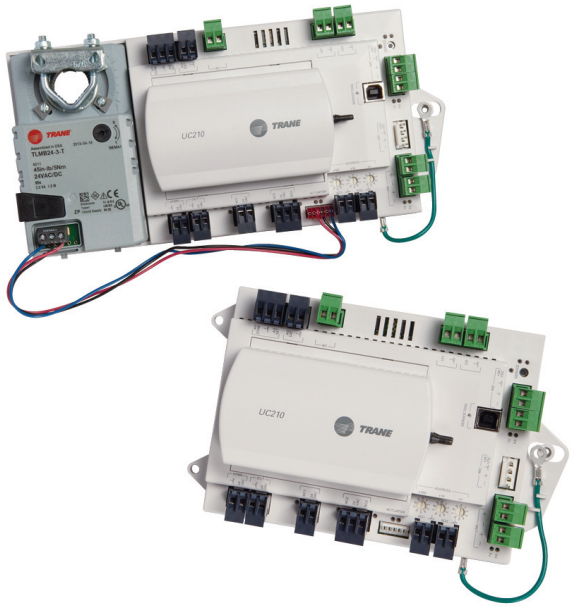
Product Data

Tracer® UC210 Programmable VAV Controller

Data Sheet



⚠ 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.

October 2023 **BAS-PRD023F-EN**

Trademark

All trademarks referenced in this document are the trademarks of their respective owners.

Introduction

The Tracer® UC210 is optimized for VAV applications and can be factory or field-installed.

VAV applications include:

- Space temperature control
- Flow tracking
- Ventilation flow control

Ordering Numbers

Table 1. Ordering numbers

Order Number	Description
BMUC210AAA0T00011	UC210 Programmable VAV Controller with Trane actuator
BMUC210AAA0B00011	UC210 Programmable VAV Controller with Belimo actuator
BMUC210AAA0100011	UC210 Programmable VAV Controller with no actuator
BMUC210ACA0T00011	UC210 Programmable Bypass Controller with Trane actuator
WIR06493	Actuator harness for UC210

Features and Benefits

Table 2. Features and benefits

Features	Benefits
BACnet MS/TP	An open standard building automation communications protocol, which enables connections to other BAS systems and controllers
Configurable and fully programmable	• VAV programs available through quick configuration for lowest setup time • Programmable for flexibility to meet unique sequence or hardware needs
Total of 14 built-in I/O points	Meets the needs of most VAV applications with extra built-in I/Os available to network, or additional programming on controller
Expandable to 22 points	Flexibility to meet additional equipment needs

Controller Specifications and Enclosure Location

Storage	
Temperature:	-40°F to 185°F (-40°C to 85°C)
Humidity:	5% to 95% (non-condensing)
Operating	
Temperature:	-40°F to 158°F (-40°C to 70°C)
Humidity:	5% to 95% (non-condensing)
Power:	20-4–27.6 Vac, (24 Vac ±15% nominal, 50–60 Hz, 10.5 VA plus 1 VA per 20mA of 24 VDC load plus 12 VA maximum per binary load
Environmental Rating (Enclosure):	NEMA 1
Installation:	U.L. 840: Category 3
Pollution:	U.L. 840: Degree 2
Agency Compliance	
• UL916 PAZX- Open Energy Management Equipment • UL94-5V Flammability • CE Marked • FCC Part 15, Subpart B, Class B Limit • AS/NZS CISPR 22:2006 • VCCI V-3/2008.04 • ICES-003, Issue 4:2004 • Communications BACnet MS/TP, supports BACnet protocol ASHRAE 135-2004 and meets BACnet Testing Laboratory (BTL) as an Application Specific Controller (ASC) profile device • Suitable for Plenum mounting	

Inputs and Outputs

Analog Inputs 1 through 3 **Note:** Configuration options when used as spare; 10kΩ thermistor, 0 to 1kΩ linear setpoint, 200Ω to 20kΩ linear.	**Universal Inputs UI1 and UI2** **Note:** Configuration options when used as spare; 4–20mA, 0-10V, resistive (see AI specifications), binary (solid state open collector).
• **AI1**: Space temperature; thermistor: 10kΩ @77°F (25°C) range: 32°F to 122°F (0°C to 50°C) • **AI2**: Space setpoint; potentiometer: 1kΩ from 50 to 90°F (10 to 32.2°C), */** (thumbwheel) functionality supported • **AI3**: Discharge air temperature: 10kΩ @77°F (25°C) from -40°F to 212°F (-40 to 100°C)	• **UI1**: Relative Humidity • **UI2**: CO_2
Pressure Input P1	**Binary Input BI1, Dry Contact**
• **P1**: Supply air flow; pressure transducer: From 0 to 5 in. water column (0 to 1240 Pa)	• **BI1**: Occupancy
Analog Outputs AO1 and AO2 **Note:** Configuration options when used a spare; Voltage output is 0 to 10 VDC, 500 ohm min. impedance. Current output is 4 - 20 mA, 500Ω max. impedance.	**Binary Outputs 1 through 5** **Note:** 0.5A Resistive Maximum Rating
• **AO1**: ECM • **AO2**: SCR Heat	• **BO1:** Heat stage 3 TRIAC • **BO2:** Heat stage 2/Water Valve Close TRIAC • **BO3**: Heat stage 1/Water Valve Open TRIAC • **BO4**: Air Damper Close TRIAC • **BO5**: Damper Open TRIAC

