



Product Data
Symbio™ 800 Controller
Data Sheet





Introduction

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Revision History

- Added Ordering Numbers section to Product Data chapter.
- Updated Specifications section in Product Data chapter.



Product Data

Overview

The Symbio™ 800 equipment controller is a factory-installed, application specific, and programmable controller designed to control chillers, air-handlers, and large packaged HVAC equipment. The optional user interface features a touch sensitive color screen that provides the facility manager at-a-glance operating status, performance monitoring, scheduling changes, and operating adjustments. Additional advanced features include automated controller backup, and optional features such as secure remote connectivity, wireless building communications, mobile device connectivity, and custom programming with expandable inputs/outputs (I/O).

Ordering Numbers

Table 1. Ordering number

| Ordering Number | Description |
|-----------------|--|
| X13651678002 | Symbio™ 800, Programmable Controller, UL-864/UUKL ^(a) |

^(a) When installed and programmed in accordance with the *Engineered Smoke Control System for the Tracer® SC+System Controller, Application Guide* (BAS-APG040*-EN).

Advantages

Table 2. Symbio 800 advantages

| Advantages | | Benefits |
|------------|--|---|
| Connected | Convenient access from anywhere with any device to enable advanced monitoring, troubleshooting, and energy management. Seamless integration across multiple standard open protocols. | <ul style="list-style-type: none"> • Minimum first cost • Maximum comfort • Minimized downtime • Minimal operating costs • Superior building and occupant productivity |
| Flexible | Reduced installation, hardware, and labor costs - ability to factory-install on equipment or field-install in a variety of locations. | |
| Reliable | Maximum equipment uptime and lifespan, minimized maintenance and troubleshooting costs. | |

Features and Benefits

Table 3. Symbio 800 features and benefits

| Symbio™ 800 Feature | Benefit |
|--|---|
| Multiple, open standard protocol support <ul style="list-style-type: none"> • BACnet (Air-Fi®, MS/TP or IP) • Modbus (TCP/IP or RTU) • LON (optional) | Simplified, lower cost, and more flexible integration with common open standard protocols with Trane or competitive BAS systems and controllers. |
| Common integration strategies and equipment specific points lists | Simplified, lower cost, and uncompromised integration. |
| Application specific, configurable, and programmable | Reduced project costs with superior reliability, comfort, performance, and installation flexibility. |
| Smart inputs and outputs | Smart analytics provide superior reliability during the lifetime of the equipment with minimal downtime. |
| Data logging | Standard, local, or remote intuitive review and analysis of equipment, zone, and building performance. |
| Local scheduling | Capable of operating in stand-alone scheduled operation without a building automation system, or as a temporary backup schedule - to provide continuous comfort and energy savings. |
| Micro SD card backup/restore | Faster, low-cost controller replacement with minimal downtime. Up to 10 scheduled controller backups ensure current controller information is maintained. |



Product Data

Options

Table 4. Symbio 800 options

| Symbio™ 800 Feature | Benefit |
|--|--|
| Access your Symbio™ 800 controlled equipment from anywhere | Trane Connect™ provides an easy and secure option to connect remotely to a Symbio™ 800 controller. |
| Expandable inputs/outputs (I/O) | If additional I/O is required, any combination of XM30, XM32, XM70, and XM90 expansion modules can be used. The Symbio™ 800 controller supports up to 500 combined I/O terminations. See <i>Symbio™ 800 Controller Installation, Operation, and Maintenance</i> (BAS-SVX080*-EN) for more information. |
| User security with audit trail support | Flexible and secure access for multiple users allows monitoring, overriding/releasing points, custom report editing, and tracking changes by users. |
| Optional rugged color touch-screen user interface | Allows for easy navigation for viewing data and making operational changes. |
| Wi-Fi module | Enables the operation of wireless service tools for increased technician productivity and flexibility. |
| Cell module | Creates a secure private cellular connection and includes a built-in firewall. |

