

Service First 2WCX3024A1000AA

Service First American Standard/Trane 2WCX3024A1000AA Time Delay Relay User Manual

Model: 2WCX3024A1000AA | Brand: Service First

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Service First American Standard/Trane 2WCX3024A1000AA OEM Replacement Time Delay Relay. This component is designed for use in various American Standard and Trane HVAC systems to manage specific timing sequences for system operations. Please read this manual thoroughly before attempting any installation or service.

2. PRODUCT OVERVIEW

The 2WCX3024A1000AA is an Original Equipment Manufacturer (OEM) replacement time delay relay, including a PC board, specifically engineered for American Standard and Trane HVAC units. It controls the timing of electrical circuits, ensuring components activate or deactivate after a predetermined delay, which is critical for the proper functioning and protection of HVAC equipment.



Image 1: The Service First Time Delay Relay, model RLY03081, shown in its original packaging. The packaging indicates it is a time delay relay with specific power and pilot pole ratings.

Key Features:

- OEM Unit Specific Component, commonly found in various Trane systems.
- Integrated PC board for precise timing control.
- Designed for 2-second on-delay and 45-second off-delay operations.
- Power Pole rated at 7 FLA, 36 RLA at 240VAC.
- Pilot Pole rated at 25 VA at 24 VAC.

3. SPECIFICATIONS

Detailed technical specifications for the 2WCX3024A1000AA Time Delay Relay are provided below:

- **Power Pole Rating:** 7 FLA, 36 RLA at 240VAC
- **Pilot Pole Rating:** 25 VA at 24 VAC
- **On-Delay:** 2 seconds
- **Off-Delay:** 45 seconds
- **Component Type:** Time Delay Relay (includes PC board)

General Product Information

Attribute	Value
Manufacturer	Service First
Model Number	2WCX3024A1000AA
Item Weight	1 Pound

4. INSTALLATION AND SETUP

WARNING: Installation should only be performed by a qualified HVAC technician. Disconnect all power to the HVAC system before beginning installation to prevent electrical shock or equipment damage.

This time delay relay is an electrical component. Incorrect installation can lead to system malfunction, damage, or personal injury. Refer to your specific HVAC unit's service manual for detailed wiring diagrams and safety procedures.



Image 2: An angled view of the time delay relay's circuit board, showing various components and connection terminals. Proper identification of these terminals is crucial for correct installation.

General Installation Steps (Consult HVAC Professional):

1. **Power Disconnection:** Ensure all electrical power to the HVAC unit is completely shut off at the main breaker.
2. **Access:** Locate and access the existing time delay relay within the HVAC system's control panel.
3. **Documentation:** Before disconnecting, carefully label all wires connected to the old relay. Take photographs for reference if necessary.
4. **Removal:** Disconnect the wires and carefully remove the old relay.
5. **Installation:** Mount the new Service First 2WCX3024A1000AA relay in the same location and connect the labeled wires to the corresponding terminals. Ensure all connections are secure.
6. **Verification:** Double-check all wiring against the system's wiring diagram.
7. **Power Restoration:** Restore power to the HVAC unit and test the system's operation to confirm the relay functions correctly.



Image 3: A side view of the time delay relay, highlighting the product label with specifications such as UL listing, voltage, and current ratings. This label is important for verifying the correct part.

5. OPERATION

The 2WCX3024A1000AA Time Delay Relay is designed to introduce specific delays into an electrical circuit. Upon receiving a signal, it will initiate a 2-second on-delay before activating the connected component. When the signal is removed, it will maintain the component's activation for an additional 45-second off-delay before deactivating. This precise timing helps protect sensitive components, manage airflow, or sequence operations within the HVAC system.



Image 4: A top-down perspective of the time delay relay's circuit board, showing the layout of the relay, capacitors, resistors, and terminal connections. This view can assist in identifying components and wiring points.

6. MAINTENANCE

Time delay relays are generally low-maintenance components. Regular HVAC system inspections by a qualified technician should include a visual check of the relay for any signs of wear, corrosion, or overheating. Ensure all electrical connections remain tight and free from debris. No user-serviceable parts are inside the sealed relay unit.

