# **Controls Solutions to Fit Your Needs**

**Terminal Products** 





# **Trane Family of Terminal Products**

It's time to take another look at the terminal. As your partner, Trane® understands it takes more than a concept to design an effective HVAC system. Between cost and code compliance—not to mention comfort, acoustics and efficiency—the complicated priorities can be challenging to satisfy.

The Trane family of terminal products has been redesigned from the inside out, with innovative high-efficiency upgrades guaranteed to fulfill virtually any building's requirements without compromising your needs. Now, these terminal units come standard with an exclusive Trane electronically commutated motor (ECM), or you can upgrade to any one of the available terminal controllers. No matter the project, Trane has the controls to suit your design needs.

From chillers to compressors, the complete line of variable speed Trane HVAC solutions are designed to work together to deliver exceptional performance and value. These high-efficiency systems with flexible configurations can be the perfect fit for your building.



## Fan Coil/Cabinet Unit Heater

A Trane\* UniTrane\* fan coil is an in-room unit composed of a fan and chilled or hot water coils. Fan coil units are ideal for hotels, condominiums, dormitories and apartments. Trane\* Force-Flo\* cabinet heaters are high-capacity forced-air fan coil units for entryways and corridors in large office buildings, schools, hospitals and dormitories.



## **Unit Ventilators**

Trane unit ventilator operates on the same principles as the fan coil but is tailored specifically for schools with a sturdy institutional design and an integrated airside economizer.

Applications include schools, as they are an especially effective solution for classroom renovation projects.



#### **Blower Coils**

A Trane blower coil is an entry level air handler for chilled water or refrigeration systems with ducted air distribution. Applications include schools, hospitals, offices, retail stores and stadiums.

## **Terminal Transformed**

Trane® developed innovative control algorithms that maximize the performance and efficiency for each of the units under all operating conditions.

Only Trane terminal products are available with factory mounted, wired and programmed Tracer® unit controllers, providing unmatched system integration and performance optimization.

## **Flexible Connectivity**

High-efficiency terminal products—unlike competitive offerings—allow for building connectivity through multiple control options. Preprogrammed controls with factory addressed AirFi wireless controls can offer plug-and-play connectivity, as well as individual guest control.

#### Symbio 400-B Unit Controller

Single Zone VAV Trane terminal ECM units integrated with Symbio 400-B unit controller are the industry's first factory commissioned Single Zone VAV solution, with automated and optimized motor speed adjustments to meet a space's heating or cooling needs.

#### **Controlled Costs**

The lowest total cost of ownership in the industry makes the new Trane highefficiency terminal units a value-added asset to any building's HVAC system.

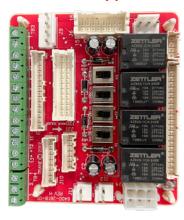
#### Adjustability and Serviceability at your Fingertips

We separated the Trane ECM from the VelociTach™ motor control board, and added an LED display and manual interface. The VelociTach motor control board continues to offer independent adjustability of motor speeds and easy to change setpoint functionality.

This delivers the convenience of a visual status report and the ease of push button adjustments, facilitating optimal performance and simplifying serviceability.



## **Customer Supplied Terminal Interface (CSTI)**



- · For use with customer supplied controllers or thermostats
- All end devices wired to a low voltage terminal strip
- 2-position devices (valves/dampers)
- · Rotary Off/High/Med/Low voltage fan switch available with CSTI
- Allows customer to select the desired speed setting through a local or remote controller with the following features:
  - Electric heat will override customer or building request
- Conflicting speed requests will result in the highest speed requested by any system
- We offer 5 "binary" optically isolated electronic speed inputs. 3 of these are assigned for H, M, L use.
- We offer a 0-10V (or specific Pulse Width Modulating signal) input for use with a controller with fan modulating outputs. It is OK to use these in parallel with our fan switch.
- The system is configured as default, so that minimum voltage input drives the fan to low speed for catalog capacity, and max voltage drives it to high speed.

## Symbio 400-B

The Symbio 400-B single-zone VAV controller maximizes fan speed while reducing energy consumption by delivering only the airflow necessary to address the space load.



