

Getting started PiiGAB 810

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Contents

1. DOCUMENT INFORMATION	3
1.1 VERSIONS	3
2. REQUIREMENTS.....	3
2.1 OPTIONAL REQUIREMENTS	3
3. INSTALLATION AND CONNECTIONS	4
4. PIIGAB 810'S MAC-ADDRESS.....	5
5. IP-CONFIGURATION	5
5.1 DHCP NETWORK.....	5
5.2 STATIC IP	5
6. FIND YOUR PIIGAB 810 ON YOUR NETWORK.....	8
7. CONFIGURE THE PIIGAB 810	9
8. PIIGAB M-BUS SETUP WIZARD – M-BUS COMMUNICATION	11
8.1 COMMUNICATE WITH TEST AND DIAGNOSTIC ADDRESS.....	12
8.2 COMMUNICATE WITH THE METER'S ACTUAL PRIMARY ADDRESS	13
8.3 IDENTIFY THE METER'S ADDRESSES IN THE PIIGAB M-BUS SETUP WIZARD	14
8.4 PARTS IN THE SECONDARY ADDRESS	14
8.5 SECONDARY ADDRESS – IDENTIFICATION NUMBER AND WILD CARDS.....	15
8.6 ENTIRE SECONDARY ADDRESS	15
8.7 WILD CARD WITH SECONDARY ADDRESS	16
9. APPENDIX	17
9.1 CONTACTS	17

1. Document Information

This document will describe how to configure the PiiGAB 810 for M-Bus communication with one M-Bus meter using static IP or DHCP.

If you see something that is not correct in this document, that misleads you or if you are missing something please contact us so we can improve this document continuously. See contact information at the end of the document.

1.1 Versions

Version	Modified by	Details
1.00.00	Stefan Eriksson	Initial version

2. Requirements

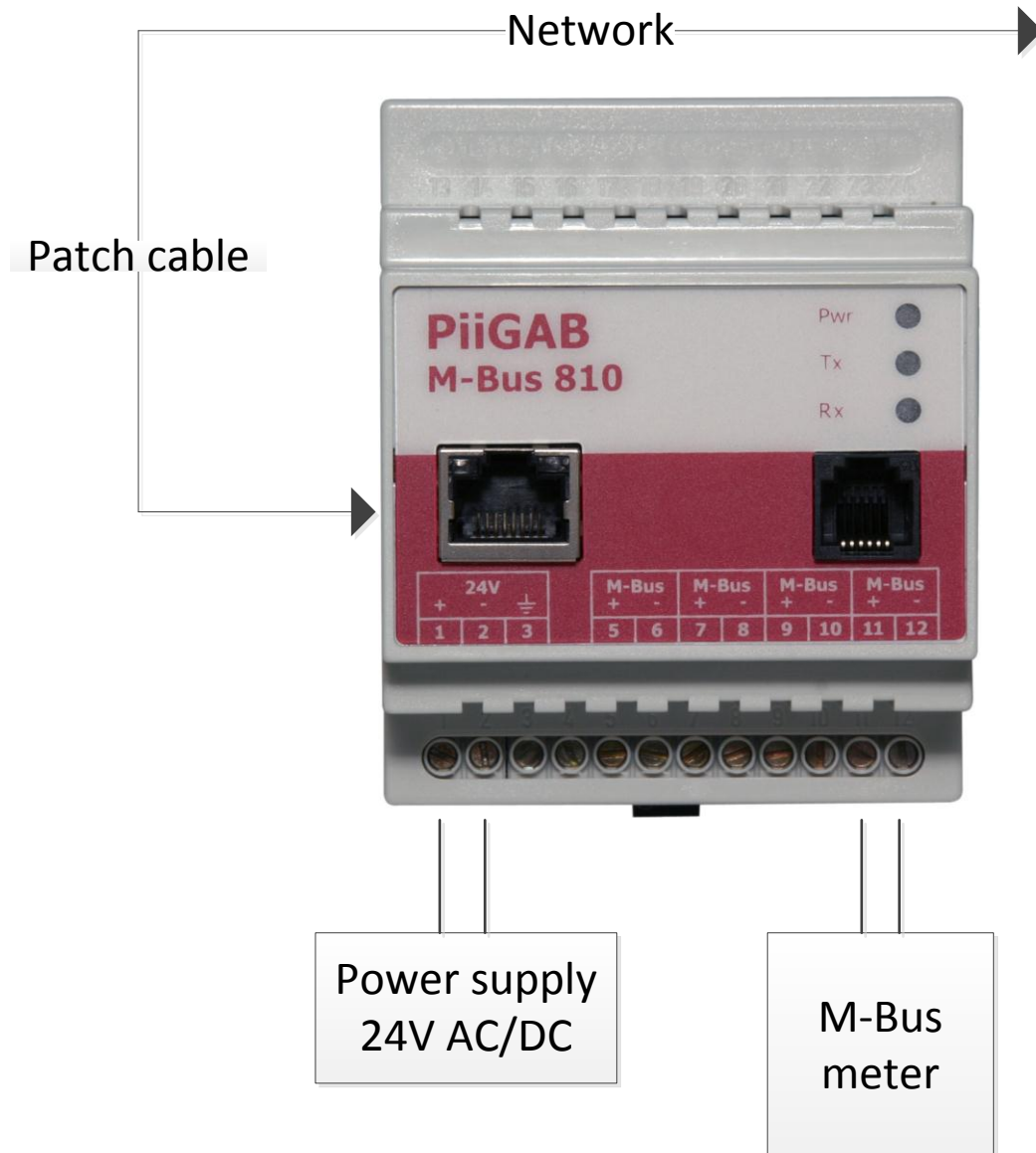
Object	Detail
One PiiGAB 810	
One M-Bus meter	Supports EN13757
One power supply	24V AC/DC
A patch cable	
PiiGAB M-Bus Setup Wizard	Version 3.1.0 or later