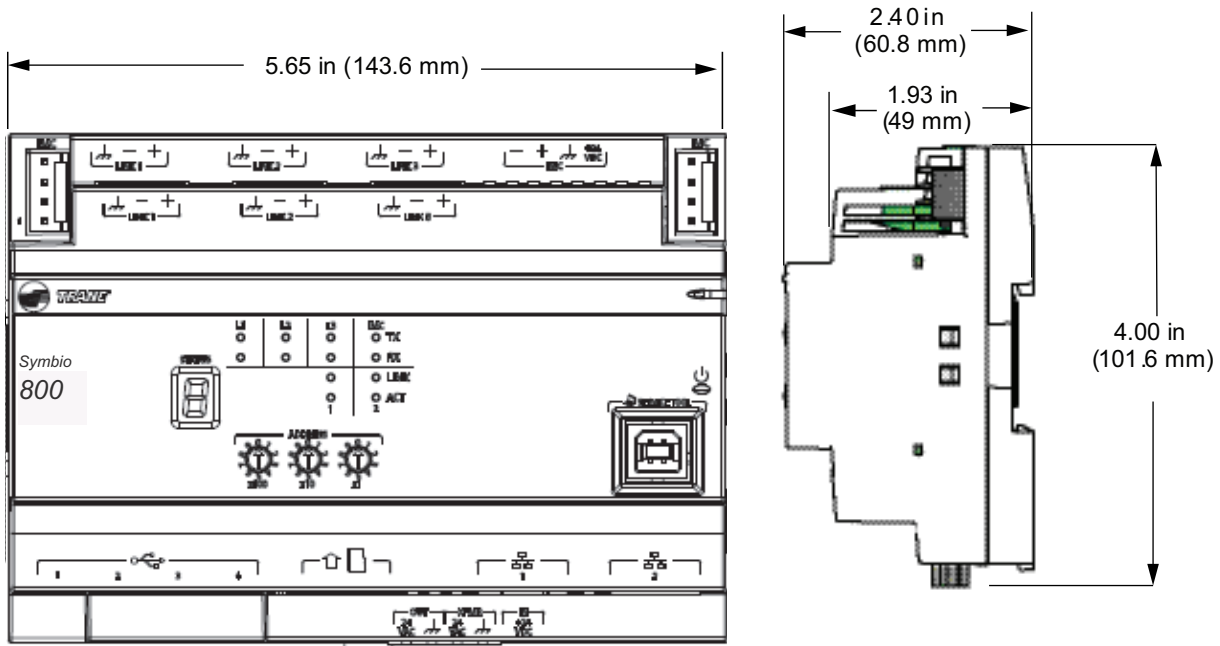
Specifications and Agency Compliance

Table 5. Symbio 800 specifications and agency compliance

| Controller Specifications | |
|--|--|
| Input power | 24 Vdc +/- 15%, 400mA maximum |
| Storage temperature | -67°F to 203°F (-55°C to 95°C), 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) |
| Environmental rating (enclosure) | IP3x (ingress protection) |
| Time clock | On-board real time clock with lithium battery (BR2032) back-up, 10 year battery life |
| Mounting weight | Mounting surface must support 1.3 lb. (0.6 kg) |
| Processor | Arm A9 Cortex Dual Core |
| Memory | FLASH 4 GB eMMC SDRAM 1 GB DDR3 |
| <ul style="list-style-type: none"> • UL916 PAZX, Open Energy Management Equipment • UL94-5VA Flammability • UL864/UUKL Smoke Control (When installed and programmed in accordance with the <i>Engineered Smoke Control System for the Tracer® SC+ System Controller, Application Guide</i> (BAS-APG040*-EN)). • CE • FCC Part 15, Subpart B, Class B Limit • BTL Listed - Advanced Application Profile (B-AAC) | |

Dimensions

Figure 1. Symbio 800 dimensions





Notes

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