



**Automations- und  
Steuerungstechnik GmbH**

# **EIB Gateway- Mbus**



**Gateway between Mbus - EIB  
for measuring and controlling  
with Mbus-meters**

**Order code: E001-H009000**



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## Highlights

- Connecting direct to EIB (2-wire)
- Usable in all EIB-Worlds
- reading of actual energie values
- direct reading of consumption meter values
- easy parametrization with the EIBDoktor
- reading of temperatures in flow pipes (forward and reverse temperature)
- up to 16 measuring values / EIBGateway-MBus gateway
- up to 8 MBus-meters / EIBGateway-MBus gateway
- stackable
- cyclic reading (adjustable)
- DIN-Rail mounted device (9Units) with integrated 230V power supply

## Fields of application

- Communication to MBus-energie meters over EIB
- Reading of actual consumption values
- Reading of meter values
- reading of temperatures in flow pipes (forward and reverse temperature)
- Diagnosis

## Contents of delivery

- EIB-MBus-Gateway
- EIBDoktor Software for parametrization
- Documentation



## Introduction

The gateway allows the communication between the EIB and Mbus metering devices. The gateway plays the role of an Mbus master, that means the communication is controlled by the gateway.

Data readout from the metering devices can be done automatically in defined time intervals or on request from a management system.

The hardware of the gateway is built into a 9 units wide din-rail housing with integrated 230V power supply and connections for both Mbus and EIB twisted pair. The device is maintenance free without any moving parts.

## Connections and control elements

A standard EIB Connector is located on the left top of the device, directly beside it the EIB program button and programming -LED.

The programming -LED signals the programming mode for assigning a physical EIB address (continuous on) and the parametrization mode (blinking).

In the mid top position there is a reset button.

The connection to the Mbus is done with screw terminals at the lower side of the device. These are marked with „M“ (the polarity doesn't matter).

The 230V screw terminals are located on the lower right side of the device and are marked accordingly.

On the lower side of the device you find 3 display elements:

EIB Telegram-LED:  
Signals EIB communication.

MBus communication-LED:  
Signals successful data reception from an MBus device.

Power-LED:  
Signals ready status.



## Parametrization

For setting up the gateway parameters please install the EIBDoktor software from the EIBTools-CD. The parameter dialog is located at „Options“, „MBUS Gateway...“.

Kanal	MBUS Adr	AdrTyp	DIndex	Datenformat	GA	Poll
1	0	P	1	Text	0/0/0	0
2	0	P	1	Text	0/0/0	0
3	0	P	1	Text	0/0/0	0
4	0	P	1	Text	0/0/0	0
5	0	P	1	Text	0/0/0	0
6	0	P	1	Text	0/0/0	0
7	0	P	1	Text	0/0/0	0
8	0	P	1	Text	0/0/0	0
9	0	P	1	Text	0/0/0	0
10	0	P	1	Text	0/0/0	0
11	0	P	1	Text	0/0/0	0

Please enter the serialnumber of your device into the field „MBus-GW Serialnumber“. This number is printed on a label attached on the right of the device.

The field „Phys. address“ must contain the physical EIB address you want to be assigned to the device.

The field „Param. address“ needs not to be changed normally, this group-address is used for communication during the parametrization.

The listbox shows the parameters of the different channels. The gateway supports up to 16 channels.



Following parameters must be setup for each used channel:

- 1) MBUS address , either primary or secondary address.  
Most modern MBUS devices support secondary addressing, where the serial number of the device is used as adress.
- 2) Data index, that means which value of the metering device should be read.  
You will find in the available values in the documentation of the MBus device.
- 3) The EIB dataformat of your choice.

The following dataformats are available:

MBUS raw data – The data contents of the specified data index is sent to the EIB without conversion, useful for tests with undocumented measuring devices.

Binary data - The data contents of the specified data index is sent to the EIB as binary value of variable length, used for testing only.

32 Bit Binary data - The data contents of the specified data index is sent to the EIB as 4 byte binary value. A decimal sign is not evaluated, that means a measured value of  
e.g. 1.234 m<sup>3</sup> gives 1234.

32 bit integer - The data contents of the specified data index is sent to the EIB as 4 byte binary value. Only the integer part is taken into account, that means a measured value of  
e.g. 2.345 m<sup>3</sup> gives 2.

IEEE floating point- The data contents of the specified data index is sent to the EIB as 4 byte IEEE floating point value. This format is especially useful for temperature values.

Text - The data contents of the specified data index is sent to the EIB as ASCII Text.  
Useful for displaying on text-capable EIB display devices.

- 4) The groupaddress which is used for this channel.
- 5) The Poll time after which the data is read from the meter and sent to the EIB.  
If the poll time of a channel is set to „0“ the readout of the meter data is not done automatically but triggered by a groupaddress read telegram from the EIB.

The button „store channel setting“ transfers the values from the edit fields into the selected channel within the listbox. Double-clicking on a channel number in the listbox transfers the data from the listbox into the edit fields.





When you are done with the configuration of all channels the setup should be saved to a file with the button "Write to file".

The data is stored in 2 different formats: a binary file with the extension ".MBT" – which can be reloaded to the dialog with the "Load from file" button – and a file with the extension ".TEL".

If you got an EIBWeiche interface for the EIBDoktor you will use the buttons „Write Mbus-GW” respectively “Read Mbus-GW” for the parameter transfer to the gateway. The EIBDoktor must be online for the data transfer.

If you got only the ETS software please do the following steps to download the parameters:

- Start the ETS groupaddress monitor.
- Load the stored „TEL“ file and replay it with the monitor.

#### Parametrization example:

The file „BEISPIEL.MBT“ in this directory shows a possible setup of an gateway.

When you load it into the „MBUS Gateway...” dialog of the EIBDoktor the following setup gets visible:

Channel 1 reads every minute the 1st data item from the device with secondary address 111888 and sends the data to the group address 2/0/0 as text.

Channel 2 reads every minute the 2nd data item from the device with secondary address 111888 and sends the data to the group address 2/0/1 as text.

Channel 1 reads every minute the 3rd data item from the device with secondary address 111888 and sends the data to the group address 2/0/2 as IEEE floating point format.

#### Please note

Not more than 8 MBus devices may be connected to one gateway!