible Cause	Solution
Display is blank or dim.	No power supply; internal battery low or dead.	Check power connections. Replace internal battery (see Section 7.2).
Timer not switching ON/OFF at programmed times.	Incorrect programming; manual override active; incorrect current time/date/location.	Review programming steps (Section 6). Check if manual mode is active and switch to AUTO. Verify current time, date, latitude, and longitude settings.
Astronomical function is inaccurate.	Incorrect latitude/longitude or time zone settings.	Double-check and correct latitude, longitude, and time zone settings (Section 6.1).
Cannot enter programming mode.	Device may be locked or in an unexpected state.	Press the "RESET" button to restart the device. Try pressing "P" again.

9. WARRANTY AND SUPPORT

For warranty information or technical support, please contact SINOTIMER customer service through the retailer where the product was purchased or visit the official SINOTIMER website. Please have your product model number (TM919TK) and purchase details ready when contacting support.

[SINOTIMER TM-610 Digital Time Switch for DIN Rail - User Manual and Specifications](#)
Detailed specifications, wiring diagrams, and operating instructions for the SINOTIMER TM-610 digital time switch, designed for DIN rail mounting.

[SINOTIMER TM928 Series HD LCD Digital Timer Switch - User Manual and Specifications](#)
Comprehensive guide to the SINOTIMER TM928 series digital timer switches, covering features, specifications, setup, and wiring for models like TM919, TM920, TM928, TM928S, TM928R, and TM929.

[SINOTIMER TM-630A/TM-630S Digital Timer: Features and Specifications](#)
Detailed technical specifications and features for the SINOTIMER TM-630A and TM-630S digital programmable timers, including power supply, timing range, dimensions, and wiring.

[SINOTIMER TM920 Series 3-in-1 Programmable Timer Switch User Manual](#)
Comprehensive user manual for the SINOTIMER TM920 Series 3-in-1 programmable timer switch, featuring 7-day programming, pulse, and countdown functions. Learn how to set date, time, control modes, and holiday settings.

[Sinotimer TM-618 7-Day Electronic Timer Instruction Manual](#)
Comprehensive instruction manual for the Sinotimer TM-618 7-Day Electronic Timer, detailing features, programming, manual operation, and safety warnings.
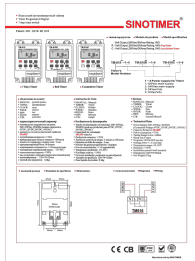
[Sinotimer TM-616 Weekly Programmable Timer - Specifications and Operation](#)

Detailed information on the Sinotimer TM-616 weekly programmable timer, including specifications, button functions, dimensions, wiring diagrams, and product lineup. Features 7-day programming and 30A switching capacity.