2.1 Optional requirements

Object	Detail
A local area network (LAN)	With DHCP
One network switch	

3. Installation and connections

1. Install PiiGAB M-Bus Setup Wizard
2. Connect PiiGAB 810 gateway to your computer with the patch cable
3. Connect the M-Bus meter to the PiiGAB 810
4. Connect PiiGAB 810 gateway to a 24V AC or DC power supply
5. Turn the power supply on
6. Wait for PiiGAB 810's *Pwr* LED to go steady red



4. PiiGAB 810's MAC-address

On the right gable of the PiiGAB 810 you'll find a label containing the MAC-address of your PiiGAB 810. You can use this to identify your PiiGAB 810 with the PiiGAB M-Bus Setup Wizard software.

Object	Starts with
MAC-address - old	00-20-4A-XX-XX-XX
MAC-address - new	00-80-A3-XX-XX-XX

5. IP-configuration

You can either connect your PiiGAB 810 gateway to a static or DHCP network. The most common IP-configuration of the PiiGAB 810 gateway is for static IP-address. The gateway is by default set to DHCP when delivered.

5.1 DHCP network

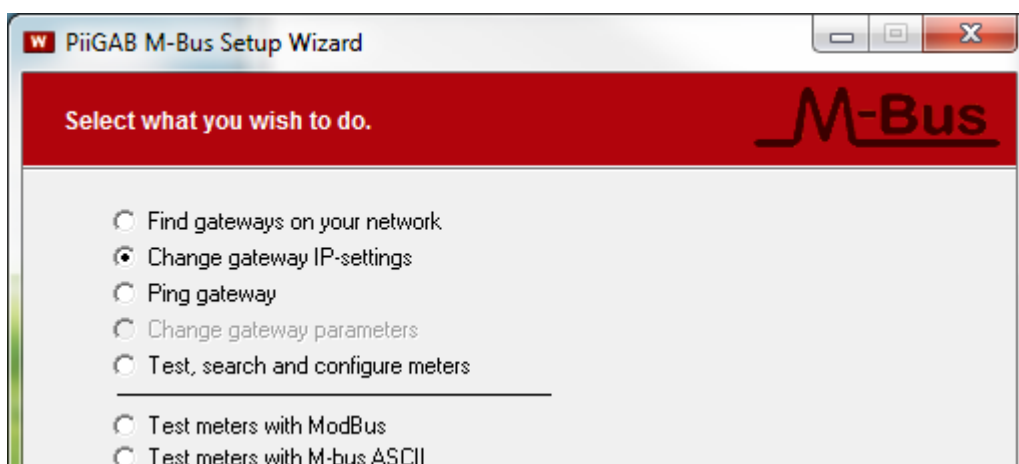
If you have a network with DHCP you can connect your PiiGAB 810 gateway to it and the gateway will receive the IP-configuration automatically.

5.2 Static IP

If you don't have a network with DHCP you must set your PiiGAB 810 gateway to a static IP-address.

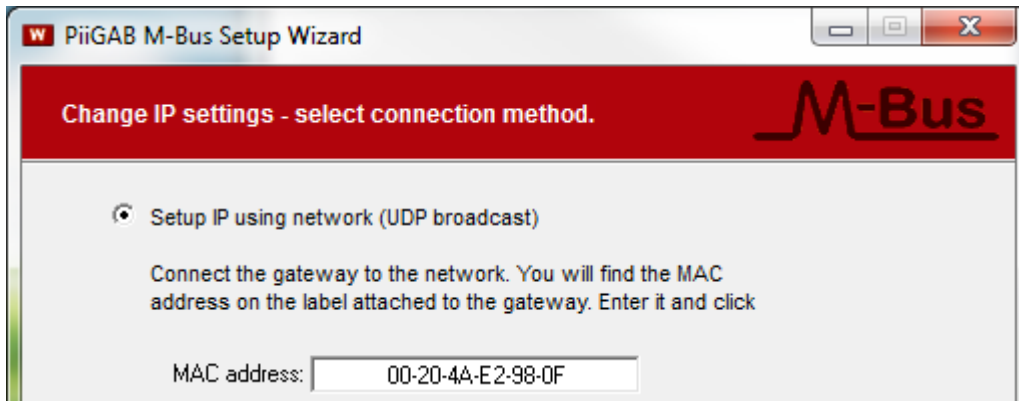
Note: If you have an old computer you might need a network switch between your computer and the PiiGAB 810 gateway.

