

BN-LINK U49

BN-LINK Pool Pump Timer Outdoor Mechanical Timer Box U49 Instruction Manual

Model: U49

INTRODUCTION

Thank you for choosing the BN-LINK U49 Outdoor Mechanical Timer Box. This heavy-duty 24-hour programmable timer is designed for controlling high-power electrical devices such as pool pumps, water heaters, fans, and spas. It features a robust, weatherproof design suitable for outdoor use and offers flexible programming options for daily repeat cycles.

IMPORTANT SAFETY INFORMATION

Please read and understand all instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury. This device must be installed by a qualified electrician in accordance with all local and national electrical codes.

- Always disconnect power at the circuit breaker before installing or servicing the timer.
- Ensure the timer's voltage and current ratings match your application.
- Do not immerse the timer in water.
- Keep the timer box securely closed to maintain its weatherproof rating.
- Do not attempt to repair or modify the timer. Contact customer support for assistance.

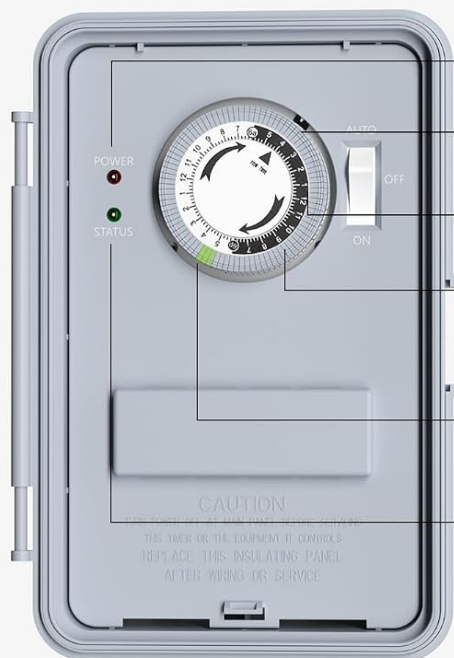
PRODUCT OVERVIEW

The BN-LINK U49 Mechanical Timer Box is built for durability and ease of use in outdoor environments. Key features include:

- **Heavy Duty Capacity:** 120 to 277 VAC, 40A Resistive, 1HP to 2HP.
- **24-Hour Daily Repeat Cycle:** Motorized timer switch with a real-time clock face.
- **Programmable Pins:** 96 pins (15-minute minimum interval) for up to 48 programs per day.
- **Manual Override:** Switch to "ON" for continuous operation or "OFF" to disable.
- **Superior Quality:** ETL Listed, conforms to UL 60730-1, certified to CSA E60730-1.

- **Weatherproof Design:** PC plastic shell with anti-oxidation and waterproof capabilities, operating from -40°F to 130°F.
- **Versatile Wiring:** Compatible with SPDT and DPDT switches, controlling 1 or 2 devices.

Versatile Outdoor



Power Indicator

Programs activated

Always off

Always on

15Min
Pins Down= On
Pins Up= Off



Load Indicator



40A Max

1HP 120VAC
2HP 208-240VAC
1HP 277VAC



Daily Repeat

UP to 48 ON/OFF
Programs Daily
96 Pins



Heavy Duty

Weatherproof for
Outdoor Use



ETL

Conforms to UL 60730-1
Certified to CSA E60730-1



Image: Overview of the BN-LINK U49 Mechanical Timer Box, highlighting its power indicator, program pins, manual switch positions (Always Off, Always On), 40A Max capacity, daily repeat function, 15-minute pin intervals, load indicator, heavy-duty weatherproof construction, and ETL certification.



Image: Detailed view of the BN-LINK U49 Mechanical Timer Box, emphasizing its heavy-duty 40A 2HP capacity, daily repeat function, indoor & outdoor suitability, and high power handling.

HEAVY DUTY POOL TIMER

Runs your outdoor devices freely

40A

Max

1HP

277VAC

1HP

120VAC

2HP

208-227VAC



Image: The BN-LINK U49 Mechanical Timer Box installed outdoors next to a pool pump, illustrating its heavy-duty application for pool systems with ratings of 40A Max, 1HP (120VAC), and 1HP-2HP (208-277VAC).

