

Connecting M-Bus meters to the LoRaWAN network by using M-Bus to LoRaWAN converters



THE ISSUE

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payloads generated by M-Bus meters. To address this problem, a solution must efficiently manage and transmit data generated by M-Bus meters while being compatible with both the LoRaWAN network and the pre-existing M-Bus infrastructure.

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To make installations effective, we had to develop a solution that:

- Allows you to connect any M-Bus meters
- Is battery powered and highly flexible with its configuration
- Allows you to pre-process the data within the hardware to keep the payload size as small as possible
- Sends the data as a standard M-Bus telegram to use any M-Bus parsers
- Has an over-the-air configuration capability
- Has external SMA connector for an installation with bad signal strength – basement installation, district heating stations, etc.

OUR SOLUTION

We use an M-Bus to LoRaWAN converter, which is offered in battery-powered and externally powered versions. The hardware's LUA scripting interface allows us to simply change the device's logic to ensure that the result satisfies your needs and meets the requirements.

The possible adaptation includes but is not limited only to:

1. Implementing the VIF & DIF filter

If we are not modifying the payload, we use the standard M-Bus payload consisting of the M-Bus header and VIF DIF values. Since the standard M-Bus telegram is too long for the LoRaWAN, we filter for the specific VIF and DIF values which we then send over to the LoRaWAN network. VIF and DIF are the identification of the value and its units – ie. Active energy in kWh etc. This allows you to shorten a payload AND to keep the standard M-Bus telegram which can be parsed by any M-Bus parser.

2. Adding a possibility to remotely configure the devices in the field

By using the simple LUA function, you can set any variable as remotely configurable. This allows you to address specific meters in the field, change the reading period or change the VIF DIF filter while the device is already installed. If done properly, there is no need for the local configuration as you can configure almost anything remotely by using the commands over the LoRaWAN network.

3. Supporting the Class-C communication for immediate response

You can configure externally powered units as Class-C devices allowing for immediate action. This can be used when your system operator or user asks for current data outside of the reading period cycle.

By choosing our M-Bus to LoRaWAN converter, customers can benefit from the advantages of a flexible and scalable solution that can connect to any M-Bus meter. Our solution enables customers to take advantage of the benefits of the LoRaWAN network while maintaining compatibility with their existing M-Bus infrastructure. This results in a cost-effective and efficient solution that can be easily integrated into existing systems.

In conclusion, our M-Bus to LoRaWAN converter offers a versatile, dependable, and economical method of integrating M-Bus meters with the LoRaWAN network. Customers that select our solution can take advantage of IoT capabilities while maintaining compatibility with their current M-Bus infrastructure.

STATISTICS

4 minutes

It takes 4 minutes to connect the M-Bus meter due to the WAGO clamps

5 UL

We support the connecting of multiple meters, up to 5 UL.

15 years

With a reading period of 1 hour the device lasts up to 15 years. Safety margin of 30% and self-discharge included.

CONTACT US

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