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Aramox Aramox4e3pbki0sr-13

Instruction Manual

Aramox Normally Open Time Relay Module

Model: Aramox4e3pbki0sr-13

1. PRODUCT OVERVIEW

The Aramox Normally Open Time Relay Module is a versatile and robust timing control device designed for various applications requiring precise time-based switching. Featuring a large LCD screen for easy monitoring, this module offers multiple operating modes and parameters that can be independently stored. It includes essential safety features such as reverse connection protection.

Key Features:

- **Large LCD Screen:** Provides clear and easy monitoring of running status, enhancing convenience and saving time.
- **Reverse Connection Protection:** Equipped with a key stop function (STOPKey) and protection against reverse polarity, ensuring the module is not damaged if connected incorrectly.
- **Sleep Mode:** Automatically enters sleep mode after 5 minutes of inactivity, turning off the display to conserve power. Can be reactivated with a single key press.
- **Wide Measuring Range:** Supports timing from 0 to 999 seconds (S), 0 to 999 minutes (min), and 0 to 999 hours (h).
- **Durable ABS Material:** Constructed from premium ABS material, offering scratch resistance, wear resistance, and overall robustness for a long lifespan.
- **Independent Parameter Storage:** Allows for independent storage of OP, CL, and LOP parameters.



Figure 1: Front and back view of the Aramox Normally Open Time Relay Module. The front features a large LCD display and control buttons, while the back shows the mounting tabs and a blank label area.

2. SPECIFICATIONS

Attribute	Value
Item Model Number	Aramox4e3pbki0sr-13
Material	ABS
Input Voltage	DC24V (This specific model)
Timing Range	0-999 seconds (S), 0-999 minutes (min), 0-999 hours (h)
Relay Type	Normally Open Relay (Passive output)
Package Dimensions	3.15 x 1.97 x 1.18 inches
Item Weight	1.73 ounces
Manufacturer	Aramox

3. SETUP AND WIRING

Before connecting the module, ensure the power source matches the module's voltage (DC24V for this model). Always disconnect power before making any connections to prevent electrical shock or damage to the device.

Wiring Diagram:

The module features a terminal block for power input and relay output. Refer to the diagram below for proper connections.



Figure 2: Close-up view of the blue terminal block on the module, showing screw terminals for wiring connections. Typically, these include power input (VCC, GND) and relay output (NO, COM).

1. **Power Connection:** Connect the DC24V power supply to the designated input terminals (usually marked VCC/+ and GND/-). Ensure correct polarity to utilize the reverse connection protection.
2. **Load Connection:** Connect the device or circuit you wish to control to the relay output terminals. This module has a normally open (NO) relay output. This means the relay contacts are open (no connection) when the relay is de-energized and close (make connection) when the relay is energized. The output is passive, meaning it does not supply power to the load; it acts as a switch within your circuit.
3. **Mounting:** Secure the module in a suitable enclosure or panel using its integrated mounting tabs.

Warning: Ensure all connections are secure and insulated to prevent short circuits. Incorrect wiring can damage the module or connected devices.

4. OPERATING INSTRUCTIONS

The module features an LCD display and four control buttons: UP (▲), DOWN (▼), SET (S), and RESET/RUN

(R).



Figure 3: Detailed view of the module's front panel, highlighting the digital display for ON/OFF times and the four control buttons: UP, SET, DOWN, and RESET/RUN.

4.1. Parameter Setting Mode:

Press and hold the **SET (S)** button for 2 seconds to enter the parameter setting mode. The display will show "P-X" (where X is the program number) and then cycle through the parameters: OP, CL, LOP, and time unit selection.

- **OP (On-time):** The duration for which the relay remains closed (active).
- **CL (Off-time):** The duration for which the relay remains open (inactive).
- **LOP (Loop Count):** The number of times the OP-CL cycle will repeat. "---" indicates infinite loop.

