Trane Commercial Controls
F50N02-820, 50N02A & B-820, 50E70-820
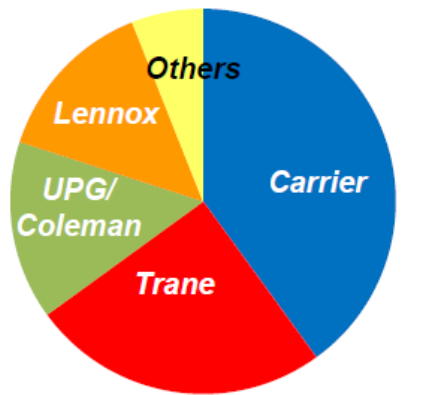# 2017 Launch

6/23/2017

EMERSON

The Target Market
Why We Are Launching Trane Commercial Products

Commercial Share of Market

Carrier & Trane have dominated the commercial market and have the largest installed base

- **Trane Has a Large Installed Base**
  - **Produced Units with *Electromechanical* Control Boards <u>Since 1990</u>**
  - **Produced Units with *Communicating* Control Boards <u>Since ~ 2002</u>**
- **We Have the Products as an OEM Supplier**
  - **Started with Fenwall, Texas Instruments**
  - **Moved to majority W-R, one UTEC SKU**
- **Expands W-R Presence Outside of Residential Split System Market**

Trane Commercial Basics
Three Product Platforms, Two Ignition Types

Impack™ *

1.5-5 TON
YCY, YCC, YCZ,
DCY, DCZ

Spark Ignition

* Note: This is also a residential product where package units are prevalent

Precedent™

3-10 TON
YSC, YHC

Spark Ignition

Voyager™

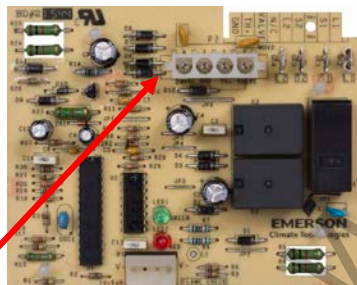12.5-25 TON YCD

27.5-50 TON YCD

HSI

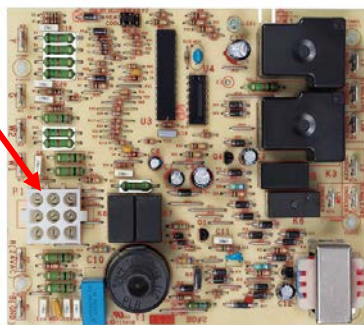# Trane Commercial Has Two Families Of Controls Electromechanical And ReliaTel™ Communicating

- The W-R Controls Being Released For 2017 Are All Electromechanical Family

- Plan Is To Follow-up With Communicating Boards in 2018 To Complete The Offering

2017 Launch

HSI & Spark

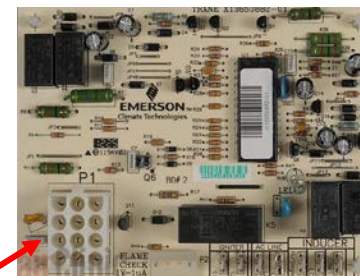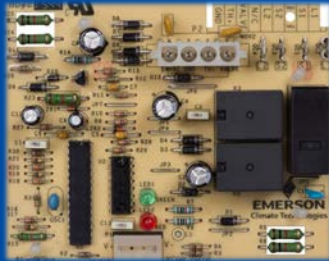**4-pin and 9-pin connectors**

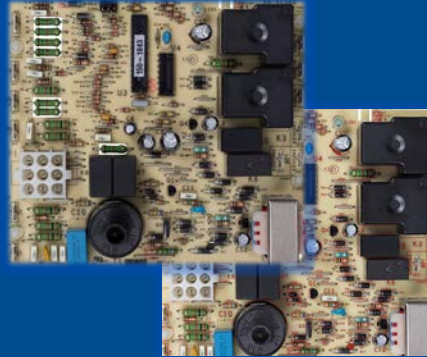**Future Launch**

HSI & Spark

All Comm boards have 12-pin connectors

Trane Rooftop / Package Unit Controls

COMMERCIAL

July 2017 First Launch

50E70-820

50N02A-820
50N02B-820

F50N02-820

Overview

- OEM Direct Replacement Boards for Trane Commercial Units from the Original OEM Supplier
- 50E70 Hot Surface Ignition
- 50N02A,B Direct Spark Ignition. Different Cooling Off Delay Timings
- F50N02 Accessory Adaptor Board and Harnesses for Spark Controls
- Thousands Installed Since Early 1990's

Features

- Easy to Install
- Full Color Boxes
- Complete Cross Reference on Box
- Instruction Sheet
- Fault Code Label, Accessory Parts to Meet or Exceed OEM Offering
- New Box Artwork to Communicate Product Positioning

