GODIYMODULES Mod-CR12V-001

GODIYMODULES DC 12V 0.1s-99h Multifunction Digital Time Delay Relay User Manual

Model: Mod-CR12V-001

1. Introduction

This manual provides detailed instructions for the installation, operation, and configuration of the GODIYMODULES DC 12V 0.1s-99h Multifunction Digital Time Delay Relay. This versatile module offers precise timing control for various applications, featuring multiple operating modes and a wide time delay range.

2. Key Features

- Multi-function relay module with 8 distinct operating modes.
- Adjustable time delay range from 0.1 seconds to 99 hours.
- Digital display for clear time and mode indication.
- Operates on DC 12V power supply.
- Integrated smart relay switch functionality.

3. Specifications

Model Number	Mod-CR12V-001
Input Voltage	DC 12V
Time Range	0.1 seconds to 99 hours
Relay Contact Rating	10A 250VAC / 10A 125VAC / 10A 30VDC / 10A 28VDC
Dimensions	Approximately 3 x 1.5 x 0.48 inches
Weight	Approximately 0.96 ounces

4. Product Overview

The time delay relay module features a compact design with clearly labeled terminals and control buttons. It includes a digital display for time and mode settings, a relay, and input/output terminals.

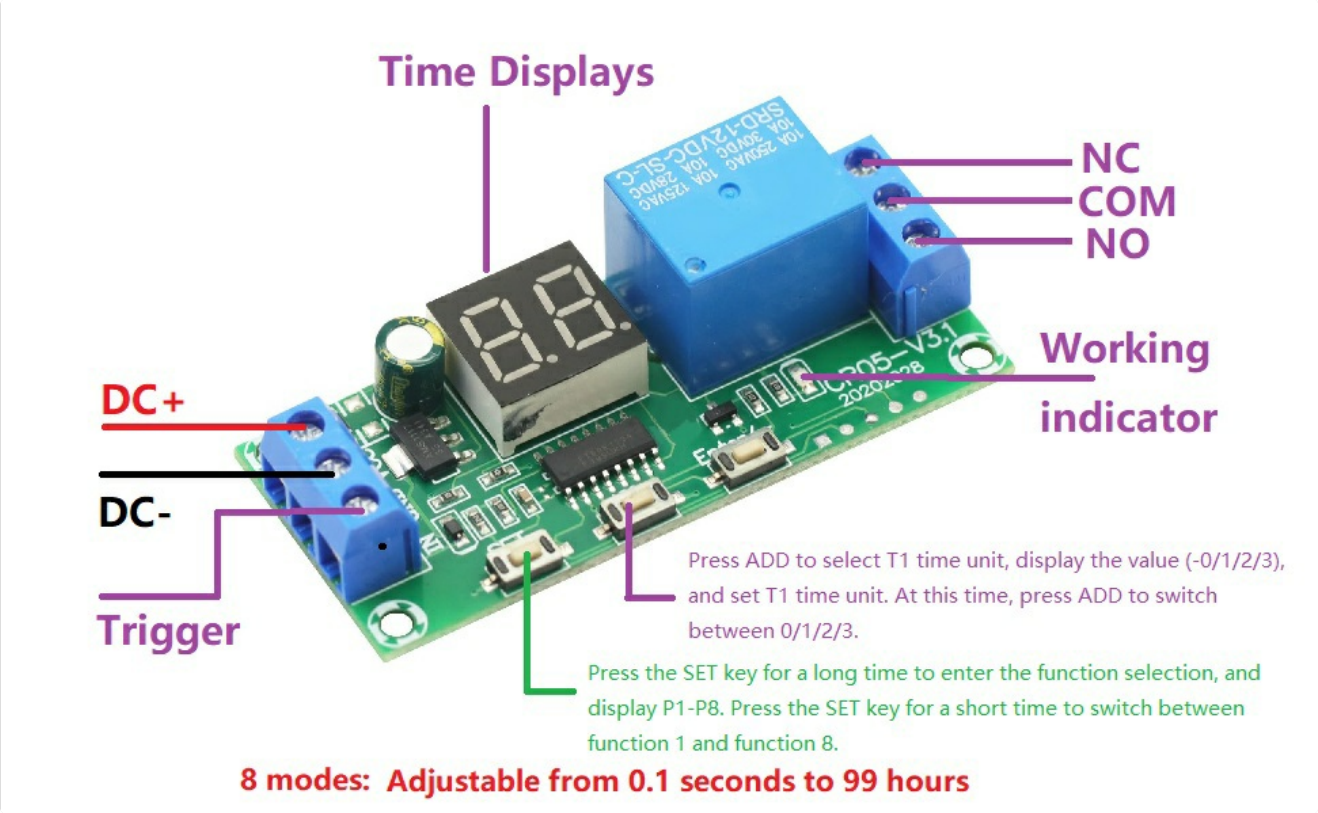


Figure 4.1: Front view of the time delay relay module with key components labeled. This image shows the digital display, control buttons (SET, ADD, Enter), input terminals (IN, GND, VCC), and relay output terminals (NC, COM, NO).

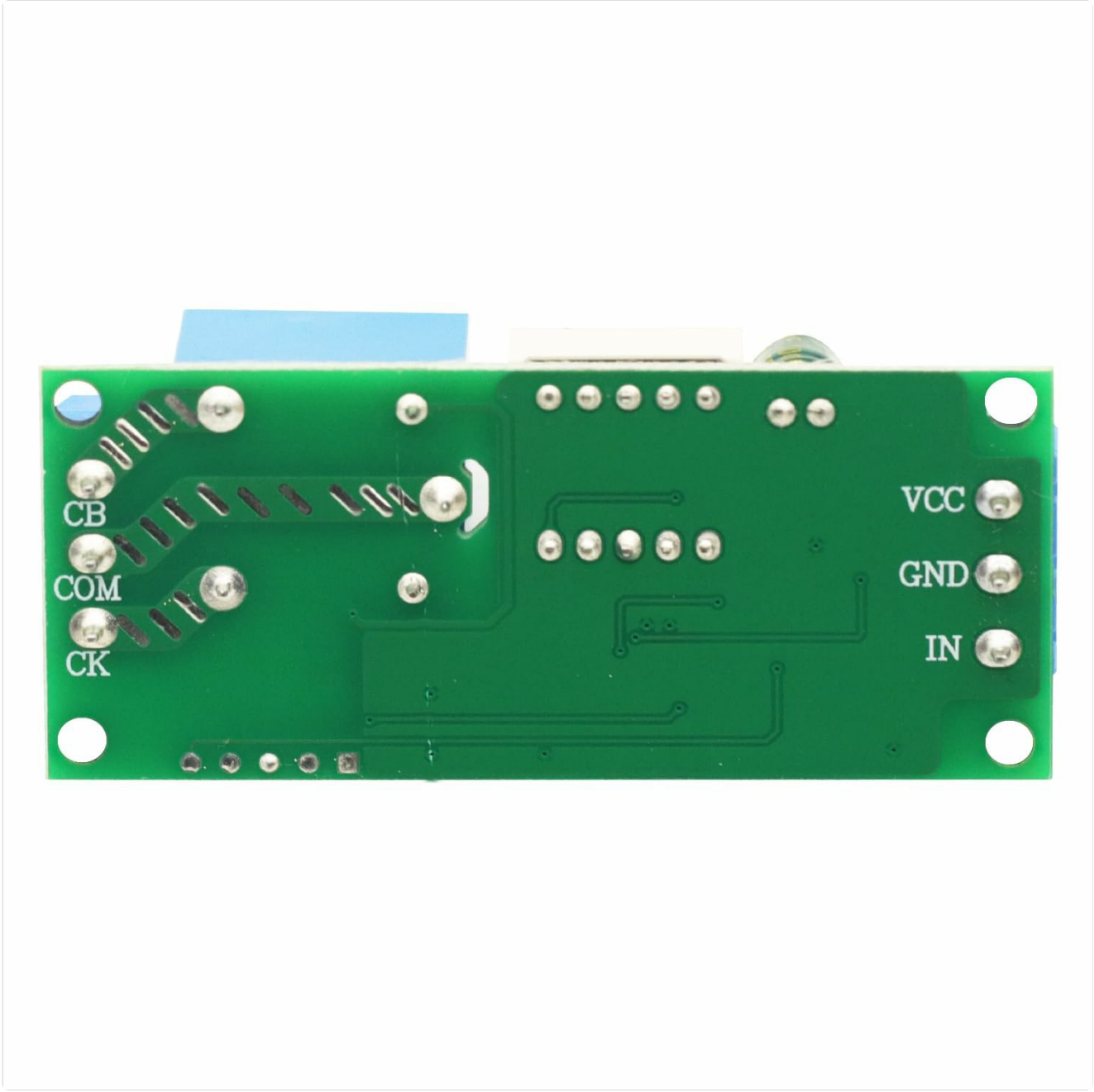


Figure 4.2: Back view of the time delay relay module, showing the solder points and circuit board layout.

