

Idec GT3A-3AD24

Idec GT3A-3AD24 Timer Relay Instruction Manual

Model: GT3A-3AD24

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Idec GT3A-3AD24 Timer Relay. Please read this manual thoroughly before using the product and keep it for future reference. The Idec GT3A-3AD24 is a versatile delayed timer relay designed for industrial control applications. It features a Double Pole Double Throw (DPDT) contact configuration, a 5A current rating at 240VAC/24VDC, and operates on a 24VAC/VDC supply voltage. Its timing range is adjustable from 0.1 seconds to 180 hours, making it suitable for a wide array of timing requirements.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Improper installation or operation can result in serious injury or death. Always disconnect power before installing, wiring, or servicing this device.

- Installation and wiring must be performed by qualified personnel in accordance with all local and national electrical codes.
- Ensure the supply voltage matches the relay's specifications (24VAC/VDC).
- Do not exceed the contact ratings (5A at 240VAC/24VDC).
- Avoid installing in environments with excessive vibration, dust, moisture, or corrosive gases.
- Do not disassemble or modify the relay.

3. PRODUCT OVERVIEW

The GT3A-3AD24 is an 8-pin plug-in type timer relay. It provides precise time-delayed switching for various control circuits.

3.1 Key Features

- **Model:** GT3A-3AD24
- **Function:** Delayed Timer Relay
- **Contact Configuration:** DPDT (Double Pole Double Throw)

- **Contact Rating:** 5A at 240VAC / 24VDC
- **Supply Voltage:** 24VAC / 24VDC
- **Timing Range:** 0.1 seconds to 180 hours (adjustable)
- **Mounting:** 8-Pin Plug-in (requires compatible socket)

3.2 Product View



Figure 1: Front view of the Idec GT3A-3AD24 Timer Relay, showing the adjustment dials and indicator LEDs.

4. SETUP AND INSTALLATION

4.1 Mounting

The GT3A-3AD24 is designed for plug-in mounting into a compatible 8-pin relay socket (sold separately). Ensure the socket is securely mounted in a control panel or enclosure, away from excessive heat or vibration.

1. Select a suitable mounting location for the relay socket.
2. Secure the relay socket using appropriate fasteners.
3. Align the pins of the GT3A-3AD24 relay with the corresponding holes in the socket and gently push the relay into place until it is fully seated.

4.2 Wiring

IMPORTANT: Disconnect all power before performing any wiring. Refer to the wiring diagram typically found on the relay's housing or in the socket's documentation for precise pin assignments. The following describes a typical 8-pin DPDT timer relay wiring configuration:

- **Power Supply (Coil):** Connect the 24VAC/VDC supply to the designated coil terminals (e.g., pins 2 and 7 for many 8-pin relays). Ensure correct polarity if using DC.
- **Common Contacts:** The DPDT configuration provides two independent sets of contacts. Each set has a common terminal. Connect your load's power source to these common terminals (e.g., pins 1 and 8).
- **Normally Open (NO) Contacts:** When the timer is active and timed out, these contacts close. Connect the load to the NO terminals (e.g., pins 3 and 6) and the common terminals.
- **Normally Closed (NC) Contacts:** When the timer is inactive, these contacts are closed. They open when the timer is active and timed out. Connect the load to the NC terminals (e.g., pins 4 and 5) and the common terminals if an inverse operation is required.

Verify all connections are secure and correct before applying power.

5. OPERATING INSTRUCTIONS

The GT3A-3AD24 operates as a delayed timer relay. Upon application of power to the coil, the timing sequence begins. After the set time delay, the output contacts will switch state.

5.1 Setting the Time Delay

The timer relay typically features two rotary dials on its front face for setting the time delay:

- **Time Range Selector:** This dial selects the overall timing range (e.g., 0.1s-1s, 1s-10s, 1m-10m, 1h-10h, up to 180 hours).
- **Time Multiplier/Value Selector:** This dial sets the specific time value within the selected range (e.g., if the range is 0.1s-1s, this dial might set 0.5s).

To set the desired time delay:

1. Rotate the *Time Range Selector* to the appropriate range that encompasses your desired delay.
2. Rotate the *Time Multiplier/Value Selector* to the specific time value within that range.

For example, to set a 5-minute delay, you might select the "1m-10m" range and then set the multiplier to "5".

5.2 Operation Sequence

1. Apply 24VAC/VDC power to the relay coil.
2. The internal timer begins counting. During this period, the Normally Closed (NC) contacts remain closed, and Normally Open (NO) contacts remain open.
3. Upon completion of the set time delay, the output contacts switch: NC contacts open, and NO contacts close.
4. The contacts remain in this switched state as long as power is applied to the coil.
5. Removing power from the coil resets the timer, and the contacts return to their original (unenergized) state.

6. MAINTENANCE

The Idec GT3A-3AD24 Timer Relay is designed for long-term, reliable operation with minimal maintenance.

- **Periodic Inspection:** Regularly inspect the relay and its socket for any signs of damage, discoloration, loose connections, or excessive dust accumulation.
- **Cleaning:** If necessary, gently clean the exterior of the relay with a soft, dry cloth. Do not use solvents or abrasive cleaners. Ensure power is disconnected before cleaning.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent premature failure.

7. TROUBLESHOOTING

If the timer relay is not functioning as expected, consider the following common issues and solutions:

Problem	Possible Cause	Solution
Relay does not energize/time.	No power to coil, incorrect voltage, loose wiring, faulty socket.	Verify 24VAC/VDC supply to coil terminals. Check all wiring connections. Inspect socket for damage.
Contacts do not switch after time delay.	Incorrect time setting, faulty relay, load issue.	Re-check time range and value settings. Test relay with a known good load. Verify load circuit.

Problem	Possible Cause	Solution
Contacts switch immediately (no delay).	Incorrect wiring (e.g., connected to NO/NC directly instead of common), faulty relay.	Review wiring diagram carefully. Ensure connections are to the correct common, NO, and NC terminals.
Relay makes clicking sound but load doesn't operate.	Load circuit open, load faulty, contact overload.	Check continuity of load circuit. Test load independently. Ensure load current does not exceed 5A.

8. SPECIFICATIONS

Parameter	Value
Brand	Idec
Model Number	GT3A-3AD24
Part Number	GT3A-3AD24/timer
UPC	720158774126
Contact Configuration	DPDT (Double Pole Double Throw)
Contact Rating	5A at 240VAC / 24VDC
Supply Voltage (Vs)	24VAC / 24VDC
Timing Range	0.1 seconds - 180 hours
Mounting Type	8-Pin Plug-in (Socket Mt)
Item Weight	7 Pounds
Number of Items	1

9. WARRANTY AND SUPPORT

9.1 Warranty Information

This Idec GT3A-3AD24 Timer Relay comes with a **1-year warranty** from the date of purchase, covering defects in materials and workmanship under normal use. This warranty does not cover damage caused by improper installation, misuse, unauthorized modification, or external factors.

9.2 Technical Support

For technical assistance, troubleshooting beyond this manual, or warranty claims, please contact Idec Corporation customer support. Refer to the official Idec website for the most current contact information.

Manufacturer: IDEC Corporation