TRANE TSCB0A Summit Communications Bridge Tracer Owner's Manual

Contents

TRANE TSCB0A Summit Communications Bridge Tracer Owner's Manual

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 airconditioning (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 dozens of suppliers 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. Using the communications bridge can help to reduce the cost and complexity of developing, integrating, and supervising building systems and equipment.

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 this wide variety of 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

Compact size
The compact, four-inch-square size of the bridge frees up desk space and provides mounting flexibility. This unit packs a lot of performance into a small package.

Easy installation
The Tracer Summit communications bridge ships with all necessary cables and adapters to make installation quick and easy. Because the 24 Vac power requirement is readily available in most applications, the device can be installed virtually anywhere in the building. Several mounting options are supported, including the standard wall mount brackets or an alternative Deutsche Industrie Norm (DIN) rail option for enclosure mounting.

Support for other protocols and drivers
In addition to the MODBUS RTU protocol, the communications bridge can also support other common protocols and custom drivers from many different vendors, including (but not limited to) the following:

- Allen Bradley
- Bell & Gosset
- Square D
- Liebert
- Notifier

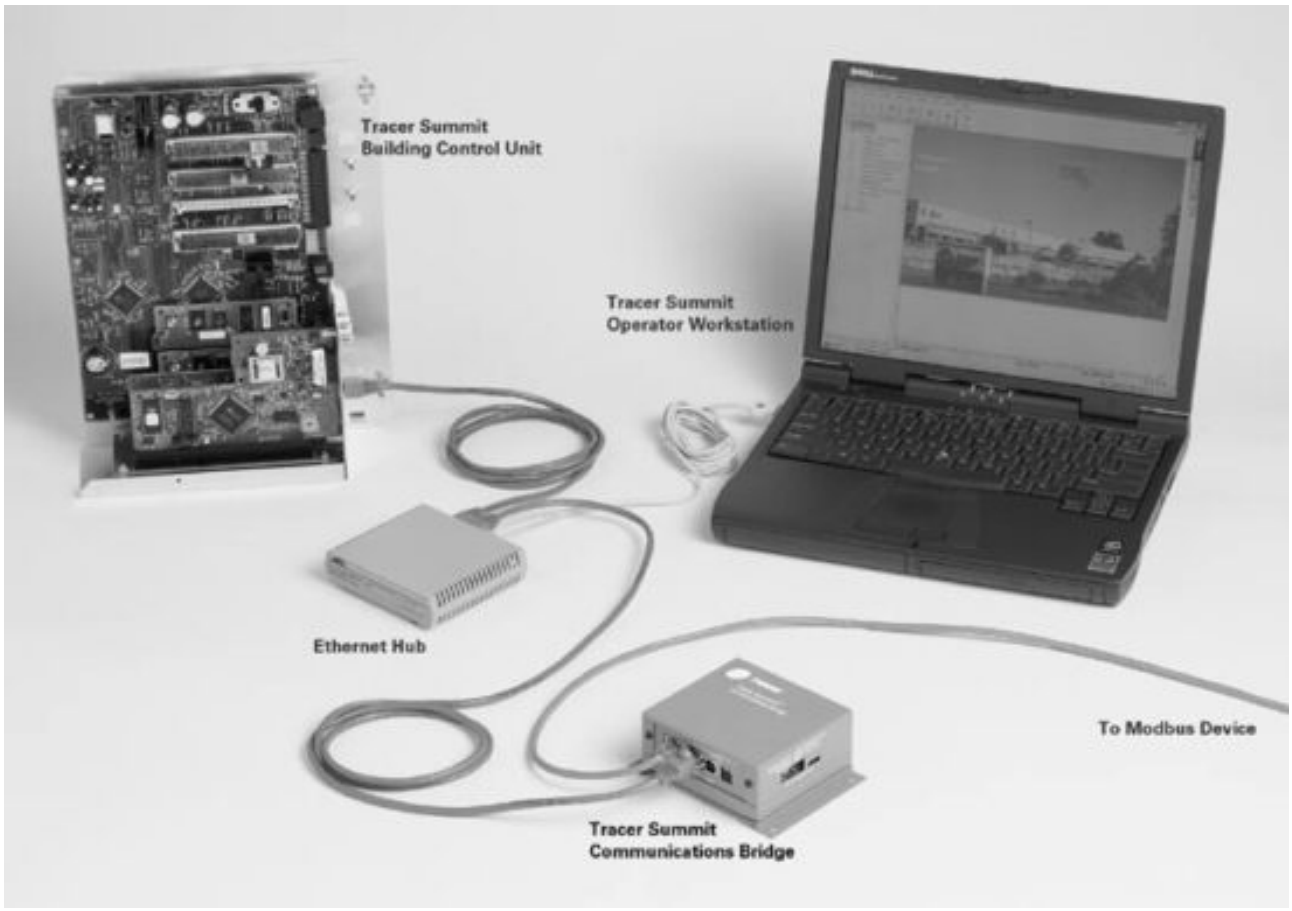
LED status indicators
To make daily operations easier and more intuitive, the Tracer Summit communications bridge incorporates LED indicators to display the status of the following parameters:

- 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 bridge supports the transmission of alarms to a Tracer Summit workstation or BCU. This standard application eliminates the need to create custom software routines, which leads to lower setup costs and more consistent, reliable operation.