## This programmable controller's functions include:

- · Random start
- · Warm-up, pre-cool
- Freeze avoidance
- · Built-in dehumidification
- · Auto fan speed adjustment
- · Discharge air temperature control
- Factory-installed, -tested and -commissioned BACnet® control
- Programmable based on Trane Select Assist™ selection

### Features:

- Single Zone VAV
- · Warm-up, Pre-cool
- · Active dehumidification

## Application considerations:

- Can function as part of the Tracer SC+ building automation system
- Can function as a completely standalone controller
- Can be used as an interoperable unit controller

# **Fan Coil Controls**

|                   | Description                             | CSTI | Symbio 400-B |
|-------------------|---|------|--------------|
| Binary Outputs    | Single Zone VAV                         |      | ✓            |
|                   | 3 Speed Fan                             | ✓    |              |
|                   | 2 Position Hydronic Valves              | ✓    | ✓            |
|                   | 2 Position Outside Air Damper           | ✓    | ✓            |
|                   | 1 Stage Electric Heat                   | ✓    | ✓            |
|                   | 3-wire Economizer Damper                |      | ✓            |
|                   | 3-wire Hydronic Valves                  |      | ✓            |
|                   | Reheat (hydronic or electric)           | ✓    | ✓            |
|                   | Generic                                 | ✓    | ✓            |
| Binary Inputs     | Condensate Overflow                     | ✓    | ✓            |
|                   | Low Temperature Detect Freezestat)      |      | ✓            |
|                   | Occupancy                               |      | ✓            |
|                   | Generic Input                           |      | ✓            |
| Analog Inputs     | Zone Temperature                        |      | ✓            |
|                   | Setpoint                                |      | ✓            |
|                   | Fan Mode (high, med, low, off, auto)    |      | ✓            |
|                   | Entering Water                          |      | ✓            |
|                   | Discharge Air                           |      | ✓            |
|                   | Outside Air                             |      | ✓            |
|                   | Generic                                 |      | ✓            |
|                   | Hydronic Valve                          |      | ✓            |
| Control Functions | Timed Override                          |      | ✓            |
|                   | Auto Change Over                        |      | ✓            |
|                   | Fan Cycling (fan off when valve closed) |      | ✓            |
|                   | Warm-Up                                 |      | ✓            |
|                   | Pre-Cool                                |      | ✓            |
|                   | Random Start                            |      | ✓            |
|                   | DX Cooling                              |      | ✓            |
|                   | DX Frost Protection                     |      | ✓            |
|                   | Entering Water Temp. Sampling (Purge)   |      | ✓            |
| Other Functions   | Manual Test                             |      | ✓            |
|                   | Maintenance Timer (dirty filter)        |      | ✓            |
|                   | Setpoint Limits                         |      | ✓            |



## Cut the wires—and get comfortable with Trane Air-Fi wireless.

Trane® Air-Fi® wireless communication is a reliable, flexible solution that frees you from the hassles associated with traditional wired systems for your building controls.

With Trane Air-Fi wireless, you get easy problem solving, efficient performance and cost savings over the life of the equipment.

Trane Air-Fi wireless provides worry-free operation. The system offers twice the signal range and four times the potential paths compared to other wireless systems on the market to help prevent communication failures. Additionally, the lifetime\* battery eliminates the need to replace batteries over the life of the system and saves time and money.

## Worry-free operation

Trane Air-Fi wireless eliminates the headaches associated with troubleshooting wired networks.

- · Wire-free communication extends throughout the entire network, for reduced troubleshooting compared to traditional wired systems.
- Self-healing mesh technology with redundant signal paths help prevent communication loss.
- Maximum signal range ensures reliable data transfer at longer range.
- · Building automation networks are secured by the use of AES-128 encryption, keys and device authentication.
- Trane® Air-Fi® wireless uses a separate, secure network from those used by your IT systems.
- The system reliably coexists with other wireless systems and networks in your building, so you can have multiple wireless solutions that conform to IEEE 802.15.4 standards to best meet your needs.
- Temperature, humidity, CO<sub>2</sub> and occupancy information from one sensor—with all the advantages of wireless—result in a streamlined process and ease of operation.

## Learn more at trane.com/terminalunits



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit *trane.com or tranetechnologies.com*.

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