Hilitand KG316T-II

Hilitand KG316T-II 30A Digital Programmable Timer Switch (AC-DC 12V) User Manual

Model: KG316T-II | Brand: Hilitand

1. Introduction

Thank you for choosing the Hilitand KG316T-II 30A Digital Programmable Timer Switch. This device is designed for precise time control of various electrical appliances and equipment, offering up to 16 ON/OFF programs per day or week. Its high-grade industrial chip ensures accurate timing, and the built-in rechargeable battery provides reliable data retention during power outages. Please read this manual thoroughly before installation and operation to ensure safe and efficient use.

2. Safety Information

- **Electrical Hazard:** Installation and wiring should only be performed by a qualified electrician or knowledgeable personnel.
- **Voltage Compatibility:** Ensure the timer switch's voltage rating (AC-DC 12V for this model) matches your power supply.
- **Load Capacity:** Do not exceed the maximum resistive switching capacity of 25A or inductive capacity of 20A. For loads above 25A, an AC contactor must be used.
- **Secure Connections:** Ensure all wire connections are tight and secure to prevent loose contacts and potential hazards.
- **Environment:** Avoid installing the device in areas with excessive moisture, dust, or extreme temperatures outside the operating range (-10°C to 40°C).

3. Product Overview

The Hilitand KG316T-II is a compact and robust digital timer switch. It features an LCD display for easy programming and monitoring, along with intuitive buttons for setting time and programs.

Figure 1: Front view of the Hilitand KG316T-II Digital Timer Switch, showing the LCD display and control buttons.

Figure 2: Detailed view of the timer switch's internal components and labeled features, including the integrated chip, NiMH lithium battery, transformer stabilizer, 30A relay, high current terminal, and capacitive rubber keys.

Key Features:

- High industrial-grade chip for accurate timing.
- Built-in rechargeable battery for power-off memory (up to 180 days).
- Maximum 16 ON-OFF programs per day or week.
- Self-locking function to prevent accidental operation.
- Capacitive rubber keys for sensitive and durable operation.
- High current terminals for robust connections.

4. Specifications

Figure 3: Image displaying the detailed technical specifications and physical dimensions of the timer switch.

Attribute	Value
Brand	Hilitand
Model	KG316T-II
Material	Plastic case + metal
Working Voltage	AC-DC 12V (Voltage tolerance: ±15%)
Switching Capacity	Resistive 25A, Inductive 20A
Power Consumption	≤ 2W
Number of Settings	16 times ON and OFF (Day/Week)
Setting Time Range	1 minute - 168 hours
Time-keeping Error	<0.5s/24h
Power-off Memory	180 days or more
Operating Environment	-10°C to 40°C, <95%RH
Product Dimensions	1.77"D x 2.16"W x 3.94"H (45mm D x 55mm W x 100mm H)
Item Weight	5.3 ounces (Approx. 150g)

5. Setup

5.1 Initial Reset

Upon first use or after a prolonged period without power, the timer may need to be reset. Use a pointed object (like a toothpick) to press the 'C' (Reset) button located on the front panel. This will clear all previous settings and restore the timer to its factory default state.

Video 1: Demonstrates how to reset the timer switch using the 'C' button. This video features a similar model (CN101A) but the reset procedure is identical.

5.2 Setting Current Time

To set the current day and time:

1. Press and hold the **Clock** button (usually labeled with a clock icon).
2. While holding the Clock button, press the **D+** button to adjust the current day (MO, TU, WE, TH, FR, SA, SU).
3. While holding the Clock button, press the **H+** button to adjust the current hour (0-23 for 24-hour format).
4. While holding the Clock button, press the **M+** button to adjust the current minute (0-59).
5. Release the Clock button to save the current time.