5. Setup and Wiring

Proper wiring is essential for the safe and correct operation of the module. Ensure all connections are secure before applying power.

5.1. Common Wiring Diagram (Shared DC Power Supply)

This diagram illustrates how to connect the module and an equipment load when both share a common DC power supply.

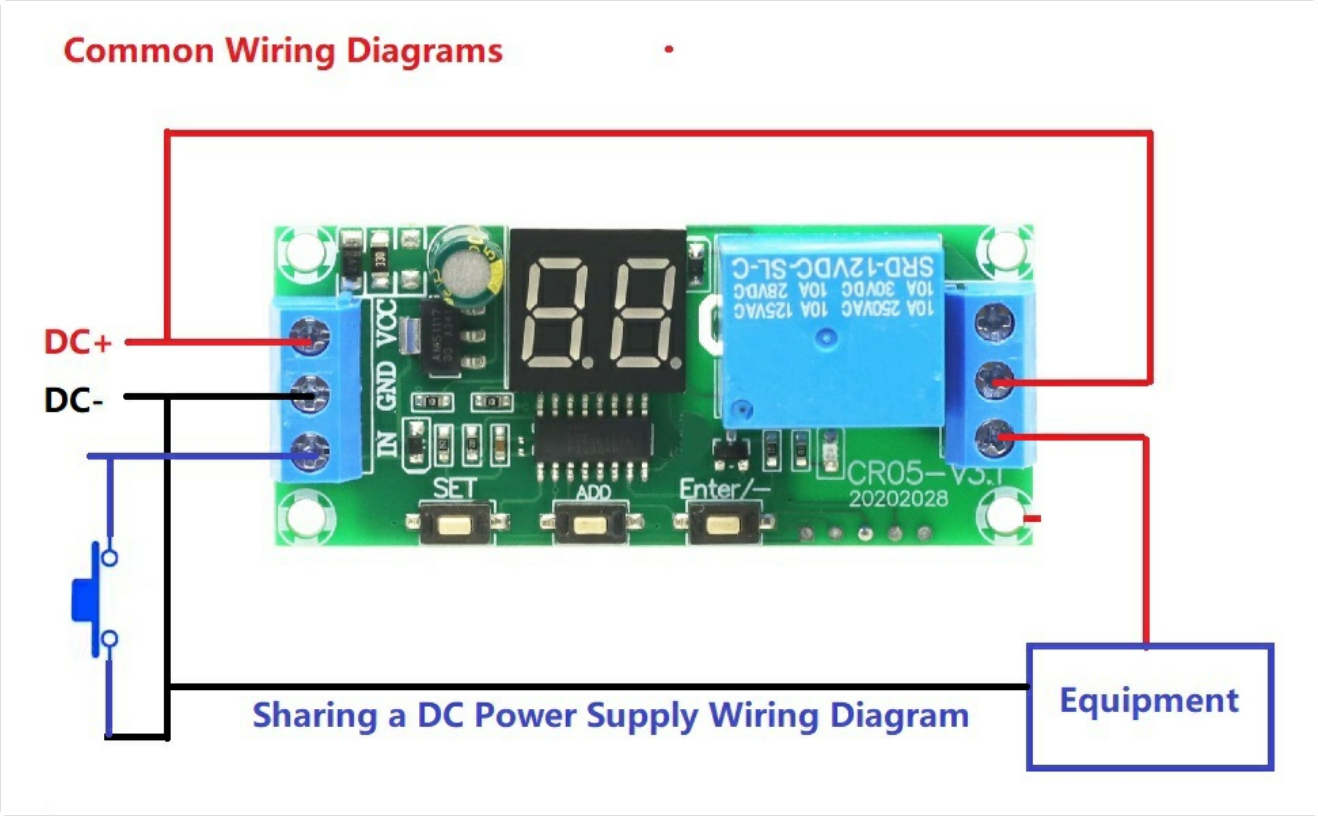


Figure 5.1: Wiring diagram showing the module connected to a DC power supply and an equipment load. DC+ and DC- from the power supply connect to the module's VCC and GND terminals, respectively. The trigger input is connected to the IN terminal. The equipment is connected to the relay's COM and NO (Normally Open) terminals, with the other side of the equipment connected to DC+.