1. Set your computer to a static IP-address
2. Start the PiiGAB M-Bus Setup Wizard and go to the main menu
3. Select *Change gateway IP-settings*

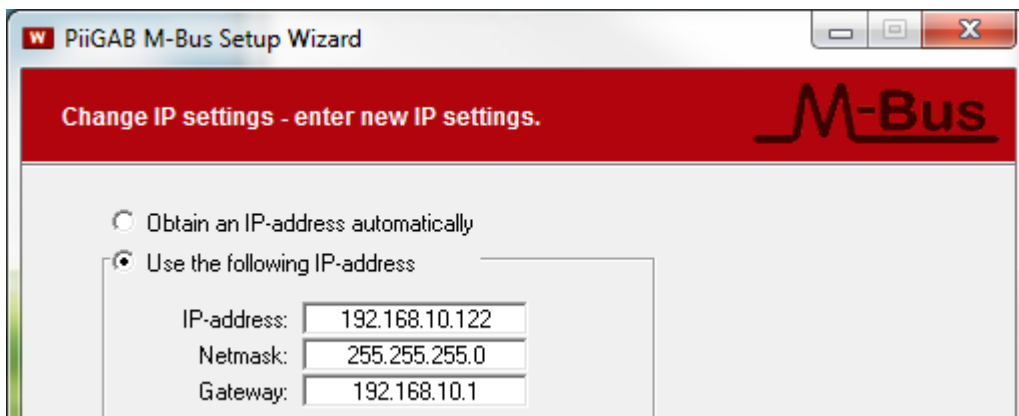


4. Press *Next* to continue

5. Select *Setup IP using network (UDP broadcast)*
6. In the *MAC-address* field specify the PiiGAB 810 gateway's MAC-address



7. Press *Next* to continue
8. Select *Use the following IP-address*

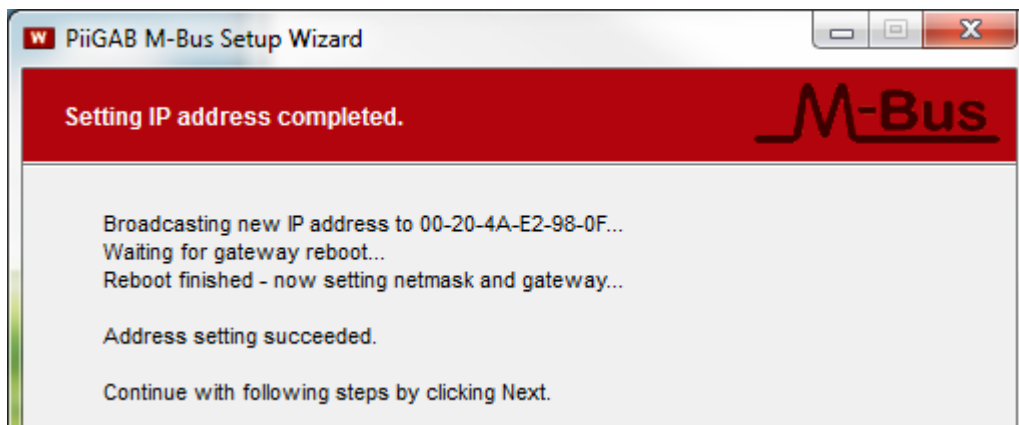


9. Specify the IP-configuration. The PiiGAB 810 gateway should match your computer's IP-address
10. Press *Next* to continue