Competition

W-R	ICM	HON
✔	X	X

50N02A-820 & 50N02B-820 Spark Ignition Controls
Impack™ and Precedent™ Product Lines

Cross Reference Replacement / Tableau de renvoi des remplacements

Trane	White-Rodgers
CNT01634 w/ Adapter Board	50N02-495-01
CNT01669 w/ Adapter Board	50N02-495-02
CNT02216 w/ Adapter Board	50N02A-820
CNT02217 w/ Adapter Board	
CNT03456	
CNT03457	
X13650873-01	
X13650874-01	

ID W-R "A" Version by BLACK Silkscreen

White-Rodgers™
Integrated Furnace Control
COMMERCIAL   **D** OEM Direct

50N02A-820 | Trane

Single or Two-Stage Applications

Direct Spark Ignition

80s Cool Off Delay

For Packaged Units

Trusted by **PROs**   1-Year Limited Warranty

EMERSON

Cross Reference Replacement / Tableau de renvoi des remplacements

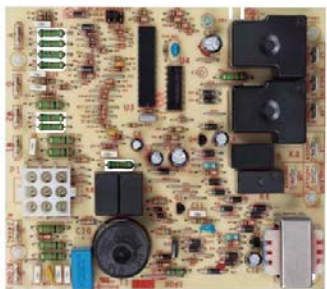| Trane	White-Rodgers
CNT02219 w/ Adapter Board	50N02B-820
CNT03458	
CNT04912	
CNT05135	
D674713P01	
X13650875-01	

ID W-R "B" Version by RED Silkscreen

White-Rodgers™
Integrated Furnace Control
COMMERCIAL   **D** OEM Direct

50N02B-820 | Trane

Single or Two-Stage Applications

Direct Spark Ignition

45s Cool Off Delay

For Packaged Units

Trusted by **PROs**   1-Year Limited Warranty

EMERSON

- Current <u>W-R</u> Production Control
- Current <u>UTEC</u> Production Control

Drop-in OEM Direct Replacement Boards

F50N02-820 Spark Ignition Adapter Board Accessory Replaces Trane's Service KIT06839

Cross Reference Replacement / Tableau de renvoi des remplacements

Trane	White-Rodgers
KIT06839	21D02-475-01
X13120662010	F50N02-820

White-Rodgers™
Furnace Adapter **Board**

COMMERCIAL

D OEM Direct

F50N02-820 | Trane

Used with 50N02A/ 50N02B Controls

Includes:
9 Pin to 9 Pin Harness
9 Pin to 12 Pin Harness

For Packaged Units

Trusted by **PROs**

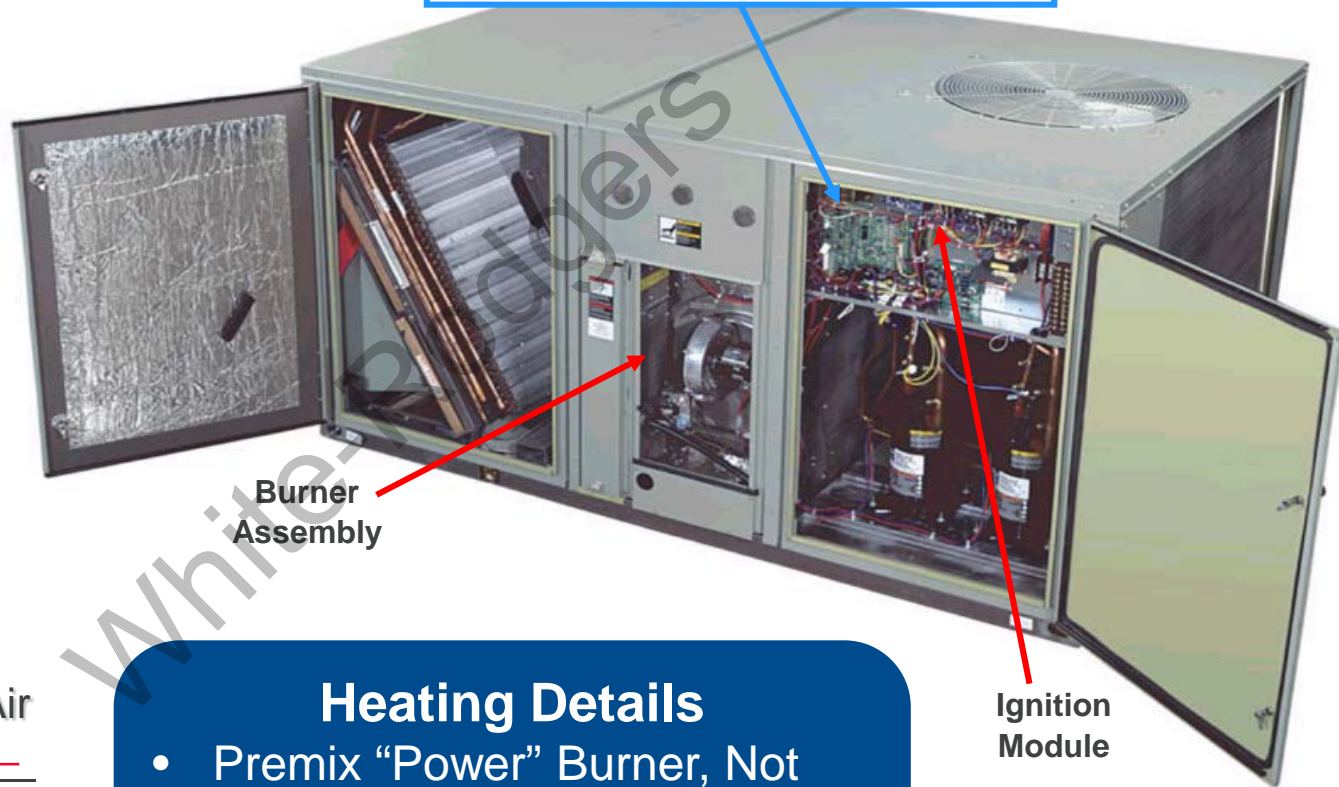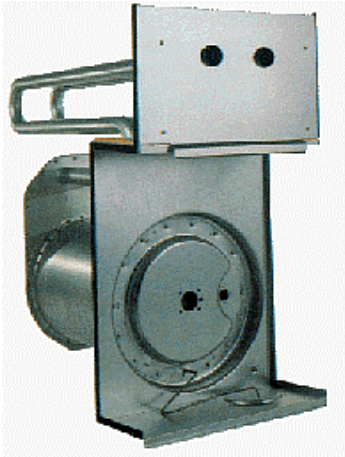**1-Year** Limited Warranty