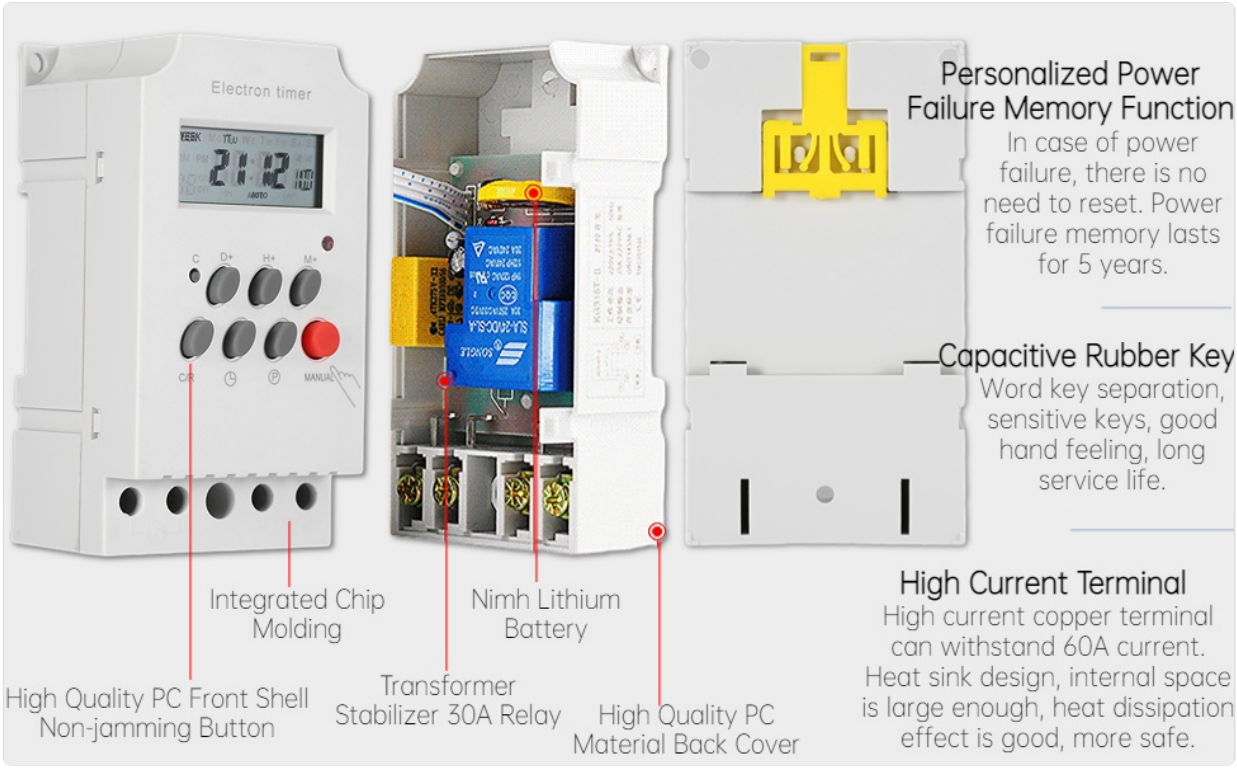

Figure 4: Visual guide for setting the current time (24-hour system) on the timer switch.

5.3 Wiring Diagram

Refer to the following diagram for proper wiring. Ensure all connections are secure and correspond to the labels on the device. For resistive loads above 25A or inductive loads above 7.5A (e.g., lamps above 5A), an external AC contactor is required.

