![TRANE®]

Product Data

Tracer® UC600 Programmable Controller

Data Sheet

Ordering Number:
BMUC600AAA0100011

October 2023   **BAS-PRD016D-EN**   TRANE TECHNOLOGIES™

Trademarks

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Overview

The Tracer UC600 unit controller is a multi-purpose, programmable, field-installed device that is designed to control the following types of equipment:

- Air-handling units (AHUs)
- Rooftop units
- Chillers
- Central heating and cooling plants
- Cooling towers
- Generic input/output (I/O) control

Features and Benefits

Feature	Benefit
BACnet MS/TP, BACnet IP	An open standard building automation communications protocol which enables connections to other BAS systems and controllers
Scheduling – supports up to 3 weekly schedules	Easy to set up and access (3 schedule types supported: Analog, Binary, Multistate)
Graphics – support for up to 10 custom graphics with optional TD7 Display	Perform overrides, link directly to alarms, reports, or other graphics directly from a graphic.
Custom data graphs	Create and view graphically formatted data logs. Up to 8 custom data graphs can be created with a maximum of 4 data logs per graph.
Configurable and fully programmable	• Factory programs available through quick configuration for lowest setup time • Programmable for flexibility to meet unique sequence or hardware needs
Total of 19 built-in I/O hardware terminations	Meets most applied product needs with built-in I/O or with additional custom programming on the controller
Expandable up to 120 hardware terminations (with the use of optional expansion modules)	Flexibility to meet additional equipment needs
Data logging – 25,000 samples	Easier investigation of equipment, zone, or building problems
Removable connectors, DIN rail mounting, multiple service tool connections	Ease of installation and service

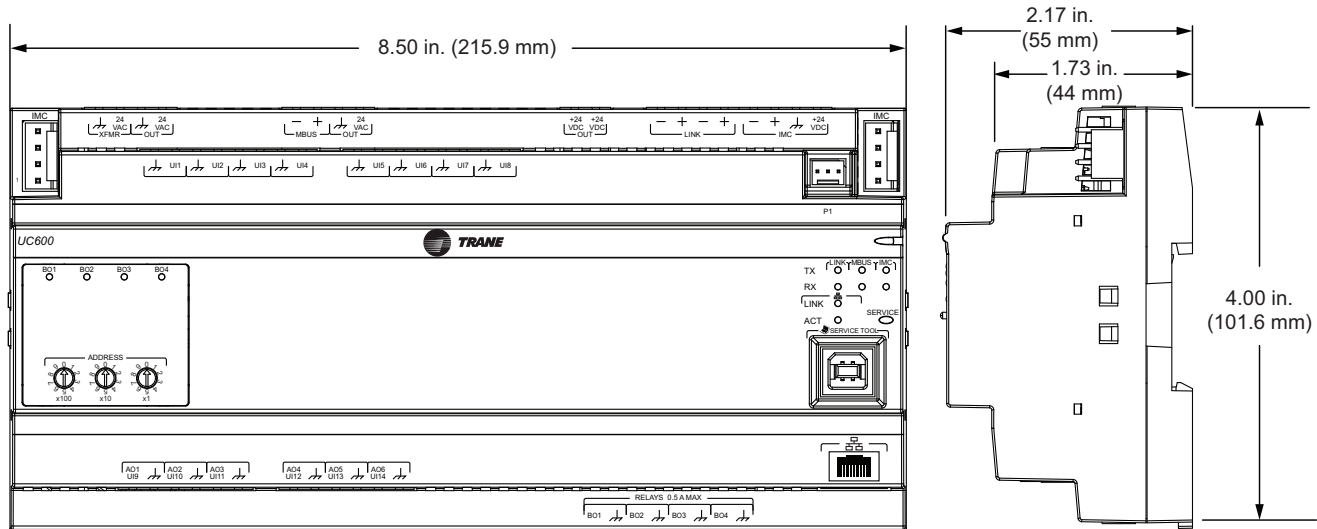## Controller Specifications and Agency Compliance

Storage	
Temperature:	-67°F to 203°F (-55°C to 95°C)
Relative humidity:	Between 5% to 95% (non-condensing)
Operating	
Temperature:	-40°F to 158°F (-40°C to 70°C)
Humidity:	Between 5% to 95% (non-condensing)
Power:	Input: 20.4–27.6 Vac (24 Vac ±15% nominal), 50 or 60 Hz, 26 VA
Time Clock:	On-board real time clock with 7 day backup
Mounting weight of controller:	Mounting surface must support 1.3 lb. (0.6 kg)
Environmental rating (enclosure):	NEMA 1
Installation:	UL 840: Category 3
Pollution	UL 840: Degree 2