Waterproof for Outdoor

PC/ABS Plastic Shell Anti-oxidation and waterproof.



Image: The BN-LINK U49 Mechanical Timer Box shown in an outdoor environment near a pool, emphasizing its PC/ABS plastic shell for anti-oxidation and waterproof protection, suitable for temperatures from -40°F to 130°F, with simple mounting.

PERFECT FOR

Pool Pump • Fans • Water Heater • Air Conditioning Blowers • Lighting



Image: Collage showing various applications for the BN-LINK U49 Mechanical Timer Box, including pool pumps, fans, water heaters, air conditioning blowers, and outdoor lighting, with the timer box at the center.

SETUP AND INSTALLATION

Mounting

The BN-LINK U49 timer box is designed for easy wall mounting. Ensure the mounting location is secure and allows for proper wiring access while maintaining the weatherproof integrity of the unit.



Control Outdoor Lighting



Padlock Hole



Mounting Hole

Image: The BN-LINK U49 Mechanical Timer Box with its dimensions (8.78" H x 5.71" W x 2.68" D) and features like the padlock hole and mounting holes for secure installation.

Wiring Instructions

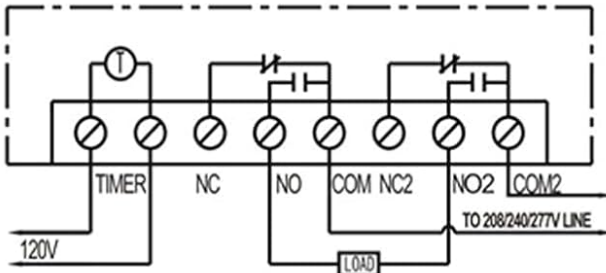
WARNING: All wiring must be performed by a qualified electrician. Disconnect power at the circuit breaker before beginning any wiring. Refer to the wiring diagrams provided inside the timer box and below for your specific application. The timer supports both Single Pole Double Throw (SPDT) and Double Pole Double Throw (DPDT) configurations.

WIRE CONNECTION DRAWINGS

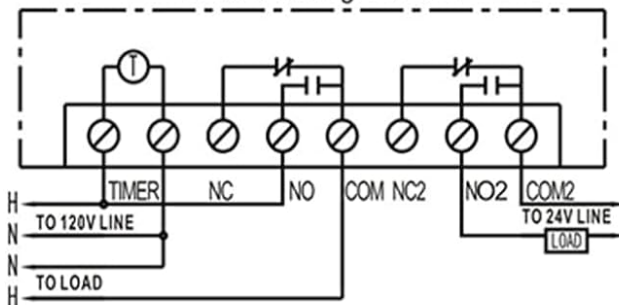


Typical Wiring Diagrams--DPDT

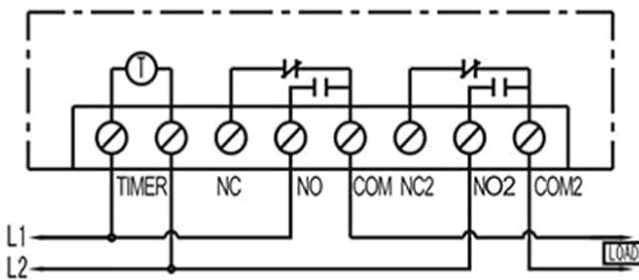
120V Timer, 208/240/277V Load, Double Break
Wired as Single Throw