11. Press *Apply* to set the IP-configuration



12. Wait for the PiiGAB 810 gateway to reboot

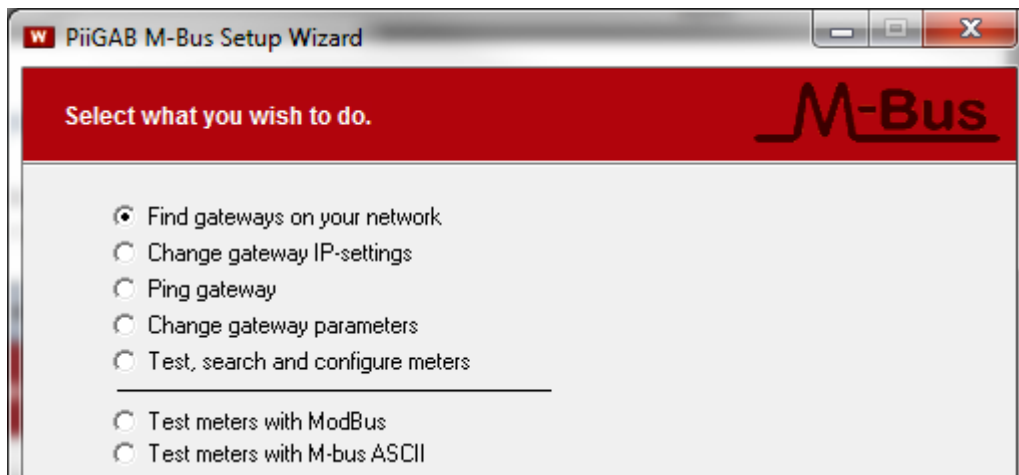


13. Press *Next* to continue to the main menu

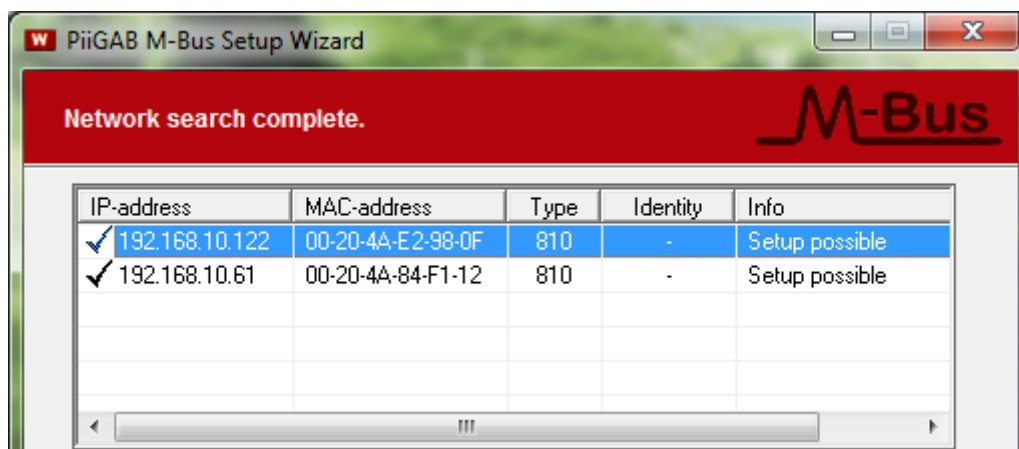
6. Find your PiiGAB 810 on your network

You can use the PiiGAB M-Bus Setup Wizard to find your gateway on the network. This will work for both a network with DHCP or static IP-address configuration.

1. Go to the main menu in the PiiGAB M-Bus Setup Wizard
2. Select *Find gateways on your network*



3. Press *Next* to continue
4. Your PiiGAB 810 gateway should be listed
5. Find your PiiGAB 810 by the *MAC-address* column



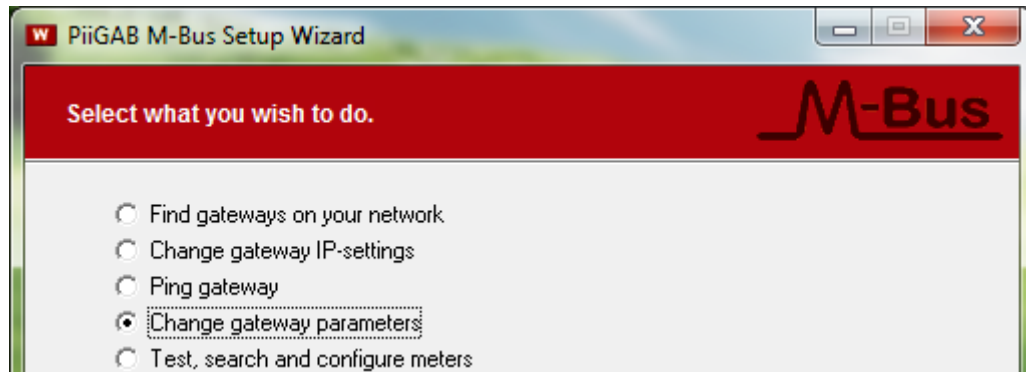
6. Select your PiiGAB 810 gateway and press *Next*

Note: If you placed your PiiGAB 810 gateway on a different sub network you might not find it in the list of available gateways.

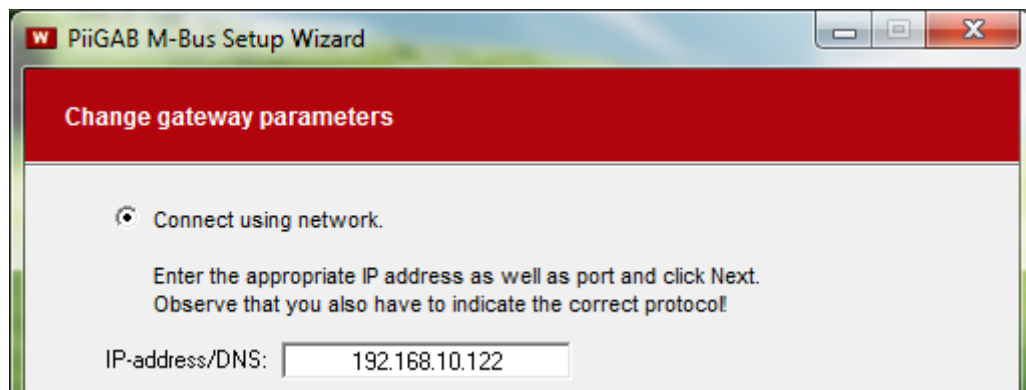
7. Configure the PiiGAB 810

This section describes how the PiiGAB 810 should be configured for M-Bus communication for 2400 baud, UDP and port 10001.