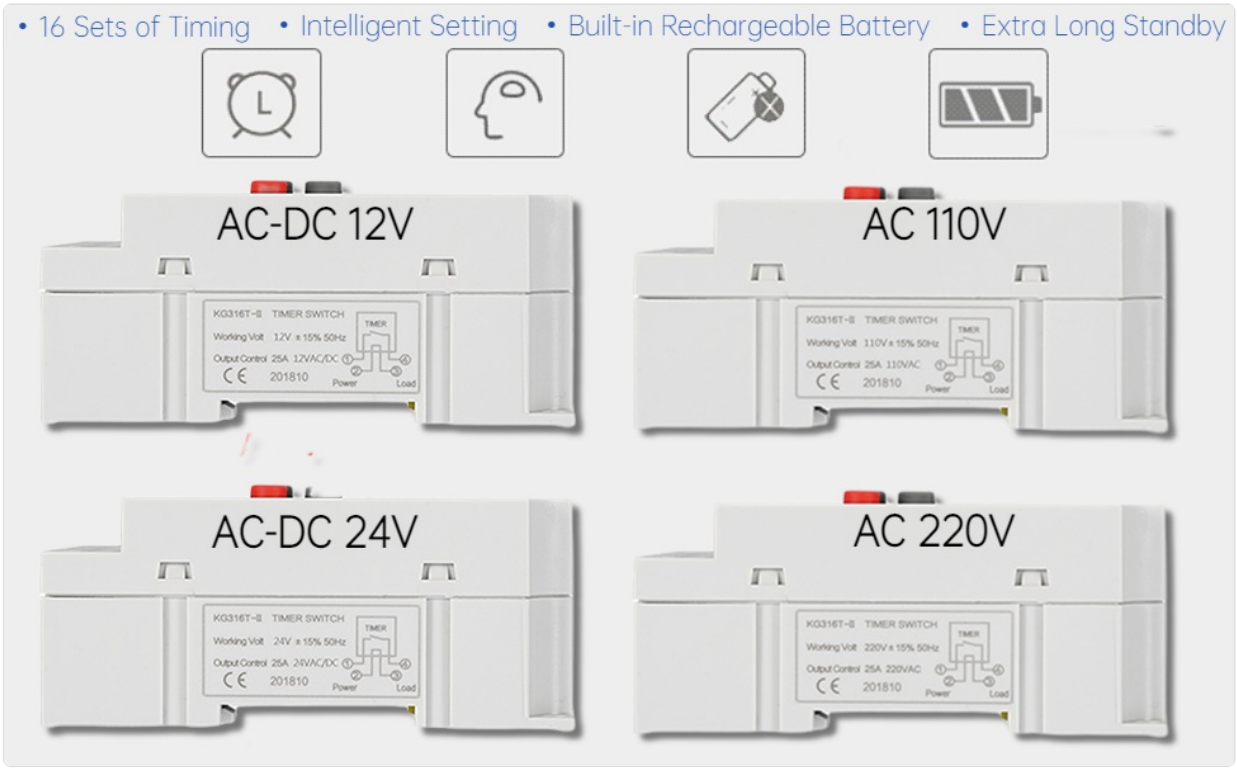

Figure 5: Wiring diagram for a 220V single-phase AC setup, including connections for an optional AC contactor for higher loads. Note: This manual is for the AC-DC 12V model; consult the device's specific wiring labels for your voltage.

6. Operating Instructions

6.1 Programming ON/OFF Times

The timer switch supports up to 16 ON/OFF programs. To set a program:

1. Press the **P** button to enter programming mode. The display will show '1 ON'.
2. Use the **D+**, **H+**, and **M+** buttons to set the desired ON time for the first program. You can select specific days or a block of days using D+.
3. Press the **P** button again. The display will show '1 OFF'.
4. Use the **D+**, **H+**, and **M+** buttons to set the desired OFF time for the first program.
5. Repeat steps 1-4 for additional programs (up to 16 ON/OFF pairs).
6. After setting all desired programs, press the **Clock** button to exit programming mode and save the settings. The timer will return to normal operation.

