Tracer Summit™ Communications Bridge

Tracer Summit interface to MODBUS RTU

Bridging the communications gap

Introduction

Building automation systems play a crucial role in providing comfort, security, and safety in today's sophisticated building environments. These intelligent systems use devices to control and monitor diverse areas, such as heating, ventilating, and air-conditioning (HVAC), lighting, security, and fire- and life-safety systems. Communication between these systems enables information sharing, which optimizes and simplifies building control and monitoring.

In order for communication to occur, intelligent devices need to share a common protocol (language). The building control unit (BCU) of a Tracer Summit building automation system has the native capability to communicate with devices that use both BACnet and LonTalk protocols. With BACnet at the system level and LonTalk at the equipment level, Trane has the flexibility to communicate with many other devices to provide open system solutions (Figure 2).

However, many devices do not use either of these protocols. Trane's Tracer Summit communications bridge solves this problem by integrating devices that use other protocols into the Tracer Summit building automation system, effectively bridging the communications gap.

The MODBUS protocol

The MODBUS protocol is an open, published protocol that is widely implemented among control devices in HVAC industrial applications. Equipment such as variable frequency drives, fume hood controllers, power monitoring systems, and many more communicate using MODBUS. The Tracer Summit communications bridge enables these devices that use the MODBUS protocol to connect to a Tracer Summit building automation system. The standard bridge configuration is equipped with the MODBUS Remote Terminal Unit (RTU) protocol and an Ethernet or Internet Protocol (IP) BACnet driver. Configuration software and complete programming and installation instructions are also provided.

Product features

Easy installation

The Tracer Summit communications bridge ships with all necessary cables and adapters to make installation quick and easy. Several mounting options are supported, including the standard wall mount brackets or an alternative Deutsche Industrie Norm (DIN) rail option for enclosure mounting.

System Integration

The Tracer Summit communications bridge provides a control and monitoring link to manufacturers of a variety of building control systems and devices.

LED status indicators

To make daily operations easier and more intuitive, the Tracer Summit communications bridge incorporates LED indicators to display the status of the following parameters:

- Power
- Ethernet communications
- Serial port communication
- Network communications

Alarm management

Receiving critical alarm data is crucial to maintaining a secure and comfortable building environment. The Tracer Summit communications bridge supports the transmission of alarms to a Tracer Summit workstation or BCU. This standard application eliminates the need to create custom software routines, lowering setup costs for a more consistent, reliable operation.

Centralized scheduling and trending

All equipment connected to the Tracer Summit system using the communications bridge can be scheduled from the central workstation for optimal operation. Additionally, this data can be included in Tracer Summit system reports and trend logs.

Figure 1: Tracer Summit communications bridge connected to network
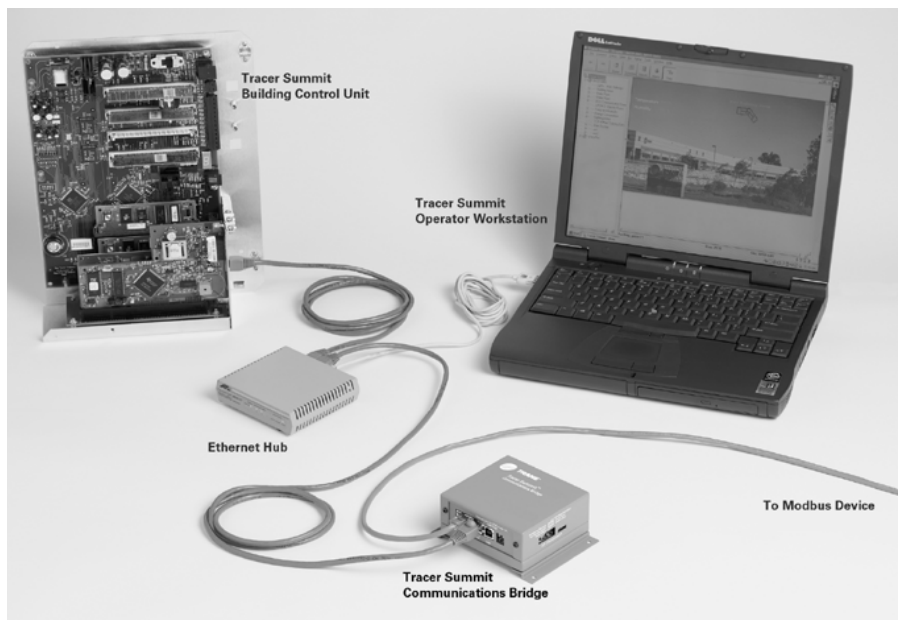
Specifications and network architecture

Software

Software and driver compatibility: BACnet (Ethernet or IP) and MODBUS RTU protocols are pre-installed

Power requirements

9 VDC, provided through 120 VAC to 9 VDC adapter included.

Inputs and outputs

1 RJ45 EIA-232 connection

1 screw terminal EIA-485 connection

1 10BaseT RJ45 Ethernet connection

Operating environment

Operating temperature: 32–140ºF (0–60ºC)

Relative humidity: 10–90% (non-condensing)

Dimensions (including mounting brackets)

5.0 in. long × 4.0 in. wide × 2.0 in. high
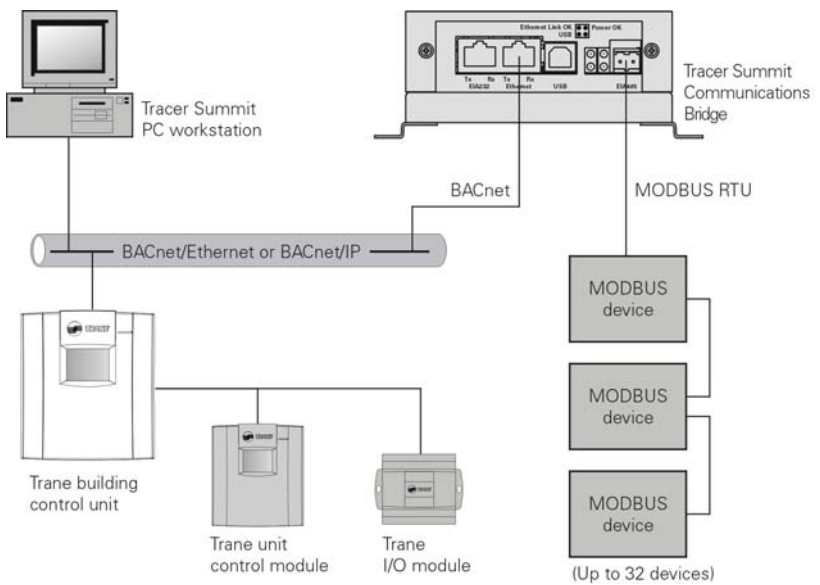
(11.0 cm long × 9.0 cm wide × 4.5 cm high)

Weight

2.5 lb (1.5 Kg)

Agency listings

UL Listing

UL-916 energy management

Figure 2: Tracer Summit communications bridge in a BACnet network

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For more information contact your local district office or e-mail us at comfort@trane.com

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.