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› [Trane](#) /

› [Trane CNT03728 Compressor Control Board Instruction Manual](#)

Trane CNT03728

Trane CNT03728 Compressor Control Board Instruction Manual

Model: CNT03728 | Brand: Trane

INTRODUCTION

This manual provides essential instructions for the installation, operation, and maintenance of the Trane CNT03728 Compressor Control Board. This board is designed for staging dual compressors in HVAC systems, ensuring efficient and reliable performance. Please read this manual thoroughly before proceeding with installation or operation.

SAFETY INFORMATION

WARNING: Electrical Shock Hazard

- Always disconnect power to the HVAC unit before installing, servicing, or removing the control board.
- Installation and servicing should only be performed by qualified HVAC technicians.
- Failure to follow these instructions could result in personal injury, death, or property damage.

Ensure all local and national electrical codes are followed during installation.

PRODUCT OVERVIEW

The Trane CNT03728 is an OEM (Original Equipment Manufacturer) ServiceFirst compressor control board specifically designed for dual-compressor staging applications in Trane and American Standard HVAC units.



Figure 1: Angled view of the Trane CNT03728 Compressor Control Board. This image displays the overall layout of the circuit board, including integrated circuits, capacitors, resistors, and two prominent relays, along with various connection points.



Figure 2: Top-down view of the Trane CNT03728 Compressor Control Board. This perspective clearly shows the labels for various components and terminal blocks, such as 'STATUS', 'Y1', 'Y2', 'ECON', 'FAN', 'ICM', and 'PWR', which are crucial for wiring and diagnostics.



Figure 3: Packaging for the Trane CNT03728 Compressor Control Board. The box is labeled 'ServiceFirst' and includes the part number CNT03728, indicating it is an official replacement component.

INSTALLATION INSTRUCTIONS

- 1. Power Disconnection:** Before beginning any work, ensure the main power supply to the HVAC unit is completely disconnected at the circuit breaker or fuse box. Verify with a voltmeter.
- 2. Access Control Panel:** Open the HVAC unit's control panel to access the existing compressor control board.
- 3. Document Wiring:** Carefully photograph or diagram the existing wiring connections to the old control board. Note the position and color of each wire. This step is critical for correct re-installation.
- 4. Disconnect Wires:** Disconnect all wires from the old control board.
- 5. Remove Old Board:** Unscrew or unclip the old control board from its mounting.
- 6. Install New Board:** Mount the new Trane CNT03728 control board in the same location as the old one, ensuring it is securely fastened.
- 7. Reconnect Wiring:** Using your documented wiring diagram, carefully reconnect all wires to the corresponding terminals on the new CNT03728 board. Double-check all connections for accuracy and tightness.
- 8. Close Panel:** Securely close the HVAC unit's control panel.
- 9. Restore Power:** Restore power to the HVAC unit.
- 10. Test Operation:** Initiate a test cycle to verify proper operation of the compressor staging and overall unit functionality. Monitor for any error codes or unusual behavior.

OPERATING PRINCIPLES

The Trane CNT03728 Compressor Control Board manages the operation of dual compressors within an HVAC system. Its primary function is to stage the compressors, meaning it activates them sequentially or simultaneously based on cooling demand, optimizing efficiency and system performance. This board receives signals from the thermostat and other system sensors to determine when and how to engage each compressor.

- **Single Compressor Operation:** For light cooling loads, the board will typically activate only one compressor (Stage 1).
- **Dual Compressor Operation:** When cooling demand increases, the board will activate the second compressor (Stage 2) to provide additional cooling capacity.
- **Protection Features:** The board incorporates protective features to prevent short cycling and ensure compressor longevity.

MAINTENANCE

The Trane CNT03728 Compressor Control Board is a sealed electronic component and generally requires no routine maintenance itself. However, ensuring the overall HVAC system is well-maintained is crucial for the board's longevity and proper function.

- **Annual System Check:** Have a qualified technician perform annual maintenance on your HVAC system.
- **Cleanliness:** Keep the control panel area clean and free from dust, debris, and moisture.
- **Wiring Integrity:** Periodically inspect wiring connections for any signs of corrosion, looseness, or damage.

TROUBLESHOOTING

Before attempting any troubleshooting, ensure power is disconnected. If you are not a qualified technician, contact a professional for assistance.

