Overview

The EZ Gateway M-Bus to Modbus & BACnet (FS-EZX-MBUS-MD-BAC) is an easy to use, high-performance building and industrial automation protocol gateway for integrators to interface M-Bus products to Modbus and BACnet management systems in commercial buildings, campuses and industrial facilities over Modbus RTU, Modbus TCP/IP, BACnet MS/TP or BACnet/IP protocols. M-Bus products encompass a wide range of applications such as energy, gas, heating, water, VFD drives and PLCs.
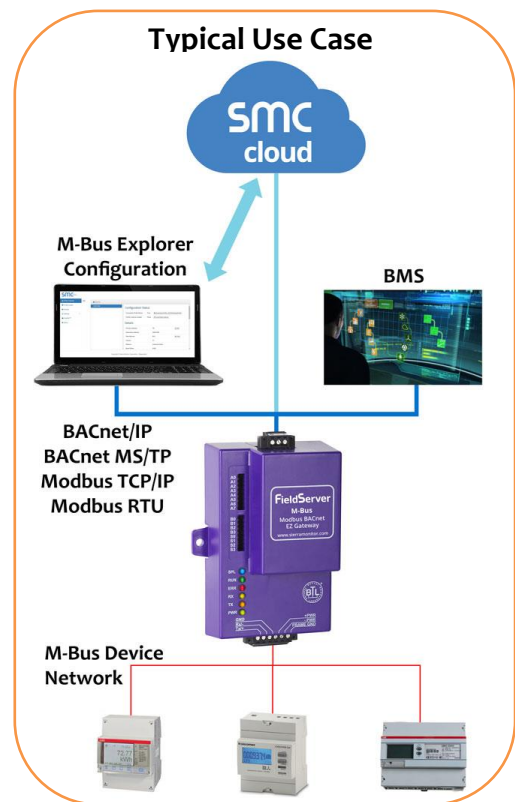
The EZ Gateway M-Bus to Modbus & BACnet combines field-hardened M-Bus, Modbus and BACnet protocol drivers with an easy to use configuration interface that, once configured, allows M-Bus devices to be presented as virtual BACnet devices which simplifies commissioning, configuration and troubleshooting. The intuitive web-based interface allows configurations to be built in the field or in the office. Additionally, the configuration profiles can be downloaded and then uploaded to other FieldServer M-Bus applications, simplifying the commissioning and integration process on repeatable applications.
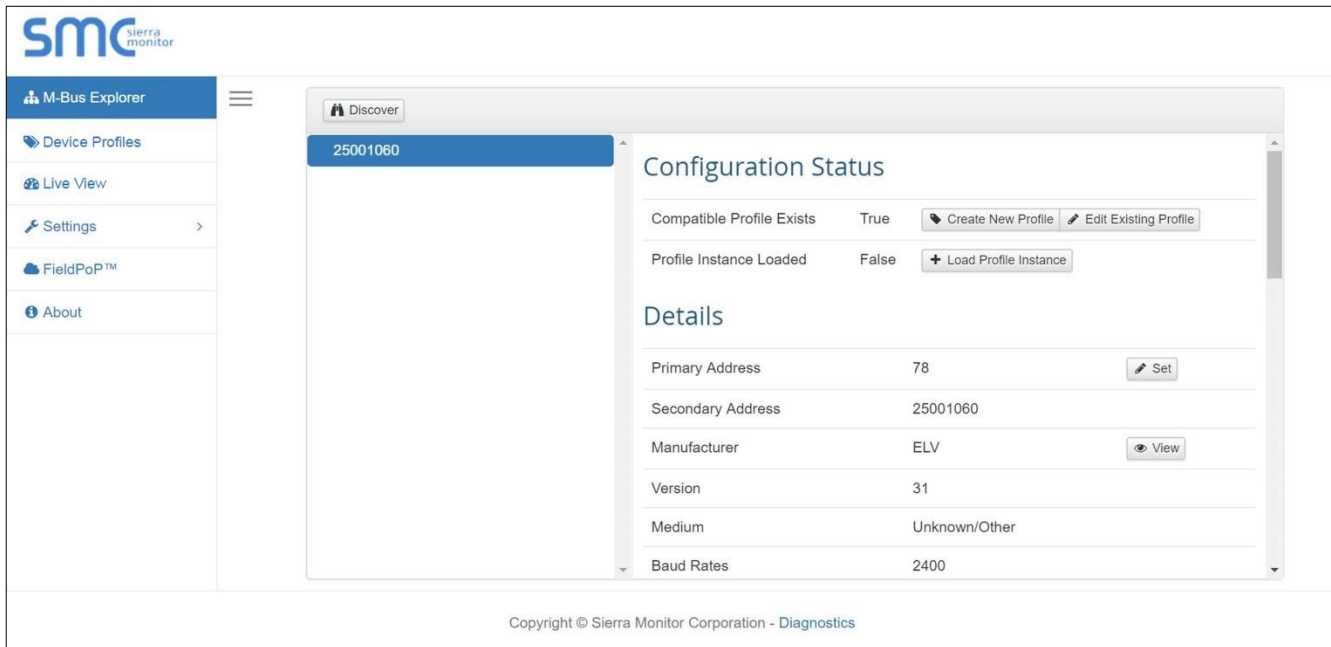
MSA Safety's M-Bus Explorer and Device Profiles apps allow M-Bus devices to be auto-discovered, templatized and presented to quickly configure new M-Bus devices. This makes each corresponding M-Bus device into a virtual BACnet device within the EZ Gateway, providing granular visibility and control over each device from within a BACnet management framework. For example, offline / online status is visible at the individual M-Bus device level.