Wiring/Transformer/Communications Protocol
18 AWG is recommended for the circuit between the transformer and the controller. Data link protocol supported: BACnet MS/TP, BACnet IP 10/100 BaseT
• UL listed, Class 2 power transformer, 24 Vac ±10%, device max load 26 VA. • The transformer must be sized to provide adequate power to the UC600 controller (26 VA) and external device outputs. • UC600 requires 26 VA for UC600+ IO + two expansion modules (XM30 or XM32).
Agency Compliance
• UL916 PAZX, Open Energy Management Equipment • UL94-5V Flammability • UL864/UUKL Smoke Control (when installed and programmed in accordance with the *Engineered Smoke Control System for the Tracer® SC System Controller Applications Guide* (BAS-APG019*-EN) • CE Marked • FCC Part 15, Subpart B, Class B Limit • BTL Listed — Advanced Application Profile (B-AAC)

Input and Output Specifications

Input/Output type	Quantity	Types	Range	Notes
Universal Input	8	Thermistor	10 kΩ Type II, 10 kΩ Type III, 2252 Ω Type II, 20 kΩ Type IV, 100 kΩ	The UC600 provides 600 mA of DC power for 0–20 mA inputs and/or outputs and to power expansion modules. See the power budget table in the *Tracer® UC600 Programmable Controller Installation, Operation, and Maintenance* (BAS-SVX045*-EN).
		Resistive (setpoint)	100 Ω – 1 MΩ	
		RTD	Balco™ (Ni-Fe), 1 kΩ, 375 (Pt), 385 (Pt), 1 kΩ	
		Current	0–20 mA (linear)	
		Voltage	0–20 Vdc (linear)	
		Binary	Dry contact	
		Pulse Accumulator	Minimum: 20 ms, closed (on) 20 ms, open (off)	
Universal Input/ Analog Output	Configure using any combination of analog or binary inputs/analog outputs			
Inputs	6	Thermistor	10 kΩ Type II, 10 kΩ Type III, 2252 Ω Type II, 20 kΩ Type IV, 100 kΩ	
		Resistive (setpoint)	100 Ω – 1 MΩ	
		RTD	Balco™ (Ni-Fe), 1 kΩ, 375 (Pt), 385 (Pt), 1 kΩ	
		Current	0 – 20 mA (linear)	
		Voltage	0 – 20 Vdc (linear)	
		Binary	Dry contact	
		Pulse accumulator	Minimum: 20 ms, closed (on) 20 ms, open (off)	
Outputs		Current	0 – 20 mA @16 V	
		Voltage	0 – 10 Vdc @20 mA	
		Pulse	12.5 ms to 1 s (12.5 ms resolution), 1 – 60 s (0.5 s resolution)	
Binary Output	4	Relay (form A) wet	24 Vac, 0.5A maximum	Ranges are given per contact.
Pressure Input	1	3-wire	0 – 5 in H_2O	Pressure input supplied with 5 Vdc. Designed for Kavlico™ pressure transducers.
Point total	**19**			

Dimensions

Additional Ordering Options

- UC600 Controller (Made in the U.S.A. Version) *(ordering number: BMUC600USA0100011)*
- Tracer TD7 Operator Display *(ordering number: X13651571010)*
- TD7 Sealed Ethernet cable (for wet environments) *(ordering number: X19070632020)*
- TD7 Display Portable Carry Case *(ordering number: X18210613010)*
- TD7 Mounting Bracket (flat surface, fixed position) *(ordering number: X05010511010)*
- Tracer XM30 Expansion Module (*ordering number: X13651537010*)
- Tracer XM32 Expansion Module (*ordering number: X13651563010*)
- Tracer XM70 Expansion Module (*ordering number: X13651568010*)
- Tracer XM70 Expansion Module, manufactured in USA (*ordering number: X13651597010*)
- Tracer BACnet Term (2 pack) *(ordering number X1365152401)*
- Tracer Large enclosure 120 VAC with display capable door (*ordering number: X13651552010*)
- Tracer Large enclosure 230 VAC with display capable door (*ordering number: X13651554010*)
- Tracer Medium enclosure 120 VAC (*ordering number: X13651559010*)
- Tracer Medium enclosure 230 VAC *(ordering number: X13651560010)*
- Tracer Small 10" DIN Rail enclosure *(ordering number: X19091354010)*
- Power Supply 24VAC to 1.4A 24 VDC for XM modules exceeding UC600 power budget *(ordering number: X1365153801)*
- IMC Harness *(ordering number: S3090059462)*

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