

1. INTRODUCTION

Network Module MB-GATEWAY is used to connect SALDA air handling units to the computer network (Ethernet). Module functions:

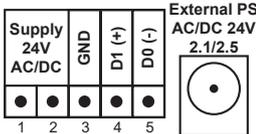
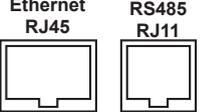
- TCP/IP Modbus gateway
- IPV4 protocol
- WEB server
- FTP server
- Building of Modbus commands using HTTP requests
- Authorized connection
- Automatic data communication between Modbus units
- Updating of the module firmware using MicroSD memory card (the update can be loaded using FTP client as well.)
- RT clock
- Galvanically insulated RS485 communication line

If the network module is not installed factory, you may install it as an option. To do this you need an installation kit consisting of:

1. MB-GATEWAY module with 4GB MicroSD memory card;
2. Sticker with a MAC address and fields for writing down connection settings
3. UTP cable (0.5 m)
4. RS485 communication cable with RJ11 plugs (2 m)
5. Adapter
6. Installation Manual

2. INSTALLATION MANUAL

2.1 Connection

	<p>1 and 2 – power supply connection (e.g. from another (standalone) power supply). 12 V DC/ AC to 25 V DC/AC supply voltage is used, power supply should be at least 2 W. Polarity of the power supply terminals is not important.</p> <p>3 – GND of RS485 communication line</p> <p>4 – D1 (+) of RS485 communication line</p> <p>5 – D0 (-) of RS485 communication line</p> <p><i>Note: Communication line is galvanically insulated from the power supply.</i></p> <p>External PS – power supply with AC/DC adapter (included).</p>
	<p>Ethernet RJ45 – network adapter connector.</p> <p>RS485 RJ11 – RS485 communication line connector.</p>

2.2 Installation

The module can be installed in any convenient for user place (mounting rail is recommended), where the following conditions are ensured:

- ambient temperature -20...70 °C
- relative humidity 30% ... 85% (without condensation);
- protection against vertical falling water drops (IP 20).

2.3 Configuring

If you are going to use some MB-GATEWAYS in the same LAN, you need to change their IP addresses. LAN cannot have more than one unit using the same IP address, thus for configuring of the MB-GATEWAY you need to connect it directly to the PC.

Step-by-step configuration:

1 Apply static TCP/IP settings for the network interface card in the PC that will be used to connect the unit. These settings depend on the OS used, see the OS documentation:

- IP address should begin with 192.168.0 and end with number 1 to 254 except 51, for example: 192.168.0.11
- Subnet mask: 255.255.255.0.

2 Connect the power supply (included).

3 Connect the MB-GATEWAY to the properly configured PC using UTP (RJ45) cable (included). If the connection does not work (the PC does not support Auto MDI-X), connect the PC and MB-GATEWAY to the switch.

4 Enter the MB-GATEWAY IP address (the default one is 192.168.0.51) into the browser (Google Chrome is recommended) address bar.

5 Each page is password protected. When you open the configuration page, you will be asked to enter user name and password. Default user name is "admin", password – "admin". We recommend to change password for security. If you forget your login details you can restore the parameters to factory default settings (see "Restoring factory defaults").

6 If you performed the above steps properly, the MB-GATEWAY configuration page opens. Here you can select the language, set IP address, Modbus (RS485) baudrate, Modbus (RS485) parity, date and time, change user name and password, page theme, open the help file, air handling unit controller's WEB page.

2.4 Restoring factory defaults

If you cannot connect to the device (have forgotten the password, IP address etc.), you always can restore the factory defaults. Steps of restoring the factory defaults:

- 1** Turn off the power supply.
- 2** Open the top flap.
- 3** Holding down the button turn on the power supply.
- 4** When you release the button, the factory defaults are restored.

2.5 Updating of the firmware using MicroSD card

Step-by-step firmware update:

1 Download (http://salda.lt/it/products/category/download_page/) the update FIRMWARE.BIN and save to the MicroSD root directory:

a. if you update using FTP client, you do not need to turn off the power supply;

b. if you save the file to the MicroSD card that is removed from the module, turn off the module power supply before inserting the card back. When you have the card inserted, turn the power supply on.