With the EZ Gateway M-Bus to Modbus & BACnet, the integrator or contractor does not need to be a protocol expert, and can minimize configuration and commissioning time, while also reducing ongoing operating and maintenance costs.

EZ Gateway Features and Benefits

- The M-Bus protocol can be converted to the following protocols:
  - o Modbus RTU
  - o Modbus TCP/IP
  - o BACnet MS/TP
  - o BACnet/IP

- M-Bus Interoperability:
  - o M-Bus Explorer discovers all M-Bus devices in the network, shows the manufacturer details as well as available points, and offers one-click profile generation
  - o Device Profiles management enables efficient profile editing, exporting and importing
  - o Up to 64 slave devices (max device count based on model)
  - o Communication between devices with different baud rates at the same time
  - o Virtual nodes allow any M-Bus device connected to one EZ Gateway to show as unique devices on the BACnet network

- BACnet COV support provides fast data communication while reducing the traffic over a BACnet network

- BACnet BBMD Server support for connecting to remote BACnet networks

- Diagnostics of the devices connected to the network are available via Web Interface

- BTL certified

- **SMC Cloud** registration connects your devices to the cloud, allowing secure remote access for diagnostics, monitoring, alarming and configuration

- On-board diagnostics allow easy troubleshooting for both serial and Ethernet communications

- **FieldSafe** adds a wealth of security options, including: web configuration page authentication (self-signed certificates), robust user and password management features

Typical Use Case

SMC cloud

M-Bus Explorer Configuration

BMS

**BACnet/IP
BACnet MS/TP
Modbus TCP/IP
Modbus RTU**

M-Bus Device Network

Configuration

The configuration interface is used to discover and configure the M-Bus to Modbus and BACnet connections. Profiles are created for each M-Bus device to be connected to the EZ Gateway. The EZ profile can be used for additional connections on this EZ Gateway or other EZ Gateways. The EZ profiles can be shared amongst anyone using the EZ Gateway.

Specifications *

Environment
Operating Temperature: -40 to 75°C (-40 to 167°F)
Relative Humidity: 5-90% RH non-condensing

Power Requirements
9-24VDC or 12-24VAC
Current Draw: @ 12V
1 Slave: 580 mA
64 Slaves: 980 mA

Physical Dimensions
H x W x D: 4.5 x 2.9 x 1.6 in. (11.5 x 7.4 x 4.1 cm)
Weight: 0.4 lbs (0.2 Kg)

Other
Configuration/Diagnostic Utilities
Capacity (part# / max slave devices):
FS-EZ1-MBUS-MD-BAC / 16 slave devices
FS-EZ2-MBUS-MD-BAC / 32 slave devices
FS-EZ3-MBUS-MD-BAC / 64 slave devices
Table, Wall or DIN Rail Mount

Communication
Baud: 2400, 4800, 9600, 19200, 38400
Start Bit: 7, 8
Ethernet: 10/100 BaseT MDIX

Approvals
TUV Approved to UL 916, EN 50491-3, EN 13757-2, EN 13757-3 and CSA C22.2 standards
BTL Certified
RoHS3 and WEEE Compliant
GOST-R Certified
CE and FCC

*** Specifications subject to change without notice**

Ordering Information

The EZ Gateway M-Bus to Modbus & BACnet is available in the following models:

- FS-EZ1-MBUS-MD-BAC   16 slave devices
- FS-EZ2-MBUS-MD-BAC   32 slave devices
- FS-EZ3-MBUS-MD-BAC   64 slave devices

Options

The Accessory Kit consists of a power supply, Ethernet cable, screwdriver, DIN rail mount and a USB flash drive with all manuals, data sheets, discovery tool and ENotes.

- FS-8915-36-QS   Accessory Kit, PSU 110-220V

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