Figure 1. UC210 dimensions without actuator

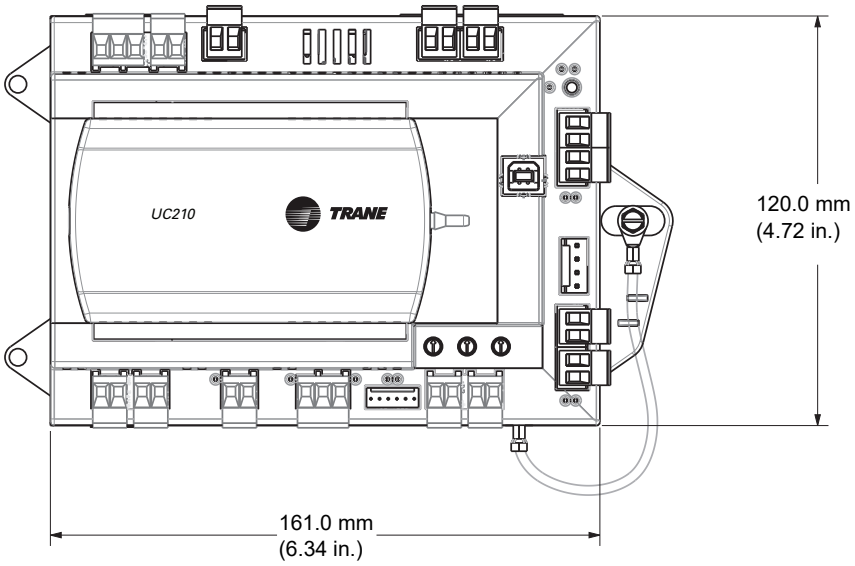


Figure 2. UC210 dimensions with actuator

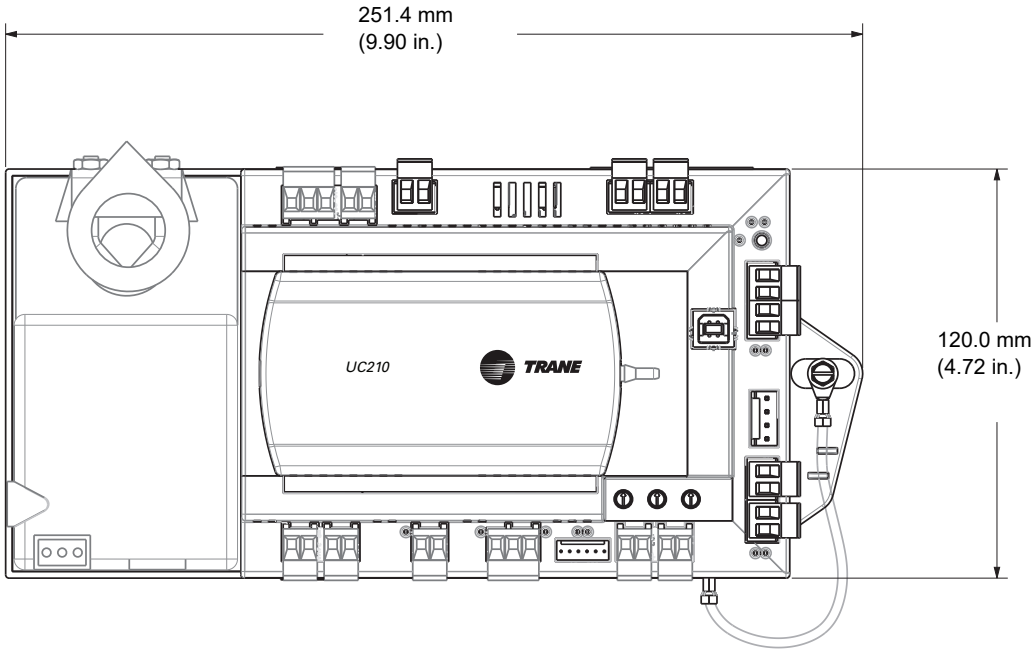


Figure 3. UC210 dimensions (Trane VAV factory version)

