



Installation Instructions

Replacement of VariTrane™ and VariTrac™ Control Modules

Models: VariTrane
VariTrac
BRD04939

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

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PART-SVN86B-EN

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- WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- CAUTION** Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
- NOTICE:** Indicates a situation that could result in equipment or property-damage only accidents.

Important: Environmental Concerns! Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFC.

Important: Responsible Refrigerant Practices! Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

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Revision History

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Board BRD02806 replaced by BRD04939.

Introduction

BRD04939 is the current replacement for several obsolete control modules used in VariTrane and VariTrac units. BRD04939 can be used in place of:

BRD00610	BRD00835	BRD01411
BRD00611	BRD00915	BRD01412
BRD00622	BRD00918	BRD01710
BRD00638	BRD00970	BRD02087
BRD00674	BRD00971	BRD02626
BRD00675	BRD01010	BRD02723
BRD00782	BRD01101	BRD02806

The terminal nomenclature remains constant throughout these boards, but the location of the terminals may change. See [Figure 1](#) for a typical wiring diagram of BRD04939.

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WARNING

Personal Protective Equipment Required!

Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards.

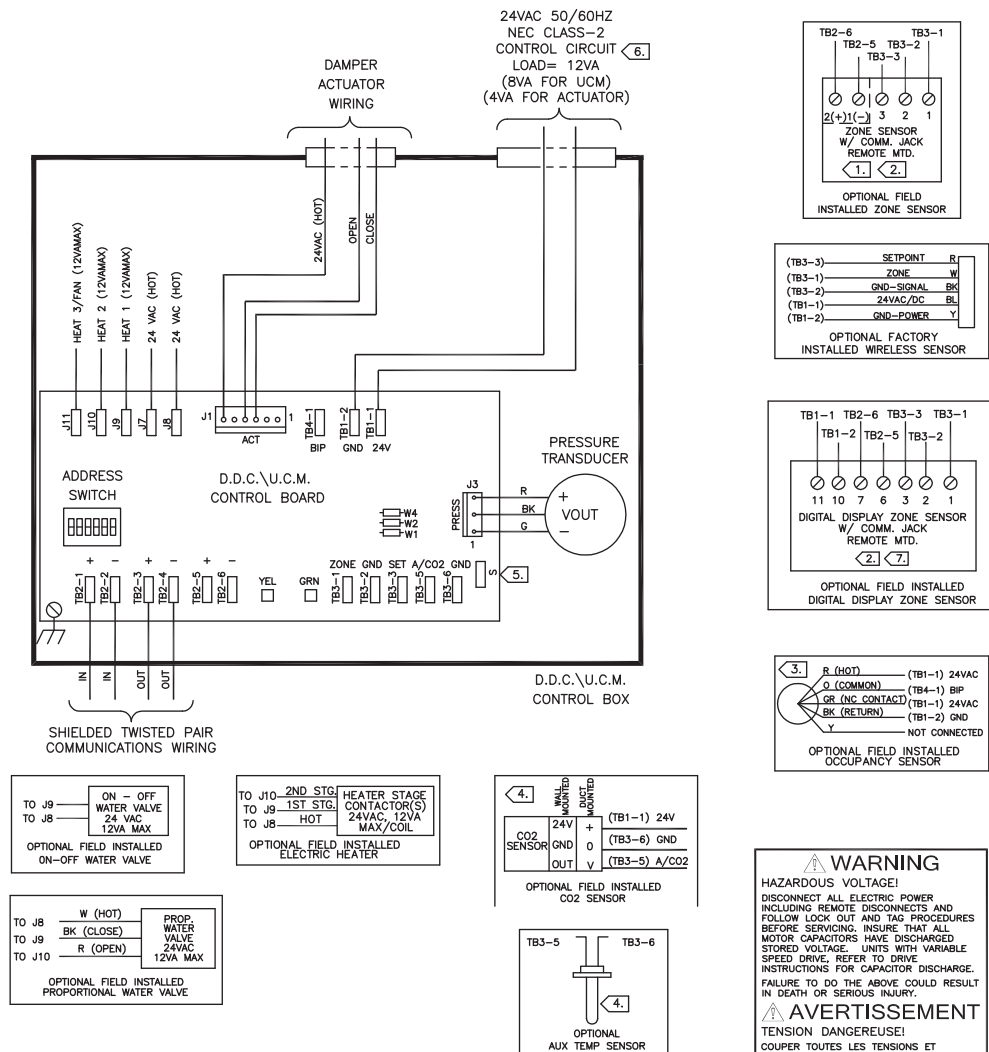
- Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Material Safety Data Sheets (MSDS)/ Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.