5.2. Module Control AC Load Wiring Diagram

This diagram shows how to use the module to control an AC load, such as a 220V device. Note that the module itself is powered by DC 12V, but its relay can switch AC power.

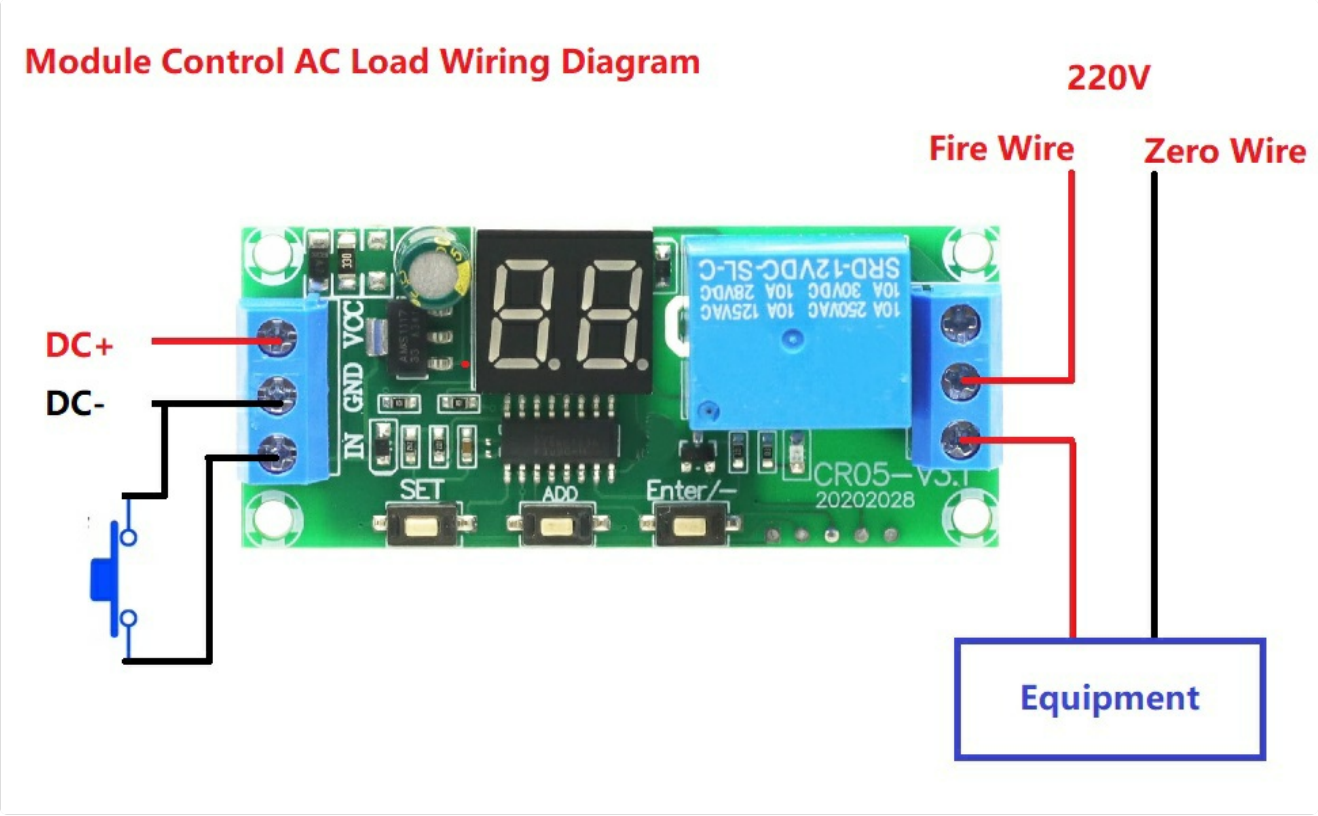


Figure 5.2: Wiring diagram for controlling an AC load. The module is powered by DC 12V (DC+ to VCC, DC- to GND). The trigger

input connects to IN. The AC load (e.g., 220V equipment) is connected to the relay's COM and NO terminals, with the AC "Fire Wire" connected to one relay terminal and the "Zero Wire" connected to the other side of the equipment.

