Application

Modbus to M-BUS Conversion

for PowerStudio
Integrating M-BUS units with PowerStudio

In Northern and Central European installations there are many devices that log consumption, equipped with M-BUS communications protocols or interfaces. These equipments measure cold and hot water consumption, as well steam, gas, electricity, etc. Said equipments deliver characteristic parameters of the systems they control, such as, water temperature, volume, flow, pressure or electrical energy consumption, as well as the more basic parameters of an electrical network.

The M-BUS (BUS-Meter) protocol is a communications system for reading energy meters that has been designed to automate data collection by remote control or computer programs. The PowerStudio platform is a system used to gather, analyse and exploit the data from these CIRCUTOR equipment. The Deluxe version enables compiling data from equipments of other manufacturers, they are equipped with MODBUS protocol. In this case, a direct integration of equipment using M-BUS with PowerStudio is not compatible.

There is a simple solution on the market for implementing and adapting M-BUS signals to MODBUS level, so that M-BUS equipment can be integrated into PowerStudio platform.

Requirements for integrating M-BUS equipments with PowerStudio

The requirements for integrating M-BUS equipments with PowerStudio are as follows:

- PowerStudio SCADA Deluxe version
- EDS / EDS-3G equipment with Deluxe version
- EDS / EDS-3G Deluxe combined with PowerStudio SCADA

M-BUS protocol integration device

The device has an associated software for PC on Windows®, which allows:

- Serial communications with the MODBUS converter (RS-232)
- Auto-detection of the M-BUS equipment or slave units
- Creating virtual MODBUS equipments, with the possibility of associating peripheral numbers as if they were physical devices
- Select existing memory maps from database of the most known M-BUS devices on the market
- Generate and save new memory maps for M-BUS devices not listed into the existing database

References

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>CMBUS-8</td>
<td>M-BUS 8 slave meters</td>
<td>M540A0</td>
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<tr>
<td>CMBUS-24</td>
<td>M-BUS 24 slave meters</td>
<td>M540B0</td>
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Use of a MODBUS to M-BUS converter is necessary for integrating the M-BUS protocol with PowerStudio. There are two versions of the product, one for up to 8 M-BUS slaves, and the other for up to 24 M-BUS slaves. This equipment converts all of the parameters of the M-BUS slaves devices connected to MODBUS protocol. The equipment needs a 24 V_ac auxiliary power supply.
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Software for setup with the converter

Database of equipments in the market with M-BUS communications

Connection diagram

PowerStudio SCADA or EDS-Deluxe will serve the data as if it were any other MODBUS slave equipment.
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