1. In the PiiGAB M-Bus Setup Wizard's main menu click the *Change gateway parameters*



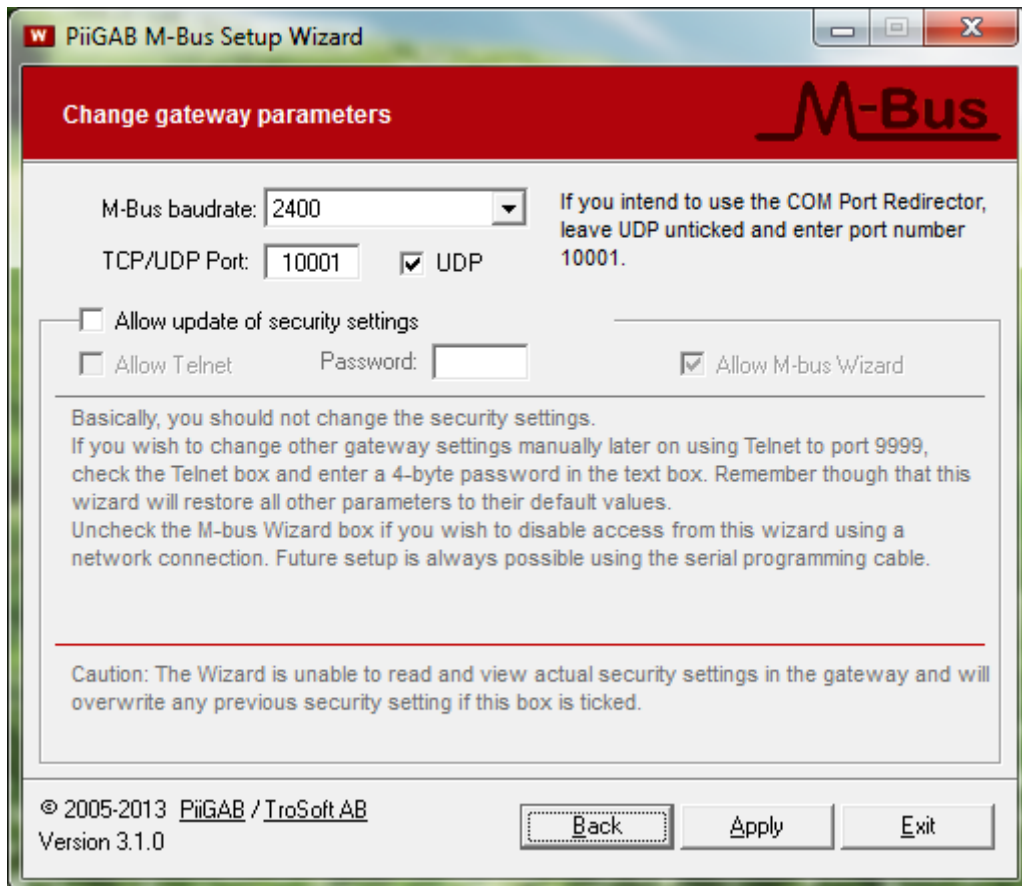
2. Press *Next* to continue
3. Select *Connect using network*



Note: Make sure the PiiGAB 810 gateway's IP-address is shown in *IP-address/DNS* field

4. Press *Next* to continue

5. Configure the PiiGAB 810 with these settings



The screenshot shows the 'PiiGAB M-Bus Setup Wizard' window. The title bar reads 'PiiGAB M-Bus Setup Wizard'. The main header is 'Change gateway parameters' with the 'M-Bus' logo. The settings are as follows:

- M-Bus baudrate: 2400 (dropdown menu)
- TCP/UDP Port: 10001 (text box)
- UDP: (checkbox)
- Allow update of security settings: (checkbox)
- Allow Telnet: (checkbox)
- Password: (empty text box)
- Allow M-bus Wizard: (checkbox)

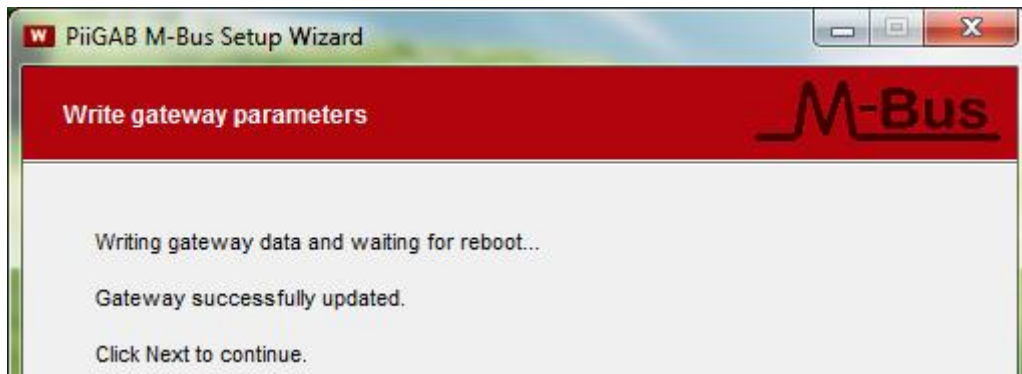
Text on the right: 'If you intend to use the COM Port Redirector, leave UDP unticked and enter port number 10001.'

Text in the main area: 'Basically, you should not change the security settings. If you wish to change other gateway settings manually later on using Telnet to port 9999, check the Telnet box and enter a 4-byte password in the text box. Remember though that this wizard will restore all other parameters to their default values. Uncheck the M-bus Wizard box if you wish to disable access from this wizard using a network connection. Future setup is always possible using the serial programming cable.'

Caution: The Wizard is unable to read and view actual security settings in the gateway and will overwrite any previous security setting if this box is ticked.

Footer: © 2005-2013 PiiGAB / TroSoft AB, Version 3.1.0. Buttons: Back, Apply, Exit.