7. TROUBLESHOOTING

If the HVAC system exhibits incorrect timing sequences or fails to operate as expected, the time delay relay may be a contributing factor. Troubleshooting should be performed by a qualified technician.

Common Troubleshooting Steps:

- **No Operation:** Check for proper power supply to the relay and verify all connections are secure.
- **Incorrect Timing:** If the delays are not as specified (2-second on-delay, 45-second off-delay), the relay may be faulty and require replacement.
- **Intermittent Function:** Inspect for loose wiring, corrosion, or signs of internal damage to the relay.

Always disconnect power before inspecting or servicing electrical components.

8. COMPATIBILITY

The Service First 2WCX3024A1000AA Time Delay Relay is an OEM replacement part compatible with a range of American Standard and Trane HVAC systems. It is also a compatible replacement for the following part numbers:

- RLY3081

- RLY03081
- RLY-3081
- 57T02-001B1
- X13260269020
- 50PN59
- C800924P02
- AZ2100-1A-12DEF
- C800924
- 4352H

This relay is commonly found in systems including, but not limited to, models such as 2WCC3024A1000AA, 2WCX3024A1000AA, 4TCC3018A1000AA, 4TCX3018A1000AA, 4WCC3018A1000AA, 4WCX3018A1000AA, and many other American Standard and Trane units.



Image 5: A graphic representation of a stamp indicating 'TRANE OEM COMPONENT'. This signifies that the relay is an original equipment manufacturer part for Trane systems.

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Service First 2WCX3024A1000AA Time Delay Relay, please contact the vendor or manufacturer directly. Keep your purchase receipt and product information handy when seeking support.

Related Documents - 2WCX3024A1000AA

Table of Contents

1. Introduction	1
2. Components	2
3. Installation	3
4. Maintenance	4
5. Troubleshooting	5
6. Safety	6
7. Warranty	7
8. Index	8

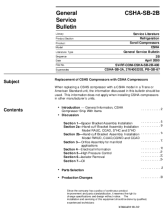
[ServiceFirst HVACR Parts Catalog - Comprehensive Component Listing](#)

Explore the extensive ServiceFirst catalog featuring a wide range of HVAC and refrigeration components, including belts, bearings, sheaves, fans, chemicals, compressors, controls, tools, and accessories from leading manufacturers like Trane, Nu-Calgon, Loctite, and Rectorseal.



[Reznor Relay Replacement Kit \(PN 259521\) Installation Guide](#)

Detailed installation instructions for the Reznor Relay Replacement Kit (PN 259521), designed to replace time delay relays (PN 46233, PN 259518) in Reznor power-vented HVAC units. Includes wiring diagrams and safety precautions.



[CSHA Compressor Replacement Guide for Trane & American Standard HVAC Systems](#)

Comprehensive service bulletin detailing the replacement of CSHS compressors with CSHA models in Trane and American Standard HVAC units. Covers installation, parts, electrical, and oiling procedures for technicians.



[Trane A5PA3042A Single Packaged Cooling Electric Heat Service Facts](#)

Service Facts document for the Trane A5PA3042A single packaged cooling and electric heat unit, including safety warnings, product specifications, sequence of operation, pressure curves, wiring diagrams, refrigerant circuits, troubleshooting, and important product information.



[Trane/American Standard Service Manual: Multi Position Air Handlers 2-5 Ton](#)

Comprehensive service manual for Trane and American Standard 2-5 Ton Multi Position Air Handlers, covering installation, safety, troubleshooting, and specifications for models 5TEM9C02AC21SA, 5TEM9D04AC31SA, 5TEM9D06AC31SA, and 5TEM9D07AC41SA.



[Service Facts: A5PH3036A1000A Single Packaged Heat Pump](#)

Comprehensive service facts, specifications, safety warnings, wiring diagrams, operational sequences, maintenance, and troubleshooting for the A5PH3036A1000A Single Packaged Heat Pump by Trane/American Standard.