Symptom	Possible Cause	Action
Compressors not engaging	No power to board, faulty thermostat signal, wiring error, board failure.	Check power supply. Verify thermostat operation. Inspect wiring connections. If all else fails, board replacement may be necessary.
Only one compressor engaging	Insufficient cooling demand, faulty Stage 2 wiring, board failure.	Increase thermostat setpoint to demand more cooling. Check Stage 2 wiring. Consult a technician.
Error codes displayed on unit	System fault, sensor issue, board malfunction.	Refer to your HVAC unit's specific error code manual. Contact a qualified technician.

SPECIFICATIONS

- **Model Number:** CNT03728 (also known as CNT-3728)
- **Function:** Compressor Staging - Dual Compressor
- **Application:** Cooling
- **Compatibility:** American Standard / Trane OEM / Service First Component
- **Replaces Part Numbers:** CNT-3728, CNT3728, CNT03728, CNT2275, CNT-2275, CNT02275
- **Weight:** Approximately 2 Pounds
- **Commonly Found In:** TTZ036A100A0, TTZ036A100A1, TTZ036A100A2, TTZ048A100A0, TTZ048A100A1, TTZ060A100A0, TTZ060A100A1, 2TTZ9030A1000AA, 2TTZ9030A1000AB, 2TTZ9030B1000AA, 2TTZ9030B1000BA, 2TTZ9036A1000AA, 2TTZ9036A1000AB, 2TTZ9036B1000AA, 2TTZ9036B1000BA, 2TTZ9048A1000AA, 2TTZ9048A1000AB,

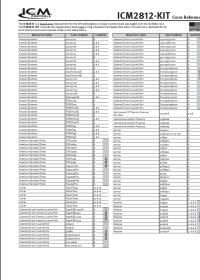
2TTZ9048B1000AA, 2TTZ9048B1000BA, 2TTZ9060A1000AA, 2TTZ9060A1000AB,
2TTZ9060B1000AA, 2TTZ9060B1000BA

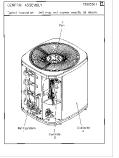
WARRANTY AND SUPPORT

For warranty information and technical support regarding the Trane CNT03728 Compressor Control Board, please refer to the documentation provided with your specific HVAC unit or contact Trane / American Standard customer service directly. As an OEM component, warranty terms are typically governed by the original equipment manufacturer.

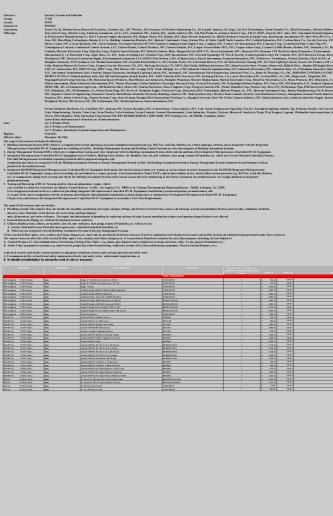
For professional assistance with installation, troubleshooting, or repair, it is recommended to contact a certified HVAC technician.

Related Documents - CNT03728

	<p>ICM2914 Gas Ignition Replacement Board Installation and Operation Guide</p> <p>Comprehensive guide for the ICM2914 Gas Ignition Replacement Board by ICM Controls, covering installation, operation, features, specifications, and troubleshooting for HVAC systems.</p>
	<p>White-Rodgers 50A65-5165 Integrated Furnace Control Installation Instructions</p> <p>Comprehensive installation, operation, and troubleshooting guide for the White-Rodgers 50A65-5165 Integrated Furnace Control. Covers specifications, wiring diagrams, safety precautions, and diagnostic features for HVAC systems.</p>
	<p>CSHA Compressor Replacement Guide for Trane & American Standard HVAC Systems</p> <p>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.</p>
	<p>ICM2812-KIT Universal Replacement Furnace Control Board Cross Reference</p> <p>A comprehensive cross-reference guide for the ICM2812-KIT universal replacement furnace control board, detailing compatible part numbers and harness types for various manufacturers including Amana, Goodman, Coleman, Evcon, Lennox, Trane, Rheem, and White-Rodgers.</p>

 <p>Upflow/Downflow Horizontal Right or Left Gas-Fired Furnace XL 80 TUD2/TDD2 PUB. NO. 22-1629-14</p>	<p>Trane XL 80 Upflow/Downflow Horizontal Gas-Fired Furnace: Specifications and Features Comprehensive guide to Trane XL 80 series gas-fired furnaces (TUD2 and TDD2 models), detailing features, performance data, electrical specifications, and dimensions for upflow, downflow, and horizontal installations.</p>
	<p>Trane 4TTR3036G1000NB Air Conditioner Parts List and Diagrams Comprehensive parts list and exploded view diagrams for the Trane 4TTR3036G1000NB outdoor air conditioning unit, detailing components for refrigeration, fan, controls, and cabinetry. Includes model nomenclature and optional accessories.</p>