6. Press the *Apply* button to continue
7. Wait for the program to finish the configuration of the PiiGAB 810 gateway



The screenshot shows the 'PiiGAB M-Bus Setup Wizard' window. The title bar reads 'PiiGAB M-Bus Setup Wizard'. The main header is 'Write gateway parameters' with the 'M-Bus' logo. The content area displays the following text:

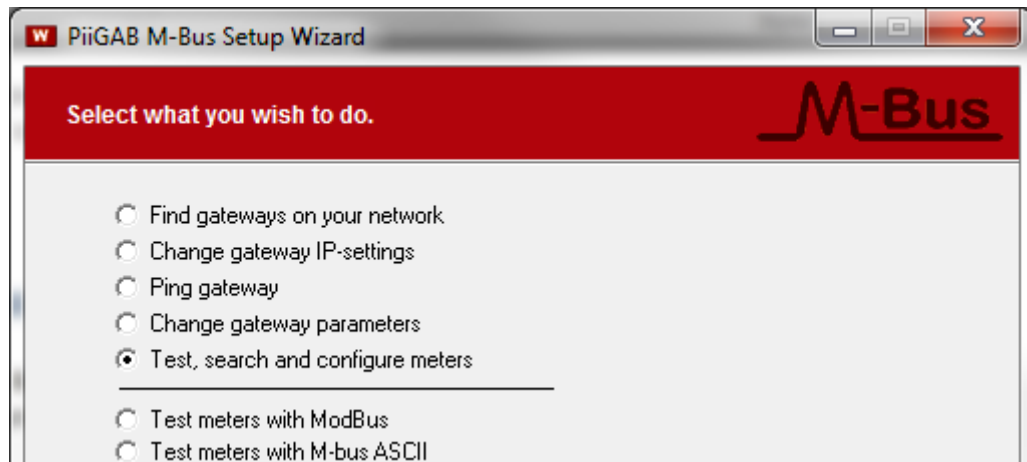
- Writing gateway data and waiting for reboot...
- Gateway successfully updated.
- Click Next to continue.

8. Press *Next* to continue

8. PiiGAB M-Bus Setup Wizard – M-Bus communication

This section will use the PiiGAB M-Bus Setup Wizard to verify if the PiiGAB 810 and an M-Bus meter respond to M-Bus communication.

1. In the main menu select *Test, search and configure meters*



2. Press *Next* to continue
3. Select *Connect using network* and configure the connection as shown in the picture below



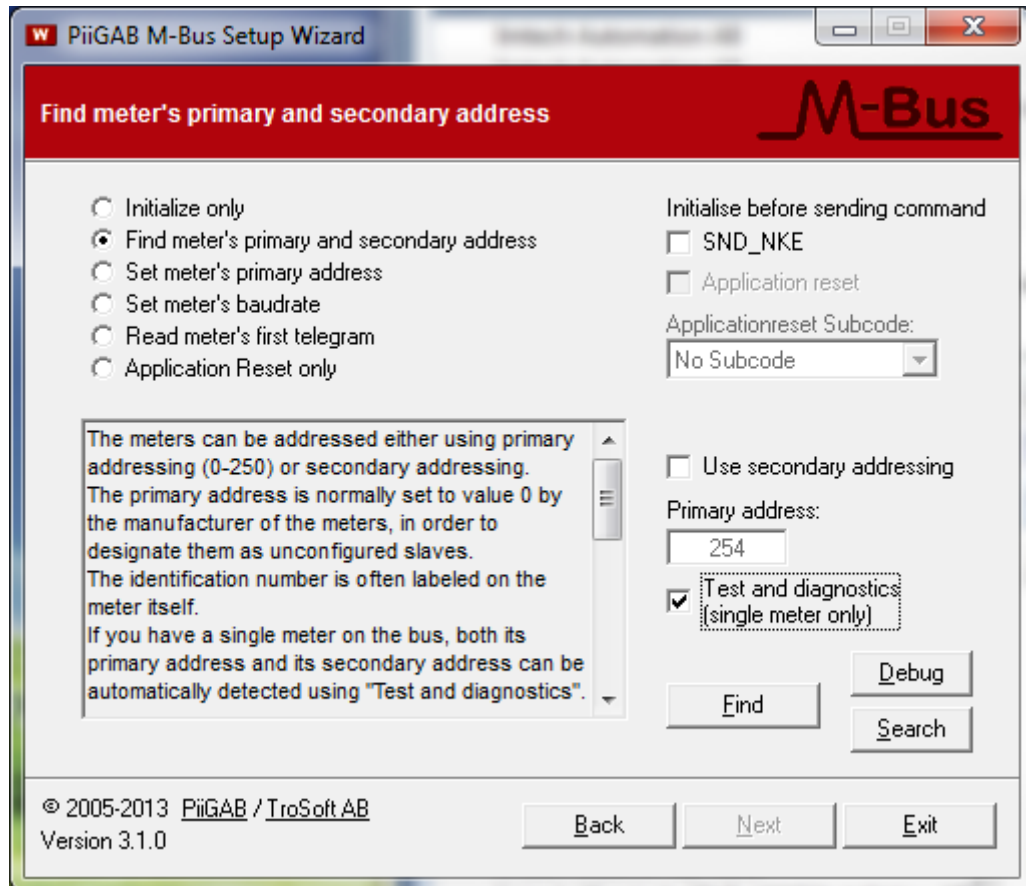
Note: Your PiiGAB 810's IP-address may not be 192.168.10.122. The PiiGAB M-Bus Setup Wizard only fills in the IP-address automatically as you selected in *Find your PiiGAB 810 on your network*, step 6.