EMERSON

- Initial production used a Texas Instruments Spark Module with mounting screws.
- The adapter mounts to the existing screw holes and converts to plastic stand-off mounting
- Newer and already converted units will not need the adapter. We DO NOT include with the control boards because Trane doesn't.
- Wiring harnesses adapt old system wiring to new control board pinouts
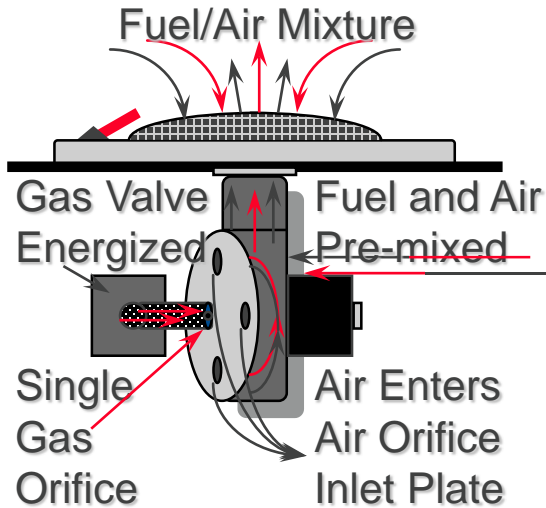
Original TI Control

50E70-820 Hot Surface Ignition Module
Voyager™ Product Line

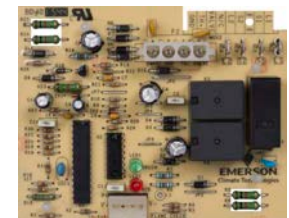Typical RTU with multiple boards. We are only supplying the ignition piece.

Burner Assembly

Ignition Module

Fuel/Air Mixture

Gas Valve Energized

Fuel and Air Pre-mixed

Single Gas Orifice

Air Enters Air Orifice Inlet Plate

Heating Details

- Premix "Power" Burner, Not Forced or Induced Draft
- Negative Pressure Gas Valve
- Drum & Tube Heat Exchanger
- 120VAC Hot Surface Ignitor

50E70-820 Hot Surface Ignition Module
Replaces Trane's Service KIT17852 For Voyager™

Flame Sense Test Header

- Initial production used a Fenwall HSI Module with mounting screws. It then went to a Texas Instruments standoff mount control.
- The included adapter mounts to the existing screw holes and converts to plastic stand-off mounting
- Newer and already converted units will not need the adapter. We include because Trane still does.
- Wiring adapter connects control to 24VAC transformer when needed

Original Fenwall Control

Drop-in OEM Direct Replacement Board

Two Excellent Training Videos On Voyager
Show & Explain Burner System and Controls Location

- Both Videos Credit David Harty

1. https://youtu.be/90bz5EhoHqA

  - Or Google "Trane Premix Burner Heat Exchanger Tips"

2. https://youtu.be/nVjugK3p5bo

  - Or Google "Trane Voyager Premix Burner Part 2"

Trane Commercial Controls
In Summary

- #2 Market Share Commercial Equipment OEM

- A Large, and Still Growing Installed Base Since 1990's

- Opportunity to Enter Commercial Market

- Direct Replacement Controls from the OEM Supplier

- ICM and Honeywell do not Offer