120V Timer, 120V Load and 24V Load
Wired as Single Throw

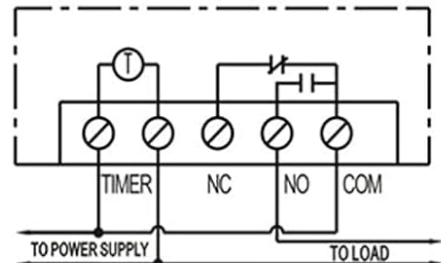


208/240/277V Timer, 208/240/277V Load, Double Break
Wired as Single Throw

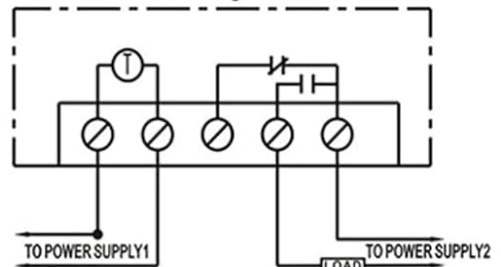


Typical Wiring Diagrams--SPDT

Timer and Load, Same Voltage
Wired as Single Throw



Timer and Load, Different Voltage
Wired as Single Throw



120V Two Speed Fan
Wired as Double Throw

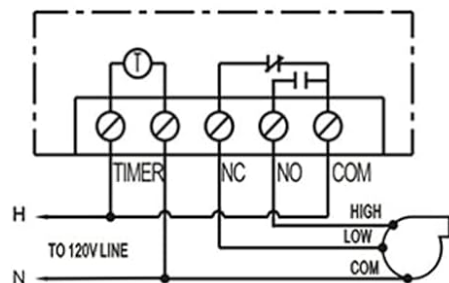


Image: Comprehensive wire connection diagrams for the BN-LINK U49 Mechanical Timer Box, showing configurations for DPDT (120V, 208/240/277V Load, Double Break; 120V Timer, 120V Load and 24V Load; 208/240/277V Timer, 208/240/277V Load, Double Break) and SPDT (Timer and Load, Same Voltage; Timer and Load, Different Voltage; 120V Two Speed Fan).



Image: Detailed DPDT wiring diagrams for the BN-LINK U49 Mechanical Timer Box, illustrating connections for 120V, 208/240/277V loads, and mixed voltage loads (120V timer with 24V load).



Image: Detailed SPDT wiring diagrams for the BN-LINK U49 Mechanical Timer Box, illustrating connections for same voltage loads, different voltage loads, and a 120V two-speed fan.

General Wiring Steps:

1. Open the timer box cover.
2. Identify the appropriate wiring diagram for your application (SPDT or DPDT, voltage, and load type).
3. Connect the incoming power supply wires to the designated terminals (e.g., TIMER, COM).
4. Connect the load wires (to your appliance) to the appropriate output terminals (e.g., NO1, NO2, COM1, COM2).
5. Ensure all connections are secure and properly insulated.
6. Close the timer box cover securely.

Note: Jumper wires and strain reliefs are typically required for installation and are not included with the timer. Ensure these are sourced and installed correctly.

Your browser does not support the video tag.

Video: An official BN-LINK video demonstrating the wiring process for the Outdoor Mechanical Timer Box. This video provides a visual guide to connecting power and load wires to the timer's terminals, including specific instructions for different wire types and ports.

OPERATING INSTRUCTIONS

Setting the Current Time

Rotate the dial clockwise until the arrow on the timer indicates the current time. The dial represents a 24-hour cycle.

Programming ON/OFF Times

1. The timer dial has 96 pins around its circumference, each representing a 15-minute interval.
2. To set an "ON" period, push the pins down for the desired time duration. Each pushed-down pin corresponds to 15 minutes of "ON" time.
3. To set an "OFF" period, leave the pins in the "UP" position for the desired time duration.
4. You can program up to 48 ON/OFF cycles per day.