4. Click *Next* to continue

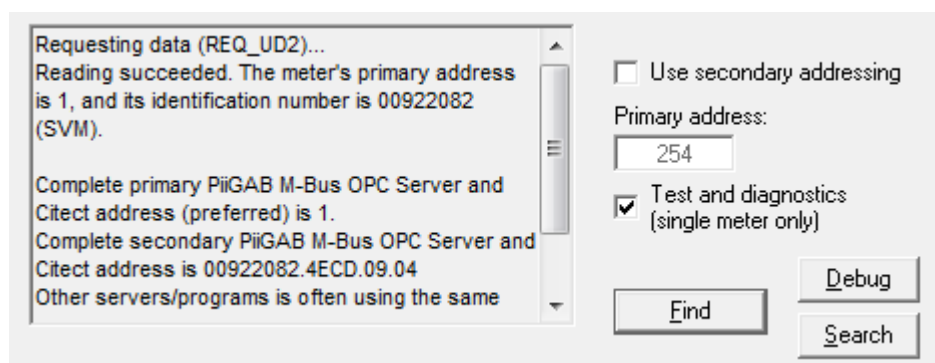
8.1 Communicate with Test and diagnostic address

There is a specific primary address which all M-Bus meters should respond to. This address is called *Test and diagnostic* and has the value 254. This address is very useful if only one M-Bus meter is connected to the M-Bus master and the meter's actual primary address is unknown.

1. Configure as the picture shown below



2. Press the *Find* button to test communication with the M-Bus meter

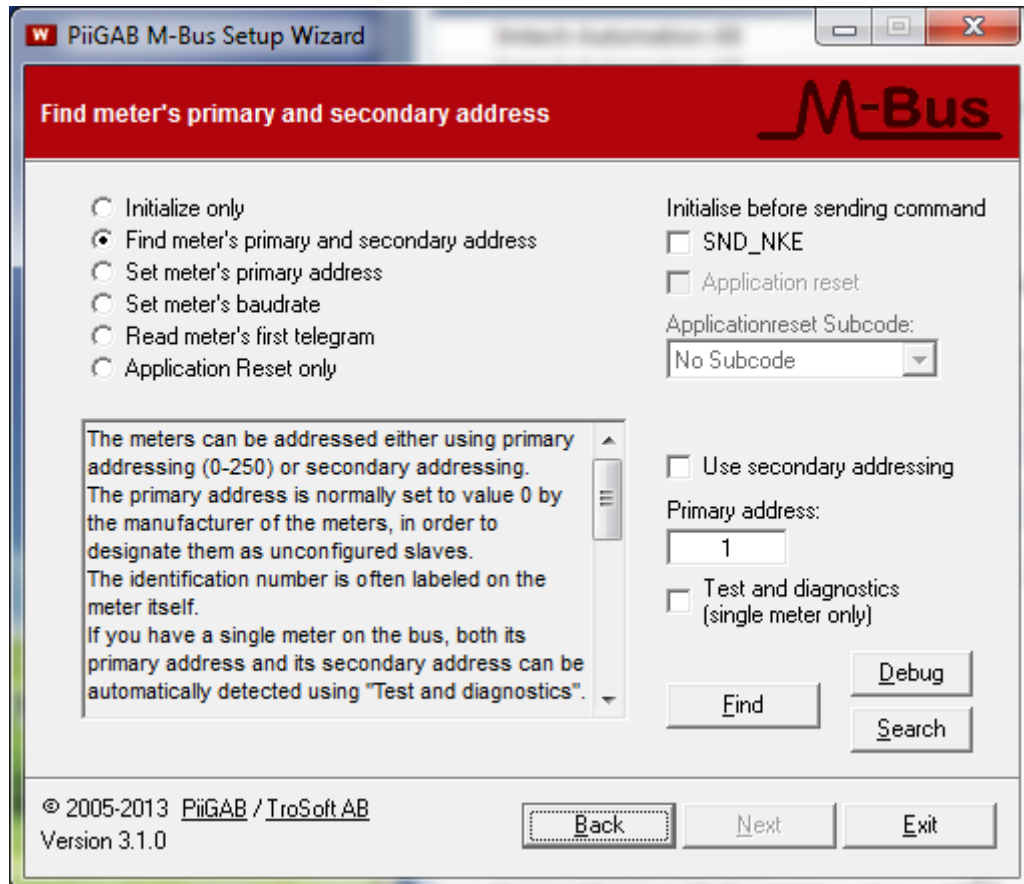


For this example the M-bus meter responded and its primary address is 1.

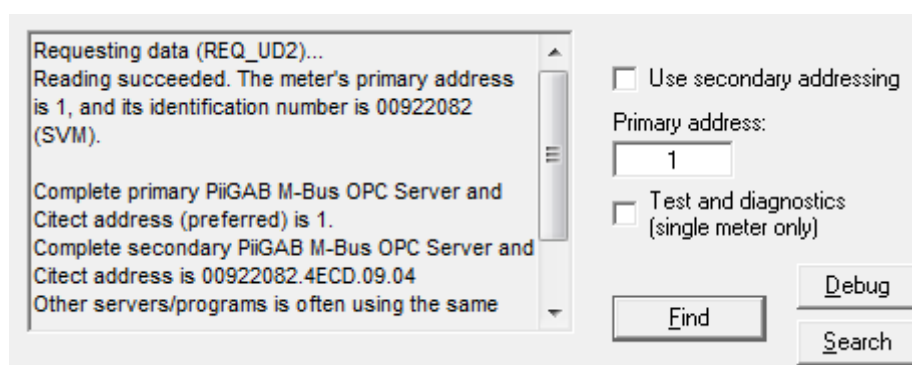
8.2 Communicate with the meter's actual primary address

Always make sure the M-Bus meter responds to the actual primary address.

