## TAXNELE SUL181H

# TAXNELE SUL181H Analog Mechanical Timer Switch User Manual

Model: SUL181H

## 1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the TAXNELE SUL181H Analog Mechanical Timer Switch. The SUL181H is a 24-hour programmable timer designed for controlling electrical appliances, such as pumps, lighting, and other equipment, to optimize energy usage and automate operations. It features a DIN rail mounting design for easy integration into electrical panels.




*Figure 1: Front view of the TAXNELE SUL181H Analog Mechanical Timer Switch. This image displays the timer's blue 24-hour dial with numbered segments, a central 'Quartz' label, and the manual override switch on the left. The top section shows the brand, model number, voltage, frequency, and contact ratings.*

## 2. Safety Information

- **Electrical Hazard:** Installation and maintenance should only be performed by qualified personnel. Ensure power is disconnected before any wiring or servicing.
- **Voltage Compatibility:** Verify that the operating voltage of the timer (AC 110V/220V/240V 50-60Hz) matches your electrical supply.
- **Load Capacity:** Do not exceed the specified contact capacity (16A/250VAC resistive load, 3A/250VAC inductive load, 1000W lamp load) to prevent damage or fire.
- **Environmental Conditions:** Operate the timer within the specified temperature range (-10°C to +55°C). Avoid exposure to moisture or extreme temperatures.

## 3. Product Specifications

| Feature | Specification |
|---|---|
| Item No. | SUL181H |
| Operating Voltage | AC 110V/220V/240V 50-60Hz |
| Power Consumption | 2.5VA |
| Contact Capacity (Resistive Load) | 16A/250VAC (cosΦ=1) |
| Contact Capacity (Inductive Load) | 3A/250VAC (cosΦ=0.6) |
| Contact Capacity (Lamp Load) | 1000W |
| Contact Resistance | ≤50MΩ |
| Insulation Resistance | ≥100MΩ |
| Operating Temperature | -10°C to +55°C |
| Accuracy | ≤2S/day at 25°C |
| Full Timing Range | 24 hours |
| Minimum Setting Unit | 30 minutes |
| Setup Times | 48 times (30 minutes/time) |
| Working Reserve Time (Battery) | 150 hours (after 24 hours recharging) |
| Dimensions (L*W*H) | 110mm * 54mm * 65mm |
| Weight | 196g |
| Installing Mode | DIN rail mounting |

## 4. Setup and Installation

### 4.1 DIN Rail Mounting

The SUL181H timer is designed for standard 35mm DIN rail mounting. Ensure the DIN rail is securely installed in an appropriate electrical enclosure.




*Figure 2: Illustration of DIN rail assembly. The image shows the SUL181H timer (left) and SUL181D timer (right) designed for easy installation onto a 35mm DIN rail, ideal for household use.*

## 4.2 Wiring Instructions

**WARNING: Disconnect power before performing any wiring.** Refer to the wiring diagram below and ensure all connections are secure and comply with local electrical codes.




*Figure 3: Wiring diagram for the SUL181H timer. The diagram illustrates the connection points for power input (L, N) and load output (terminals 1, 2, 3, 4, 5, 6, 7, 8, with 1-2 and 3-4 being normally closed/open contacts, and 5-6-7-8 for motor connections). Ensure correct phase and neutral connections.*

- Connect the live wire (L) and neutral wire (N) of your power supply to the corresponding input terminals on the timer.
- Connect your load (e.g., pump, light) to the output terminals. The SUL181H typically uses terminals for switching a single circuit. Refer to the specific terminal markings on your device for exact connections.
- Ensure all terminal screws are tightened to prevent loose connections and potential hazards.

## 5. Operating Instructions

### 5.1 Setting the Current Time

1. Rotate the central dial clockwise until the current time aligns with the small arrow indicator on the timer's face. The dial is marked with a 24-hour format.
2. The timer has a built-in battery that provides a power reserve of approximately 150 hours after 24 hours of initial charging. This maintains timekeeping during power outages.


TAXNELE
SU . 181 h
230V/45-60 Hz
16(4) 250~
R 150h
CE
4 5 6 7
M
1 2 3 8
Quartz

*Figure 4: Close-up view of the SUL181H timer's 24-hour dial. The dial features numbered segments for setting ON/OFF times, with a minimum setting unit of 30 minutes. The central 'Quartz' mechanism ensures accurate timekeeping.*

## 5.2 Programming ON/OFF Times

The SUL181H timer allows for up to 48 ON/OFF programs within a 24-hour cycle, with a minimum setting interval of 30 minutes.

1. Identify the small segments around the outer edge of the dial. Each segment represents 30 minutes.
2. To set an "ON" period, push the corresponding segments outwards.
3. To set an "OFF" period, leave the corresponding segments in their inward position.
4. For example, to turn a device ON from 6:00 AM to 8:00 AM, push out the segments corresponding to 6, 6:30, 7, and 7:30.




*Figure 5: Illustration of the 24-hour cycle timing feature. The image highlights the 30-minute minimum setting for the SUL181H model, demonstrating how segments are pushed out for programmed ON times.*

## 5.3 Manual Override Switch

The SUL181H includes a manual override switch, typically located on the side or front of the timer. This switch allows you to temporarily override the programmed settings:

- **AUTO:** The timer operates according to the programmed ON/OFF settings.
- **ON:** The connected appliance remains continuously ON, regardless of programmed settings.
- **OFF:** The connected appliance remains continuously OFF, regardless of programmed settings.

Remember to return the switch to the "AUTO" position for programmed operation.

## 6. Key Features

- **Programmable Control:** Set up to 48 ON/OFF programs within a 24-hour cycle.
- **Energy Saving:** Automate appliance operation to avoid peak power times and conserve energy.
- **Stable Performance:** Utilizes a synchronous pulse motor for reliable and accurate timing.
- **Power Off Memory:** Built-in battery provides up to 150 hours of power reserve to maintain time settings during power interruptions.
- **DIN Rail Mounting:** Easy installation into standard electrical panels.




*Figure 6: Visual representation of key features including safety, time accuracy, power off memory, built-in battery, long mechanical life, and 24-hour control.*




*Figure 7: This image highlights the "Long Battery Life" feature, indicating a built-in battery with a backup power of 100 hours (note: product description states 150 hours, use 150 hours for consistency). This ensures the timer maintains its settings during power outages.*

## 7. Maintenance

- **Cleaning:** Periodically wipe the timer's exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly check for any signs of damage, loose wiring, or overheating. If any issues are observed, disconnect power and consult a qualified electrician.
- **Battery:** The built-in battery is designed for long-term use and typically does not require replacement. It recharges automatically when the timer is powered.

## 8. Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|

| Problem | Possible Cause | Solution |
|---|---|---|
| Timer not operating / No power | No power supply; Loose wiring; Incorrect voltage. | Check power source; Verify wiring connections; Ensure correct operating voltage. |
| Appliance not switching ON/OFF as programmed | Incorrect time setting; Program segments not set correctly; Manual override switch in wrong position; Faulty load connection. | Adjust current time; Ensure program segments are pushed out for ON times; Set manual override to "AUTO"; Check load wiring. |
| Timer losing time during power outages | Internal battery not fully charged or faulty. | Allow timer to remain powered for 24 hours to fully charge the internal battery. If issue persists, contact support. |
| Timer making unusual noises | Internal mechanical issue. | Disconnect power immediately and contact customer support. Do not attempt to repair. |

## 9. Warranty and Support

For warranty information or technical support, please refer to the documentation provided with your purchase or contact TAXNELE customer service through the retailer where the product was acquired. Keep your purchase receipt as proof of purchase.

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