Set Timer

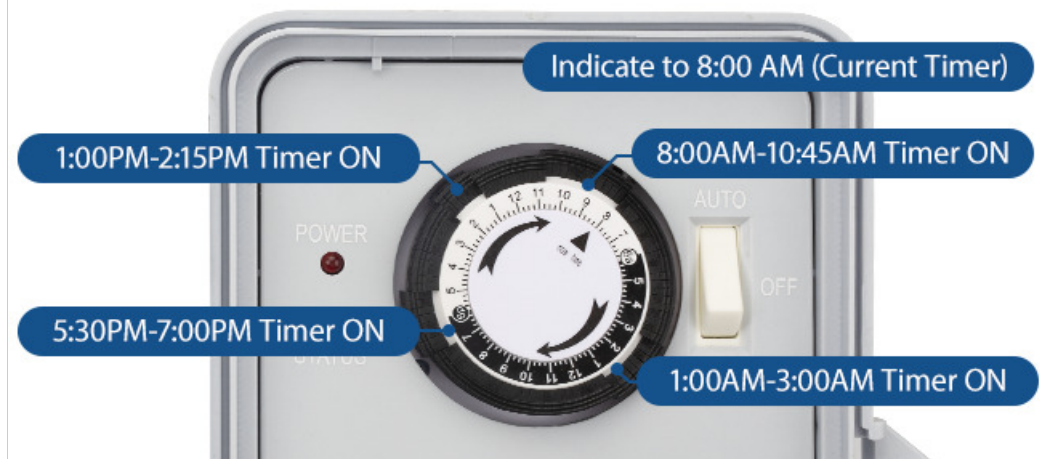


Image: Close-up of the timer dial, showing how to push down pins to set "ON" times. Examples include 1:00 PM-2:15 PM ON, 8:00 AM-10:45 AM ON, 5:30 PM-7:00 PM ON, and 1:00 AM-3:00 AM ON, with the current time indicator set to 8:00 AM.



Easy Mechanical Dial - Set & Forget

Image: The BN-LINK U49 Mechanical Timer Box showing the easy mechanical dial for setting times and the manual switch. The image illustrates the timer's

function with an example of an appliance turning OFF at 9:00 AM and ON at 8:00 PM.

Using the Manual Switch (Override)

The timer features a manual switch with three positions:

- **AUTO:** In this position, the timer will operate according to your programmed ON/OFF settings.
- **ON:** This position overrides the timer and keeps the connected device continuously ON.
- **OFF:** This position overrides the timer and keeps the connected device continuously OFF.

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



Image: Close-up of the manual switch on the timer, showing the "AUTO", "ON", and "OFF" positions for overriding or enabling programmed operation.

Power Failure

In the event of a power failure, the timer will stop. After power is restored, rotate the dial clockwise until the arrow indicates the current time to reset the timer's internal clock.

MAINTENANCE

The BN-LINK U49 Mechanical Timer Box requires minimal maintenance. To ensure optimal performance and longevity:

- Periodically inspect the timer box for any signs of damage, such as cracks in the casing or loose wiring.
- Keep the exterior of the timer clean by wiping it with a damp cloth. Do not use harsh chemicals or abrasive cleaners.
- Ensure the cover is always securely latched to maintain its weatherproof rating.
- If the timer is exposed to extreme weather conditions, check for any moisture ingress.

TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Device does not turn ON/OFF at programmed times.	• Manual switch is not in "AUTO" position. • Pins are not correctly pushed down/up for desired times. • Current time dial is not set correctly. • No power to the timer.	• Ensure the manual switch is set to "AUTO". • Verify that the pins are correctly set for ON (down) and OFF (up) periods. • Rotate the dial clockwise to align the arrow with the current time. • Check circuit breaker and wiring connections.
Timer is not running.	• No power supply to the timer. • Internal mechanism issue.	• Check power indicator light and circuit breaker. • If power is present and timer still doesn't run, contact customer support.
Device stays ON continuously.	• Manual switch is in "ON" position. • All pins are pushed down.	• Move the manual switch to "AUTO". • Ensure pins are in the "UP" position for desired OFF times.
Device stays OFF continuously.	• Manual switch is in "OFF" position. • All pins are in the "UP" position.	• Move the manual switch to "AUTO". • Ensure pins are pushed "DOWN" for desired ON times.

SPECIFICATIONS

Feature	Detail
Model Number	U49
Voltage Rating	120 VAC, 240 VAC, 277 VAC
Current Rating	40A Resistive Max
Horsepower (HP) Rating	1HP (120VAC), 2HP (208-277VAC)
Program Cycles	24-hour daily repeat
Minimum ON/OFF Time	15 minutes (per pin)
Maximum Programs	Up to 48 ON/OFF programs per day
Material	Polycarbonate (PC plastic shell)
Operating Temperature	-40°F to 130°F (-40°C to 54°C)
Dimensions (D x W x H)	7.44" x 9.06" x 3.19"
Certifications	ETL Listed, UL 60730-1, CSA E60730-1
UPC	810079586585

WARRANTY AND SUPPORT

Warranty

BN-LINK provides a 12-month warranty for this product from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

Customer Support

If you encounter any technical problems, have questions regarding installation, wiring, or operation, please do not hesitate to contact our customer support team. Our friendly customer service will reply to your correspondence within 24 hours. For support, please visit the BN-LINK website or refer to the contact information provided with your product packaging.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question