6. Operating Instructions and Modes

The module offers 8 distinct operating modes, adjustable from 0.1 seconds to 99 hours. Use the control buttons (SET, ADD, Enter) to configure the desired mode and time parameters.

6.1. Setting Time Unit

To select the T1 time unit, press the **ADD** button. The display will show a value (0/1/2/3). Press **ADD** again to cycle between the units:

- **0:** Seconds (0.1s - 99.9s)
- **1:** Seconds (1s - 999s)
- **2:** Minutes (1min - 999min)
- **3:** Hours (1h - 99h)

6.2. Selecting Operating Mode

Press and hold the **SET** button for a long time to enter the function selection menu. The display will show P1-P8. Press the **SET** button briefly to switch between the 8 functions.

6.3. Detailed Mode Descriptions

P-1: delayed disconnection: energized relay is engaged, after a delay of T1, the relay is disconnected. P-1: Delayed Disconnect: the relay is activated and starts to delay, after the delay time T1, the relay is disconnected;

P-2: time-delayed absorption: energized to start the time-delay, after the time-delay T1, the relay is absorbed; give IN a low level, repeat the above function once

P-3: cycle on/off: energize the relay, after delay T1, the relay will disconnect, after delay T2, the relay will absorb, and then repeat the last state, the number of cycle can be adjustable 1-99 times or infinite cycle;

P-4: cyclic on-off: power on to start the delay, delay time T1, the relay is absorbed, delay time T2, the relay is disconnected, and then repeat the last state, the number of cycles can be adjustable 1-99 times or unlimited cycles

P-5: Trigger Delay Absorption: the relay will not be activated, after the trigger, the relay will be activated, after the delay T1, the relay will be disconnected, and give IN a low level, and then repeat the last state, the cycle times can be adjusted 1-99 times or infinite cycle. After the delay time T1, the relay will be disconnected and give IN a low level to repeat the above function;

P-6: Trigger time-delay disconnect: energized relay does not absorb, relay does not absorb after triggering, relay absorbs after time-delay T1; give IN a low level, repeat the above function once.

P-7: Trigger cycle on-off: energized relay does not absorb, relay absorbs after triggering, after delay T1, relay disconnects, after delay T2, relay absorbs, and then repeats the last state, the number of cycles can be adjusted from 1 to 99 or infinite cycles;

P-8: Trigger cycle on/off: energized relay does not absorb, relay does not absorb after triggering, relay absorbs after delay T1, relay absorbs after delay T2, relay absorbs, then repeats the last state, the cycle number is adjustable 1-99 times or infinite cycle;

Figure 6.1: Visual representation of the 8 operating modes (P-1 to P-8) with their respective descriptions and functionalities.

1. **P-1: Delayed Disconnection**
   The relay is activated upon power-on. After a delay of T1, the relay disconnects.
2. **P-2: Time-Delayed Absorption (Triggered)**
   Upon power-on, the time delay T1 starts. After T1, the relay engages. A low-level signal on the IN terminal will re-trigger this function once.

3. **P-3: Cyclic On/Off (Power-on Start)**
   Upon power-on, the relay engages. After delay T1, the relay disconnects. After delay T2, the relay engages. This cycle repeats. The number of cycles can be adjusted from 1 to 99 or set for an infinite cycle.
4. **P-4: Cyclic On-Off (Delay First, Power-on Start)**
   Upon power-on, delay T1 starts. After T1, the relay engages. After delay T2, the relay disconnects. This cycle repeats. The number of cycles can be adjusted from 1 to 99 or set for an infinite cycle.
5. **P-5: Trigger Delay Absorption (Repeatable)**
   The relay is initially inactive. After a trigger signal, the relay activates. After delay T1, the relay disconnects. A low-level signal on the IN terminal will re-trigger this function. The cycle times can be adjusted from 1 to 99 or set for an infinite cycle.
6. **P-6: Trigger Time-Delay Disconnect**
   The relay is initially inactive. Upon triggering, the relay engages. After delay T1, the relay disconnects. A low-level signal on the IN terminal will re-trigger this function once.
7. **P-7: Trigger Cycle On-Off (Repeatable)**
   The relay is initially inactive. Upon triggering, the relay engages. After delay T1, it disconnects. After delay T2, it engages. This cycle repeats. The number of cycles can be adjusted from 1 to 99 or set for an infinite cycle.
8. **P-8: Trigger Cycle On/Off (Delayed Start)**
   The relay is initially inactive. Upon triggering, delay T1 starts. After T1, the relay engages. After delay T2, the relay disconnects. This cycle repeats. The number of cycles can be adjusted from 1 to 99 or set for an infinite cycle.