2 If there is a proper file, the module will start the update procedure. Every ~1 second RJ45 LEDs are flashing in an alternating way. Do not turn off the power supply until the process is not finished.

3 In ~2 min. the module will finish the update and restart to the normal state.

4 When the update is finished, the file FIRMWARE.BIN is automatically deleted.

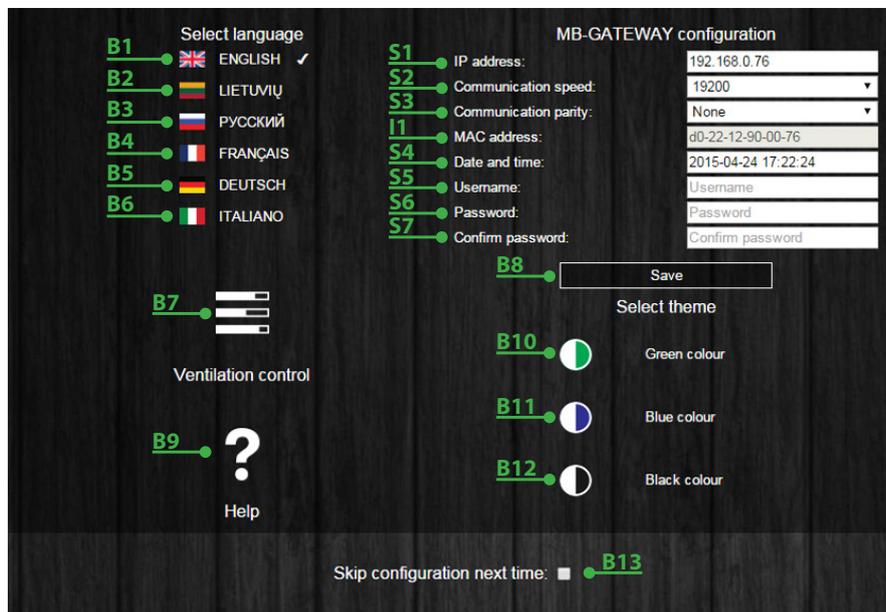
Indications of the RJ45 connector LEDs:

- Both LED indicators flashes slowly and synchronously – MB-GATEWAY has no firmware installed.
- LED indicators flashes slowly in an alternating way – the firmware is being updated.
- LED indicators are off – no power supply and/or connection to the Ethernet.

2.6 FTP server

This module has the built-in FTP server too, so you do not need to remove the MicroSD memory card to access and edit the data on it. FTP server has the same connection data as the protected WEB pages. For the FTP client software use the "Passive Mode" setting.

3. MODULE WEB INTERFACE



Number	Function
I1	Displays the MAC address of the MB-GATEWAY module

Number	Function
B1	Click to switch to the English language
B2	Click to switch to the Lithuanian language
B3	Click to switch to the Russian language
B4	Click to switch to the French language
B5	Click to switch to the German language
B6	Click to switch to the Italian language
B7	Click to open the control window of automatics. The automatics is recognised automatically. If parameters of the RS485 communication line are wrong or the device is connected improperly, after clicking B7 the message that control board is not found will be displayed.
B8	Click to save the MB-GATEWAY module settings
B9	Click to open the PDF help file
B10	Click to switch to the green theme

B11	Click to switch to the blue theme
B12	Click to switch to the black theme
B13	Click to switch on/off the display of this window during start up

Number	Function
S1	The IP address of the MB-GATEWAY module is set
S2	The baud rate of MB-GATEWAY module RS485 communication line is set
S3	The parity of MB-GATEWAY module RS485 communication line is set
S4	The date and time of MB-GATEWAY module is set
S5	The user name of the MB-GATEWAY module is set
S6	The password of the MB-GATEWAY module is set
S7	The password of the MB-GATEWAY module is repeated

