



## Networkable Universal Wall-Mount Controller

The TUCB/TUHB is a universal wall-mount controller designed for simple and accurate control of a heat pump or other heating/cooling equipment. Its field configurable algorithms enable versatile implementation of required control sequences.

The TUCB provides an external humidity sensor input and the TUHB provides a built-in humidity sensor for simple and accurate humidity control and provides a dehumidification sequence compensated by auto activation of reheat output.

### Inputs/Outputs

- 2 Configurable binary inputs
- 2 Configurable analog inputs (0-10Vdc, sensor 10KΩ, dry contact)
- 6 Configurable binary outputs (dry contacts 24Vac, 1A, max. 3A in-rush)
- 2 Configurable analog outputs (0-10Vdc adjustable)

### Network Communication

- BACnet® MS/TP or Modbus (selectable via menu)
- Select MAC address via menu or via network
- Automatic baud rate detection

#### BACnet MS/TP®

- Automatic device instance configuration
- Copy & broadcast configuration via menu or via BACnet to other controllers
- BACnet scheduler (up to 6 events per day)
- Firmware upgradeable via BACnet
- Supports COV (change of value)

#### Modbus

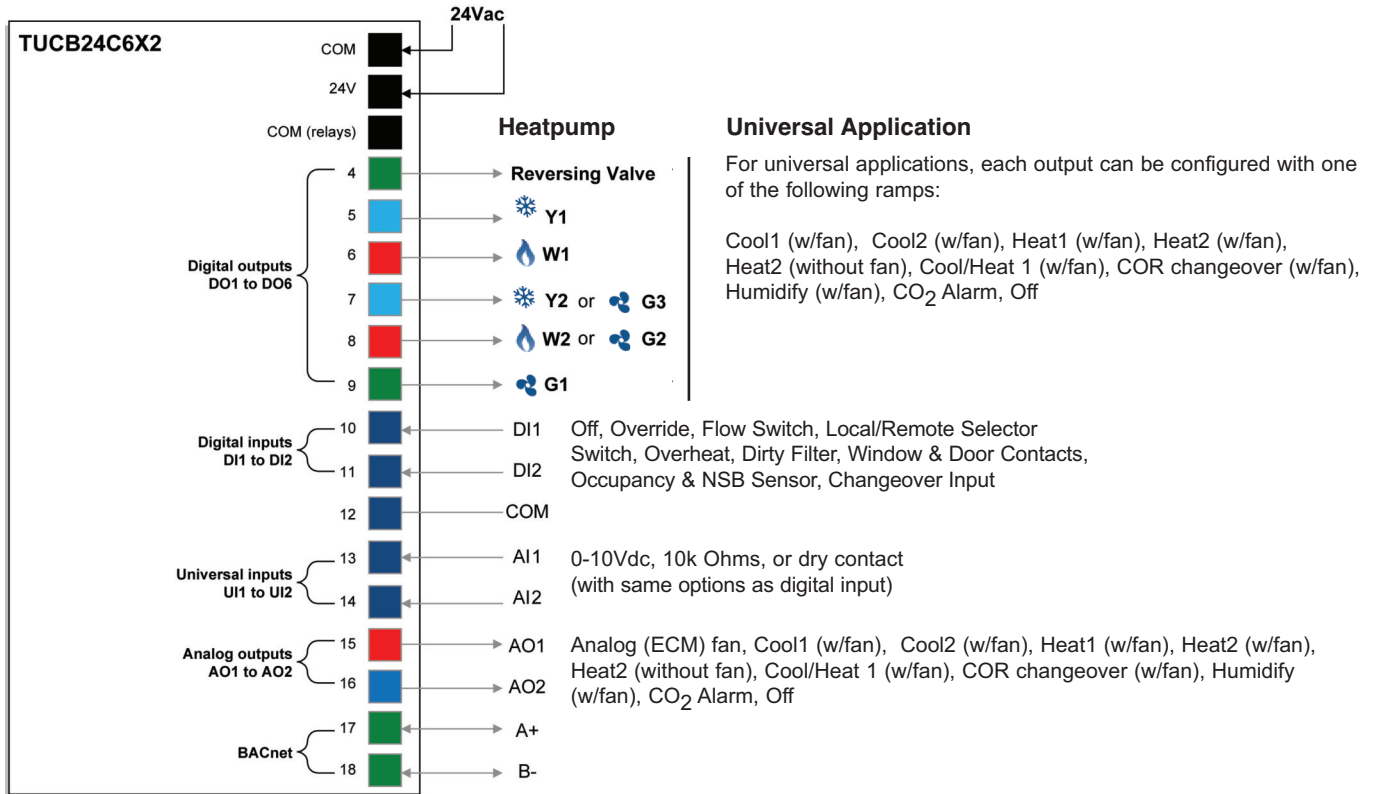
- Modbus @ 9600, 19200, 38400, or 57600 bps
- RTU Slave, 8 bits (configurable parity and stop bits)
- Connects to any Modbus master

### Features

- Applications: Heat pump, humidity control, CO<sub>2</sub> alarms, or general unit controller
- Static pressure logic for VSD (model TUCB-PS1 only)
- Fan control: 1, 2, or 3-speed (auto/on), or analog (ECM)
- External humidity sensor input for simple and accurate humidity control
- Built-in humidity sensor (only with TUHB models)
- Dehumidification sequence compensated by auto activation of reheat output
- Configurable inputs and outputs for CO<sub>2</sub> sensor and alarm
- Real time clock (RTC) with 24-hour backup
- Precise temperature control with configurable PI (Proportional-Integral) function
- Selectable internal or external temperature sensor
- Anti-freeze protection
- Compressor anti-cycling delay (configurable)
- Low limit set protection (10°C / 50°F)
- Occupancy and night set back (NSB) mode
- Selectable direction on outputs



## PCB Overview



## Models

Model	DI*	AI*	BO*	AO*	Note
TUCB24C6X2	2	2	6	2	Temp.
TUHB24C6X2	2	2	6	2	Temp./ Hum.

## Universal Applications



- Packaged AC rooftop units

- Heat pumps

- Fan coils



- Humidity control

- CO<sub>2</sub> alarms

- Other heating/cooling equipment



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