Centralized scheduling and trending
All equipment connected to the Tracer Summit system using the 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
24 Vac Class 2 (customer provided)

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% (noncondensing)

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)

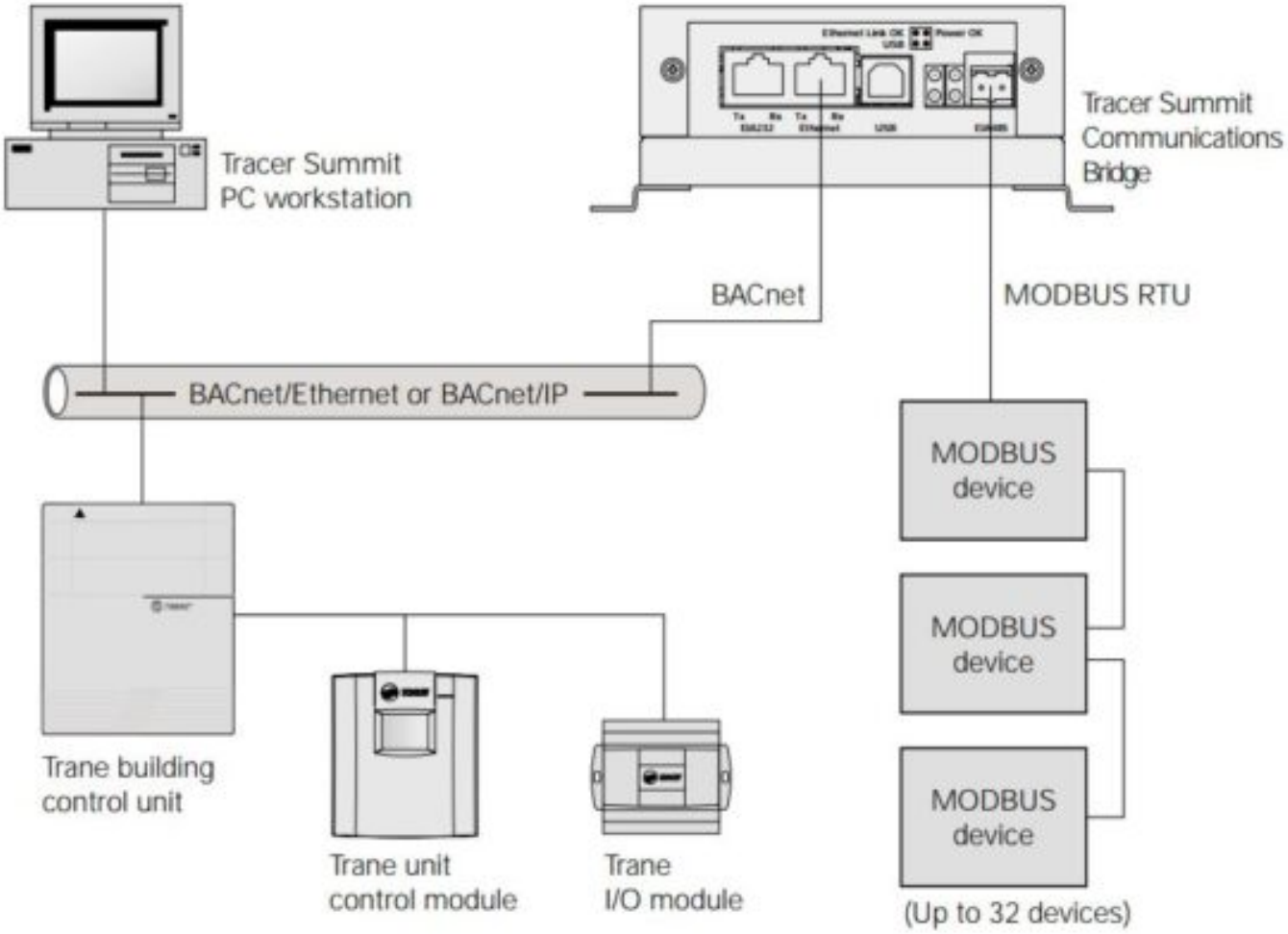
Weight
2.5 lb (1.5 Kg)

Agency listings
UL Listing
UL-916 energy management
CUL-C22.2 energy management Canada

FCC
FCC part 15, Class A

CE
Emissions EN55022 Class B

Figure 2: Tracer Summit communications bridge in a BACnet network



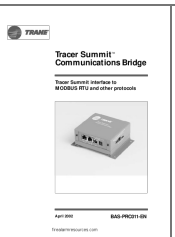
Note:
For applications where the input/output (I/O) wiring is greater than 3 meters, Trane recommends using a suitable optical isolation device.

Literature Order Number	BAS-PRC011-EN
File Number	PL-ES-BAS-000-PRC011-0402
Supersedes	BAS-PRC011-EN August 2001
Stocking Location	La Crosse

Trane
An American Standard Company
www.trane.com
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.

Documents / Resources

	TRANE TSCB0A Summit Communications Bridge Tracer [pdf] Owner's Manual TSCB0A Summit Communications Bridge Tracer, TSCB0A, Summit Communications Bridge Tracer, Communications Bridge Tracer, Bridge Tracer, Tracer

References

- Fire Alarm Resources | Download fire alarm documents
- Trane Heating & Air Conditioning