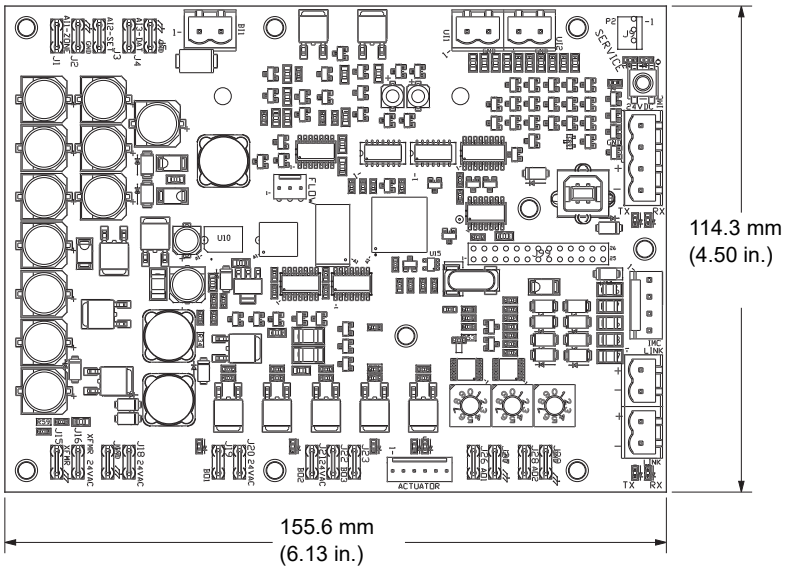
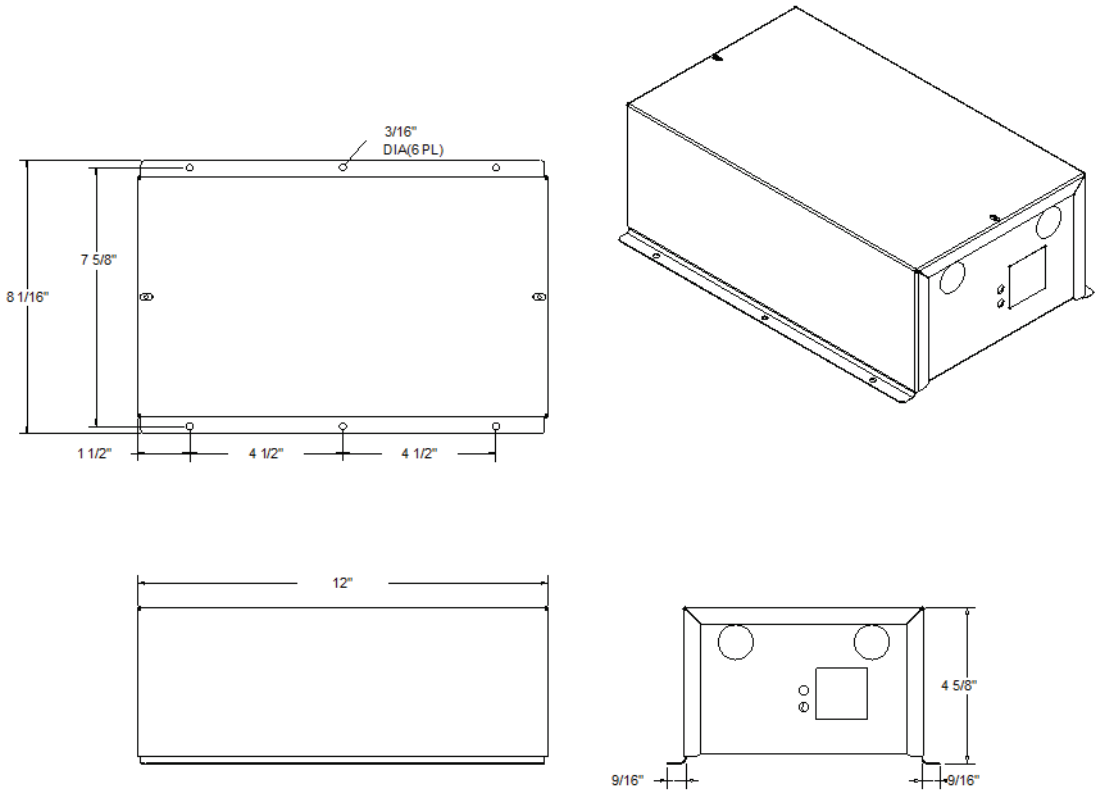


Figure 4. Optional UC210 Control box 501897940100 dimensions



Notes

Trane - by Trane Technologies (NYSE: TT), a global climate innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

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