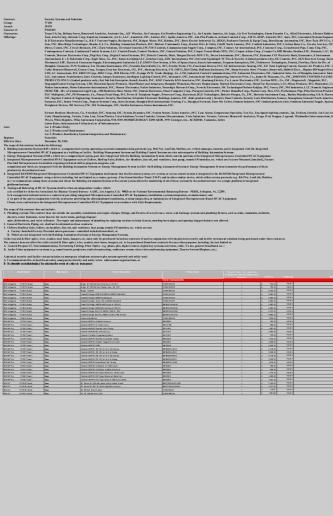
Documents - Trane – CNT03728


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[Trane Building Automation System \(BAS\) and HVAC Components Price List](#)

Comprehensive price list for Trane Building Automation Systems (BAS), HVAC equipment, and related components, including controllers, sensors, chillers, air handlers, and accessories. Details product codes, model numbers, and pricing for commercial and industrial applications.

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[\[pdf\] Price List](#)

Current Trane OGS Price List Jennifer Sanford 4PRO CCP RJ12 to Cable 3591 4260 1 55 00 \$ 50 00%
\$27 BAS Tracker PC182 VariTrac Binary Input Controller X13650576010 984 purchase prices
7720120191PL 4pro file c37bb |||

Contract: Group: Award: Contract #: Contractor: Offerings: Security Systems and Solutions 77201 201 ... CNT03601 CNT03603 CNT03605 CNT03654 CNT03665 CNT03666 CNT03670 CNT03671 CNT03688 CNT03690 CNT03691 **CNT03728** CNT03740 CNT03748 CNT03755 CNT03774 CNT03775 CNT03776 CNT03780 CNT03781 CNT03782 CNT03783 C...

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 **TRANE**

Trane A Division of
Ingersoll Rand Inc. 2300
CityGate Drive Columbus OH 43219
Phone: 614-473-3500
Fax: 614-473-3501

STS DETAILS FOR TRANE COLUMBUS, TOLEDO, and CINCINNATI OFFICES

BASIC ORDER LIMITATIONS

Minimum: \$85.00
Maximum: \$200.00 - Agencies should contact State Purchasing when they expect to exceed the Maximum Order Limitation (MOL).

Price Schedule

a. REPAIRS PRICE
Trane will service all brands of heating, ventilating, and air conditioning (HVAC) equipment and related building services.

a. Labor rates are as follows:

TYPE OF SERVICE	STS Rate	Travel Charges (per Service Call)
• Regular Home, Marine, Factory 7:30-4PM		Franklin County/Greater Cincinnati, Toledo: \$60.00 round trip VAN Outside Franklin County/65 mi. Cincinnati, Toledo: \$8.40 per mile round trip
• Overtime and Saturdays: Time and 1/2		
• Sundays & Holidays: Double Time		

HVAC Project Management

Columbus	\$115.00
Cincinnati	\$115.00
Toledo	\$135.00

HVAC DDC Control Installation

Columbus	\$115.00
Cincinnati	\$115.00
Toledo	\$120.00

HVAC DDC Control Service Technicians

Columbus	\$115.00
Cincinnati	\$115.00
Toledo	\$120.00

HVAC Mechanical Service Technicians

Columbus	\$88.00
Cincinnati	\$88.00
Toledo	\$98.00

b. Trane is legally authorized to repair the following brands of equipment:

Trane Mechanical Equipment

Ernest Cooling Towers	McNeil Cool
Fire Building Control	LMCO Separators
Industrial Control	LMCO
Industrial Control	Modular
Industrial Control	Proline
Caravan Computer Room Cooling Skid	Propak
Resistor	

Trane can provide service on all other brands and types of equipment as well.

Some of the other brands that can be services are, but are not limited to:

Carrier	EMC	Chase Brooks	McQuay
Trane	EMC	EMC	McQuay
FBI	Perma	Perma	Perma
Johnson Controls	Perma	Automated Logic	Perma

[\[pdf\] Catalog](#)

STS DETAILS FOR TRANE COLUMBUS TOLEDO and CINCINNATI OFFICES Trane A Division of Ingersoll Rand Inc 2300 CityGate Drive Columbus OH 43219 Phone 614 473 3500 FAX 3501 American Standard CAP00913 Catalog markssupply ca ASSETS DOCUMENTS ITEMS EN |||

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CNT03730 CNT03733 CNT03735 CNT03736 CNT03740 CNT03741 CNT03742 CNT03745 CNT03748 CNT03753 C...

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