7. Maintenance

The GODIYMODULES Time Delay Relay is designed for reliable operation with minimal maintenance. To ensure longevity and proper function:

- Keep the module clean and free from dust and moisture.
- Avoid exposing the module to extreme temperatures or direct sunlight.
- Periodically check all wiring connections to ensure they remain secure.
- Do not attempt to open or modify the module, as this may void any warranty and could lead to malfunction.

8. Troubleshooting

If you encounter issues with your time delay relay module, consider the following common troubleshooting steps:

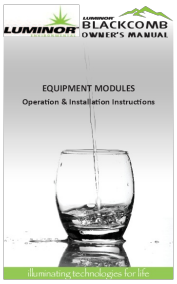
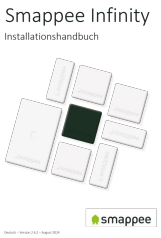
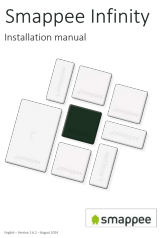
- **Module Not Powering On:** Verify that the DC 12V power supply is correctly connected to the VCC and GND terminals and is providing the correct voltage. Check for loose connections or damaged wires.
- **Relay Not Activating/Deactivating:**
  - Ensure the correct operating mode (P-1 to P-8) is selected.
  - Check the set time (T1, T2) and time unit.
  - If using a trigger, verify the trigger signal is being applied correctly to the IN terminal.
  - Confirm the load is correctly wired to the relay's COM, NO, or NC terminals.
- **Incorrect Timing:** Double-check the set time values and the selected time unit (seconds, minutes, hours).
- **Display Issues:** If the digital display is blank or showing erratic characters, check the power supply and connections.

If problems persist, contact customer support for further assistance.

9. Warranty and Support

For warranty information and technical support, please refer to the product packaging or contact GODIYMODULES customer service directly. Keep your purchase receipt as proof of purchase.

Related Documents - Mod-CR12V-001

	Getting Started with Your Time Timer MOD: User Guide Learn how to set up and use your Time Timer MOD. This guide covers battery installation, sound preferences, timer settings, and product care for your visual timer.
	Luminor Blackcomb Equipment Modules Owner's Manual: Operation and Installation This owner's manual provides detailed operation and installation instructions for Luminor Blackcomb equipment modules including Emulator (MOD-EMU), Remote Alarm (MOD-RAM), 4-20 mA (MOD-420), Solenoid (MOD-SOL), SHERPA Water Quality Monitor (MOD-SHERPA), and UV Concierge (MOD-APP).
	Smappee Infinity Installationshandbuch: Leitfaden zur Installation und Konfiguration des Energiemanagementsystems Dieses Installationshandbuch bietet detaillierte Anleitungen zur physischen Installation, Konfiguration und Validierung des Smappee Infinity Energiemanagementsystems, das Echtzeit-Energieüberwachung, IoT-Steuerung und Lastausgleich ermöglicht. Für zertifizierte Installateure.
	Smappee Infinity Installation Manual Comprehensive installation manual for the Smappee Infinity energy management system. Learn how to install, configure, and troubleshoot your Smappee Infinity for detailed energy monitoring and smart home control.

	[Line 6 DL4 Delay Modeler User Manual] Comprehensive user manual for the Line 6 DL4 Delay Modeler, detailing its features, functions, and operation, including various delay models, loop sampler, and connectivity options.
	[Smappee Infinity: Ihr Installationshandbuch für intelligentes Energiemanagement] Dieses Installationshandbuch führt Sie durch die Einrichtung und Konfiguration des Smappee Infinity Energiemanagementsystems, einschließlich Modulinstallation, Cloud-Konnektivität und Fehlerbehebung.