Setting Parameters:

1. In parameter setting mode, use the **UP (▲)** and **DOWN (▼)** buttons to adjust the value of the currently displayed parameter (OP, CL, or LOP).
2. Press the **SET (S)** button briefly to move to the next parameter.
3. After setting LOP, the module will display the time unit selection. Use **UP (▲)** and **DOWN (▼)** to select:
 - **d.d.d**: Seconds (0.00 to 99.9 seconds)
 - **d.d**: Minutes (0.0 to 99.9 minutes)
 - **d**: Hours (0 to 999 hours)
4. Press and hold **SET (S)** again for 2 seconds to save the settings and exit parameter mode.

4.2. Operating Modes (P-X):

The module supports various operating modes, typically selected by a short press of the **SET (S)** button when not in parameter setting mode. The specific modes (P-1 to P-4 or similar) define how OP, CL, and LOP are used.

- **P-1: Single Trigger Mode:**
 - P-1.1: Trigger ON, then OFF after OP time.
 - P-1.2: Trigger ON, then OFF after OP time, then wait for CL time before next trigger.
 - P-1.3: Trigger ON, then OFF after OP time, then wait for CL time, then repeat LOP times.
- **P-2: Cycle Mode:**
 - P-2.1: Continuous cycle of OP ON and CL OFF for LOP times.
- **P-3: Delay ON/OFF Mode:**
 - P-3.1: Power ON, wait CL time, then OP ON.
 - P-3.2: Power ON, wait CL time, then OP ON, then repeat LOP times.

Note: Specific mode behaviors may vary slightly. Refer to the detailed mode descriptions in the full product documentation if available.

4.3. Start/Stop Function:

The **RESET/RUN (R)** button serves as a start/stop switch. A short press will toggle the module's operation (start/pause/reset the current timing cycle).

4.4. Sleep Mode:

If no button is pressed for 5 minutes, the module will automatically enter sleep mode, turning off the display. Press any button to wake it up.

4.5. Restore Factory Settings:

To restore the module to its factory default settings, press and hold the **SET (S)** key while powering on the module. This will reset all parameters to their original values.

5. MAINTENANCE

To ensure the longevity and optimal performance of your Aramox Time Relay Module, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the module's exterior. Avoid using abrasive cleaners, solvents, or excessive moisture, which can damage the ABS material or internal components.
- **Environment:** Operate and store the module in a clean, dry environment, away from direct sunlight, extreme temperatures, high humidity, and corrosive gases.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion. Loose connections can lead to intermittent operation or damage.
- **Avoid Physical Impact:** Protect the module from drops or strong impacts, as this can damage the internal circuitry or the LCD screen.

6. TROUBLESHOOTING

If you encounter issues with your time relay module, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Module does not power on.	No power supply; incorrect voltage; reverse polarity; loose connection.	Check power source (DC24V); verify voltage and polarity; ensure all power connections are secure.
Display is off (sleep mode).	Module entered sleep mode due to inactivity.	Press any button to wake up the display.
Relay does not activate/deactivate as expected.	Incorrect parameter settings (OP, CL, LOP); wrong operating mode selected; load wiring issue.	Review and adjust OP, CL, LOP parameters; ensure correct operating mode is selected; check load connections and ensure the load is compatible with a passive relay output.
Module resets unexpectedly.	Unstable power supply; electrical interference.	Ensure a stable power supply; consider adding a filter if electrical noise is suspected.

If the problem persists after attempting these solutions, please contact customer support.

7. WARRANTY AND SUPPORT

This Aramox product is covered by a standard manufacturer's warranty against defects in materials and workmanship. The warranty period typically begins from the date of purchase. Please retain your proof of purchase for warranty claims.

For technical support, warranty inquiries, or further assistance, please contact Aramox customer service through the retailer where you purchased the product or visit the official Aramox store page on Amazon:

Visit the Aramox Store on Amazon

When contacting support, please provide your product model number (Aramox4e3pbki0sr-13) and a detailed description of the issue.