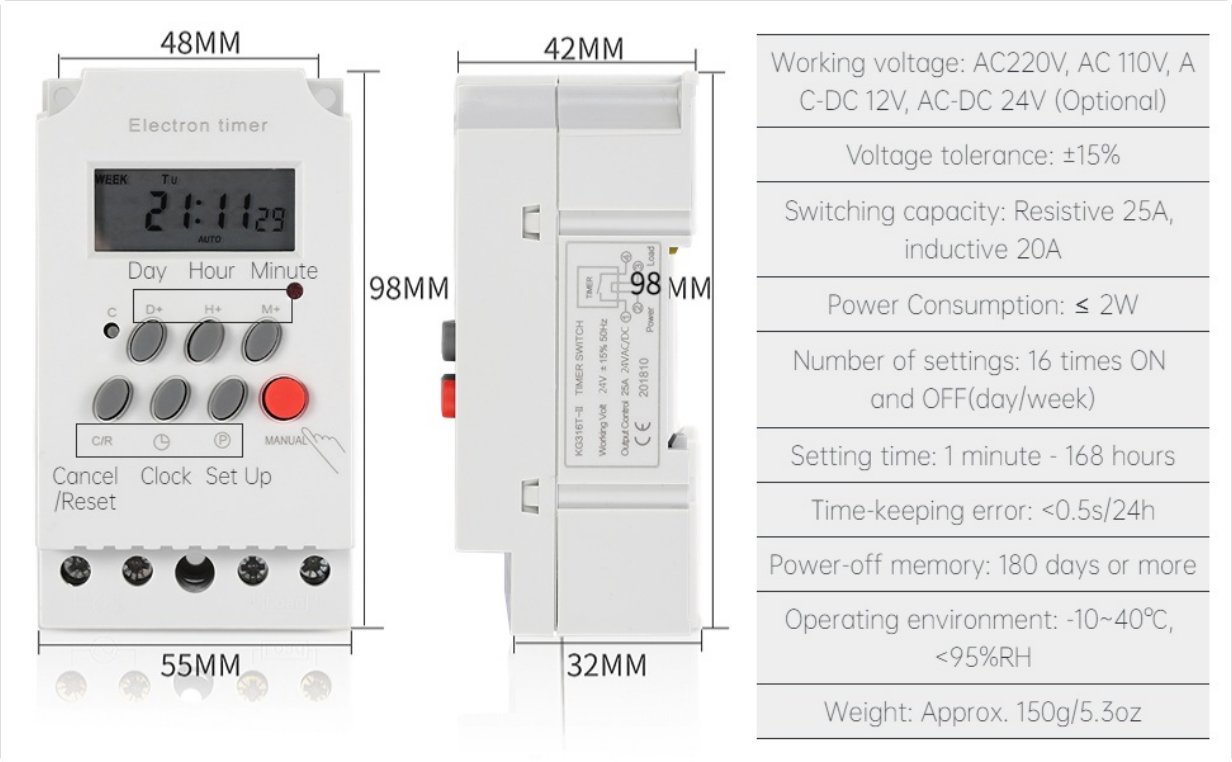

Figure 6: Visual guide for setting the 'ON' time for a program.

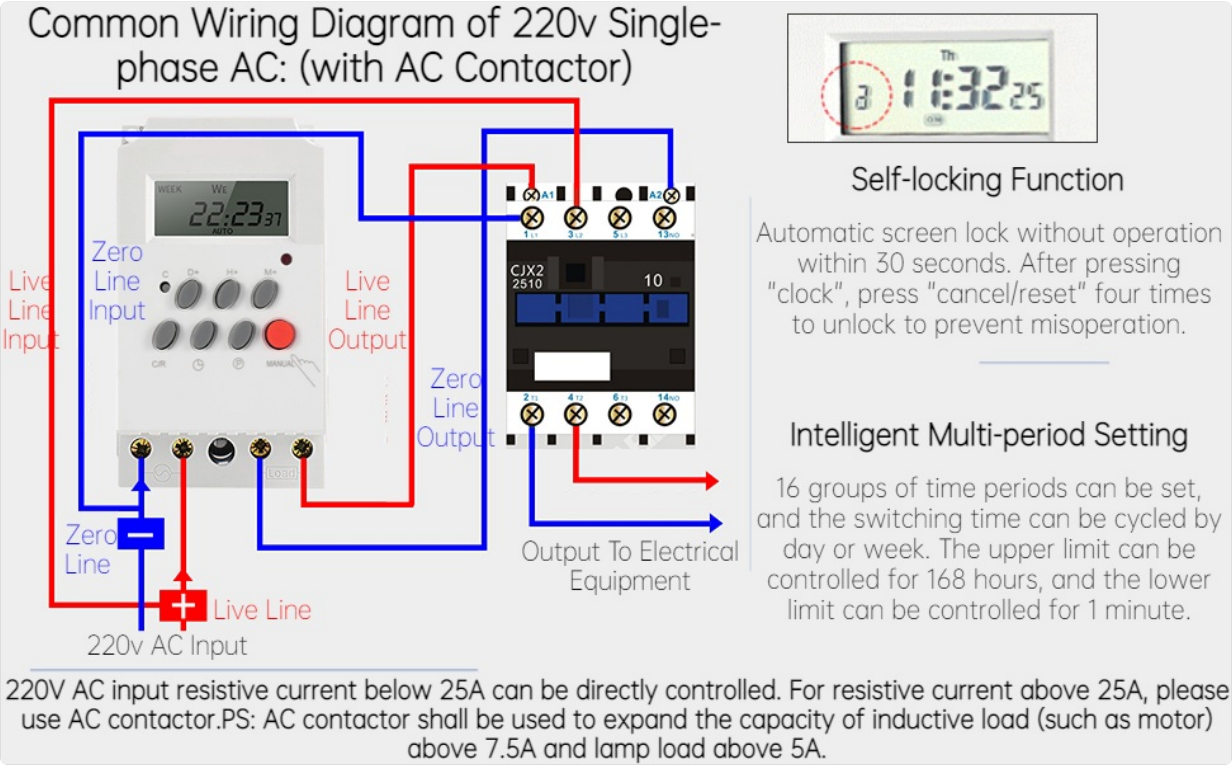

Figure 7: Visual guide for setting the 'OFF' time for a program.

