PYTHIA TECHNOLOGIES

PROTOCOL GATEWAY · MS0-MB

Put Modbus equipment on your BACnet network.

The MS0-MB converts Modbus RTU and Modbus TCP to BACnet/IP. Generator controllers, UPS systems and industrial equipment show up on the building automation system as native BACnet objects, and the BMS can write back to them.



5,000
BACnet objects: analog, binary and multi-state inputs, outputs and values

240
Modbus RTU devices, plus up to 200 Modbus TCP devices

2-way
read and write mapping, with a priority array on commandable objects

–40 to 85 °C
industrial DIN-rail gateway, 10–30 VDC or 24 VAC

HOW IT CONNECTS



RTU and TCP
Modbus over RS-485 or Ethernet, master or slave, client or server.

Native BACnet
The BMS sees ordinary BACnet objects. No Modbus knowledge needed.

Browser setup
Secure web interface. Nothing to install.

BBMD included
Works with BACnet/IP devices on other subnets.

Generators · UPS systems · Industrial equipment · BMS retrofits

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WHAT IT DOES

Every Modbus register becomes a BACnet object.

The MS0-MB polls your Modbus equipment and presents each register to the BMS as a BACnet object. Writes from the BMS go back to the Modbus device.

Modbus RTU and TCP

A hardened RS-485 port at 1200 to 115200 baud, plus Modbus TCP over Ethernet. RTU as master or slave, TCP as client or server.

Native BACnet/IP

Analog, binary and multi-state objects, with BBMD included for networks that span subnets.

Read and write

Bidirectional mapping lets the BMS command Modbus equipment, not just monitor it. Commandable objects use a priority array.

Any register format

16, 32 and 64-bit integers, 32 and 64-bit floats and Mod-10, with scaling and a poll rate for each point.

Browser setup

A password-protected web interface with TLS 1.2. Maps can be imported from a CSV file.

Industrial build

DIN-rail housing rated −40 to 85 °C, with communication and power LEDs and pluggable terminals.

WHERE IT'S USED

GENERATORS

Generator data on the BMS

Put generator controller status, alarms and readings on the BACnet BMS.

UPS SYSTEMS

UPS status as BACnet objects

Bring UPS conditions and measurements onto the building network.

RETROFITS

Let the BMS command Modbus

For retrofits where the BMS must command Modbus equipment, not just monitor it. Points are mapped in the browser setup, with CSV import of point lists.

SPECIFICATIONS

PROTOCOLS	
Equipment	Modbus RTU (RS-485), master or slave; Modbus TCP, client and server
Building	BACnet/IP with BBMD
Mapping	Bidirectional read and write; priority array on commandable objects

CAPACITY	
Objects	Up to 5,000
Devices	Up to 240 Modbus RTU, 200 Modbus TCP and 200 BACnet/IP
Data formats	16, 32, 64-bit integers; 32, 64-bit floats; Mod-10; scaling

CONNECTIONS	
Serial	Hardened RS-485, 1200–115200 baud
Network	10/100 Ethernet, RJ45
Setup	Secure web interface (TLS 1.2); CSV import

POWER AND ENVIRONMENT	
Power	10–30 VDC or 24 VAC; 0.1 A at 24 VDC
Supplies	Optional DIN-rail supplies: 120 VAC to 24 VDC, and 24 VAC
Environment	−40 to 85 °C; 5–90% RH, non-condensing
Size	100 × 70 × 60 mm (H × W × D); DIN-rail

Specifications are subject to change.

Need SNMP instead?

MS0-MS: Modbus RTU and TCP to SNMP, for IT network monitoring.

BACnet to SNMP

MS0-BS: BACnet/IP and MS/TP to SNMP, for the NOC.

Serial to Ethernet

MS0-MBT: Modbus RTU to Modbus TCP, no translation needed.

Connect your Modbus equipment to BACnet.

Contact us for pricing or to talk through your application.

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