

Babel Buster[®]
485XM



CONTROL SOLUTIONS, INC.
MINNESOTA

*Put Modbus RTU devices on
a BACnet MS/TP network*



Control Solutions' Babel Buster 485XM

is a BACnet MS/TP slave (server) device that functions as a Modbus RTU master. Each of 100 BACnet objects maps to up to 100 Modbus registers. Packed Modbus registers may be parsed to multiple BACnet objects when reading. Multiple BACnet objects may be packed into a single Modbus register when writing. All standard Modbus register types are supported. Output functions are implemented with commandable Analog Value or Binary Value objects. The writeable input objects can also write to Modbus when placed "out of service".

Commandable Value objects will poll their assigned Modbus register at the interval you specify. The content of the Modbus register will be given as the Present Value of the BACnet object when read. The Commandable Value object uses the priority array for BACnet writes, and the Modbus register is written from the priority array each time the BACnet object is written.

Input objects will poll their assigned Modbus register at the interval you specify, and provide the Modbus data as the Present Value when read. Input objects are normally not written, but can be when "out of service".

Babel Buster 485XM Object Summary

- 100 (40) Writeable Analog Input Objects
- 5 (10) Commandable Analog Value Objects
- 40 Writeable Binary Input Objects
- 10 Commandable Binary Value Objects

BACnet MS/TP EIA-485 supports 9600, 19200, 38400 and 76800 baud. Modbus RTU EIA-485 supports 4800, 9600, 19200, 38400 baud and all character formats. Modbus slave configuration also available.

Original configuration (Type 1) has 40 AI, 10AV. Type 2 has 100 AI, 5 AV. Both have 40 BI, 10 BV.

Visit our web site for

- Full details
- User Guides & Software Downloads
- Pricing
- On-line Ordering

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Read/Write any standard Modbus Register
as a BACnet Property Value

FEATURES

- Read/Write any standard Modbus register via BACnet objects
 - 100 (40) Writeable Analog Input (AI) objects
 - 5 (10) Commandable Analog Value (AV) objects
 - 40 Writeable Binary Input (BI) objects
 - 10 Commandable Binary Value (BV) objects
- BACnet slave is Modbus RTU master
- Configurable as Modbus slave (certain firmware versions)
- Bidirectional communication between BACnet and Modbus
- Supports Modbus “coils”, input registers, holding registers
- Single or double Modbus registers, signed, unsigned, IEEE 754
- Modbus register mapping dynamically mappable via BACnet
- Modbus registers may be scaled (x10, x100, x0.1, x0.01, etc.)
- Modbus (master) polling interval configurable per point
- Commandable BACnet objects implement priority array
- EIA-485 transceivers
- Powered by 10-30VDC or 12-24VAC 50/60 Hz
- Power Consumption: 0.1A @ 24VDC
- DIN rail mounting, 100mm H x 70mm W x 60mm D
- Pluggable screw terminal block for power & networks
- Operating temperature -40°C to +85°C; Humidity 5% to 90%

BACnet Protocol Implementation Conformance Statement (Abbreviated)

Date: 8 January 2008

Vendor Name: Control Solutions, Inc.

Product Name: Babel Buster 485XM

Product Model Number: BB485XM

Applications Software Version: 1.10

Firmware Revision: 1.10

BACnet Protocol Revision: 2

Product Description: Network gateway allowing Modbus RTU slave devices to be accessed via BACnet MS/TP as a BACnet slave.

BACnet Standardized Device Profile (Annex L):

- ▶ BACnet Smart Sensor (B-SS)
- ▶ BACnet Smart Actuator (B-SA)

List all BACnet Interoperability Building Blocks Supported (Annex K):

DS-RP-B, DS-RPM-B, DS-WP-B, DW-WPM-B,
DM-DDB-B, DM-DOB-B, DM-RD-B

Segmentation Capability: (None)

Standard Object Types Supported:

Object types: AI, AV, BI, BV, DEV (all static)

See additional documentation for optional & proprietary properties.

Data Link Layer Options:

- ▶ MS/TP slave (Clause 9), baud rate(s): 9600, 19200, 38400, 76800

Device Address Binding:

Is static device binding supported? No

Networking Options: (None)

Character Sets Supported:

ANSI X3.4

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:

Modbus RTU slaves (BACnet slave device functions as Modbus RTU master)

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