- When working with or around hazardous chemicals, ALWAYS refer to the appropriate MSDS/SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.

- If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.

Failure to follow instructions could result in death or serious injury.

Figure 1. Wiring diagram



NOTE:

1. ZONE SENSOR TERMINALS 1 (-) AND 2 (+) REQUIRE SHIELDED TWISTED PAIR WIRING FOR COMMUNICATIONS JACK EQUIPPED ZONE SENSOR OPTION.
2. NO ADDITIONAL WIRING REQUIRED FOR NIGHT SETBACK OVERRIDE (ON/CANCEL).
3. THE OPTIONAL BINARY INPUT CONNECTS BETWEEN TB4-1 (BIP) AND 24VAC (HOT). THE BINARY INPUT CAN BE RECONFIGURED AS AN OCCUPANCY INPUT VIA THE COMMUNICATIONS INTERFACE.
4. AS SHIPPED, THE AUX INPUT IS CONFIGURED AS AN AUX TEMP INPUT. THE AUX INPUT CAN BE RECONFIGURED AS A CO2 SENSOR INPUT VIA THE COMMUNICATIONS INTERFACE.
5. S TERMINAL NOT TO BE USED WITH VARITRANE. S INPUT IS USED IN VARITRAC 3 APPLICATION. IF S INPUT IS USED, NOTHING CAN BE CONNECTED TO ZONE (TB3-1) INPUT.
6. IF UNIT MOUNTED TRANSFORMER IS NOT PROVIDED, POLARITY FROM UNIT TO UNIT MUST BE MAINTAINED TO PREVENT PERMANENT DAMAGE TO CONTROL BOARD. IF ONE LEG OF 24VAC SUPPLY IS GROUNDED, THEN GROUND LEG MUST BE CONNECTED TO TB1-2.
7. DIGITAL DISPLAY ZONE SENSOR TERMINALS 6 AND 7 REQUIRE SHIELDED TWISTED PAIR WIRING FOR OPTIONAL USE OF COMMUNICATIONS JACK.

⚠ WARNING

HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER
INCLUDING REMOTE DISCONNECTS AND
FOLLOW LOCK OUT AND TAG PROCEDURES
BEFORE SERVICING. INSURE THAT ALL
MOTOR CAPACITORS HAVE DISCHARGED
STORED VOLTAGE. UNITS WITH VARIABLE
SPEED DRIVE, REFER TO DRIVE
INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE COULD RESULT
IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT

7) AVERTISSEMENT
TENSION DANGEREUSE!

COUPER TOUTES LES TENSIONS ET
OUVRIR LES SECTIONNEURS A DISTANCE,
PUIS SUIVRE LES PROCEDURES DE
VERROUILLAGE ET DES ETIQUETTES AVANT
TOUTE INTERVENTION. VERIFIER QUE TOUTS
LES CONDENSATEURS DES MOTEURS SONT
DECHARGES. DANS LE CAS D'UNITES
COMPORTANT DES ENTRAÎNEMENTS A
VITESSE VARIABLE, SE REPORTER AUX
INSTRUCTIONS D'ENTRAÎNEMENT POUR
DECHARGER LES CONDENSATEURS.

NE PAS RESPECTER CES MESURES DE
PRECAUTION PEUT ENTRAÎNER DES
BLESSURES GRAVES POUVANT ETRE
MORTELLES.

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DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON TRANSMISIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR.

EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.



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