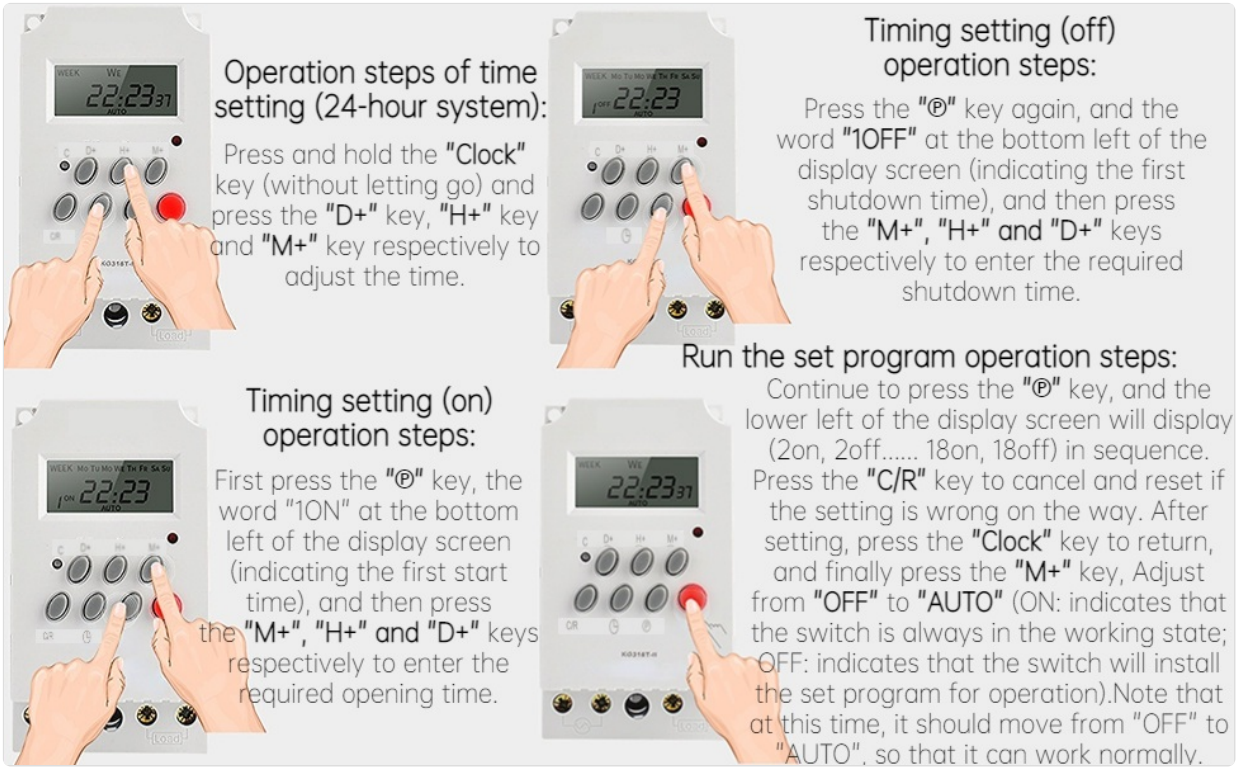

Figure 8: Guide on how to review and adjust set programs, and switch between ON, OFF, and AUTO modes.

6.2 Manual Mode

The **MANUAL** button allows you to override programmed settings temporarily. Pressing it cycles through different modes:

- **ON:** Keeps the output permanently ON.
- **OFF:** Keeps the output permanently OFF.
- **AUTO:** Follows the programmed ON/OFF schedules.

To temporarily turn off the display and save battery, press and hold the**MANUAL** button for 5 seconds. To turn it back on, press and hold for another 5 seconds. Settings are retained.

7. Maintenance

7.1 Battery Backup

The timer switch includes a built-in rechargeable NiMH lithium battery. This battery maintains the time, display, and programmed data for up to 180 days in the event of a power loss. No user maintenance is typically required for this internal battery.

7.2 Cleaning

Clean the exterior of the timer switch with a soft, dry cloth. Do not use abrasive cleaners or solvents, as these may damage the casing or display.

8. Troubleshooting

8.1 Common Issues and Solutions

- **Display is blank:** Check the power supply connections. If power is present, the internal battery might be fully discharged. Allow time for it to recharge when connected to power.

- **Timer not switching:** Verify that the timer is in **AUTO** mode. Check your programmed ON/OFF times for accuracy. Ensure the load is within the specified capacity.
- **Incorrect time:** Reset the current time as described in Section 5.2.

8.2 Error Codes

If there are setting errors, the LCD may display the following codes:

- **E1:** Indicates that the START time has not been set for a program.
- **E2:** Indicates that the END time has not been set for a program.

To cancel or reset programs if settings are incorrect, press the**C/R** button. If all buttons are locked (no response), press and hold **C/R** for 8 seconds to unlock.

9. Warranty and Support

Specific warranty details are not provided in the product information. For warranty claims, technical support, or further assistance, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.