1. Configure as the picture shown below



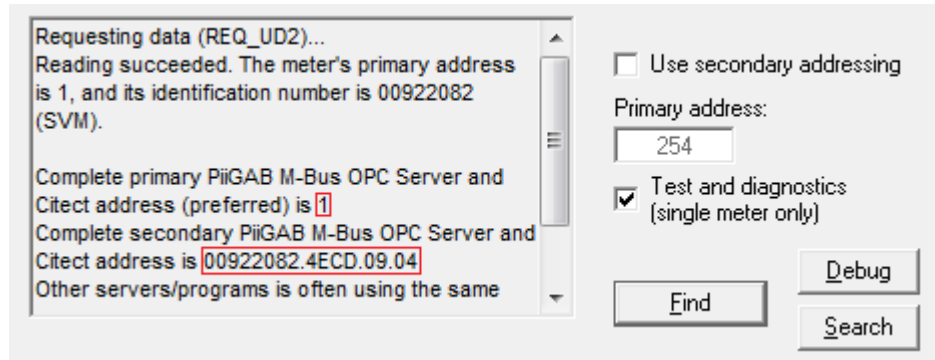
2. Press the *Find* button to test communication with the M-Bus meter



As expected the meter responded to primary address 1.

8.3 Identify the meter's addresses in the PiiGAB M-Bus Setup Wizard

The PiiGAB M-Bus Setup Wizard always shows the meter's actual primary and secondary addresses. In the previous example the meter's addresses are:



Address	Value
Primary	1
Secondary	00922082.4ECD.09.04

8.4 Parts in the secondary address

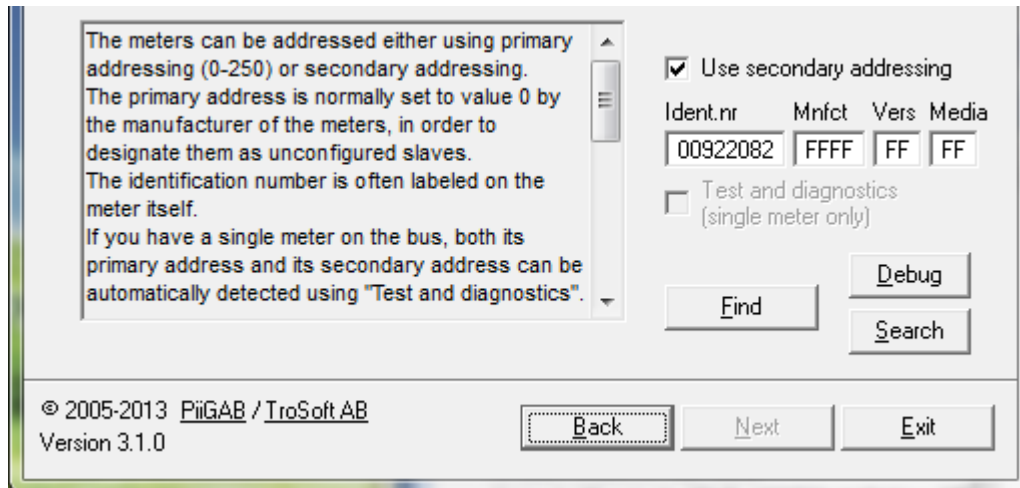
The secondary address is based on four fields. These fields make the meter's secondary address entirely unique. These fields are:

Field	Value
Identification number	00922082 (BCD)
Manufacturer	4ECD (Hex)
Version	09 (Hex)
Media	04 (Hex)

8.5 Secondary address – Identification number and wild cards

As the same with primary addresses, make sure the meter responds to the actual secondary address. For the secondary address there is often just enough to specify the identification number.

1. Configure as the picture shown below

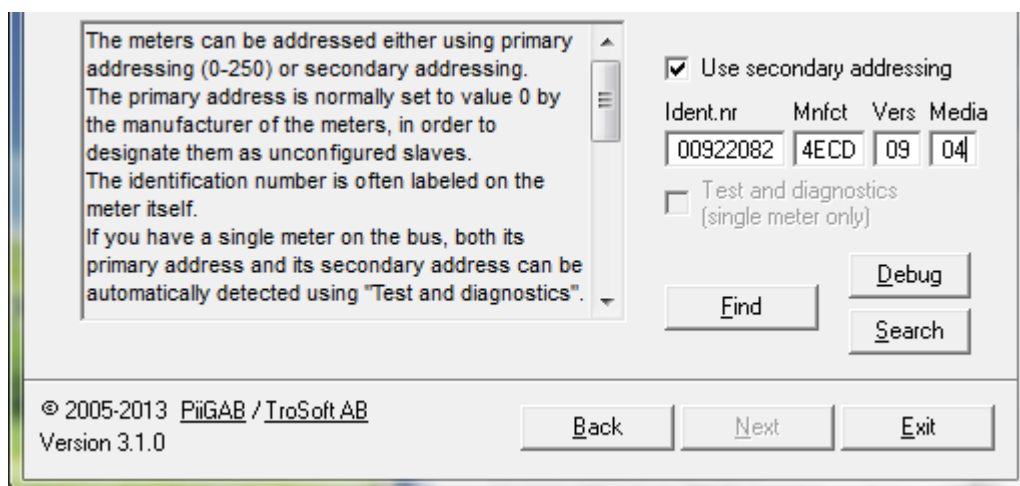


2. Press the *Find* button and test the communication with the meter.

8.6 Entire secondary address

If the meter doesn't respond to the identification number you can enter the entire secondary address.

1. Configure as the picture shown below

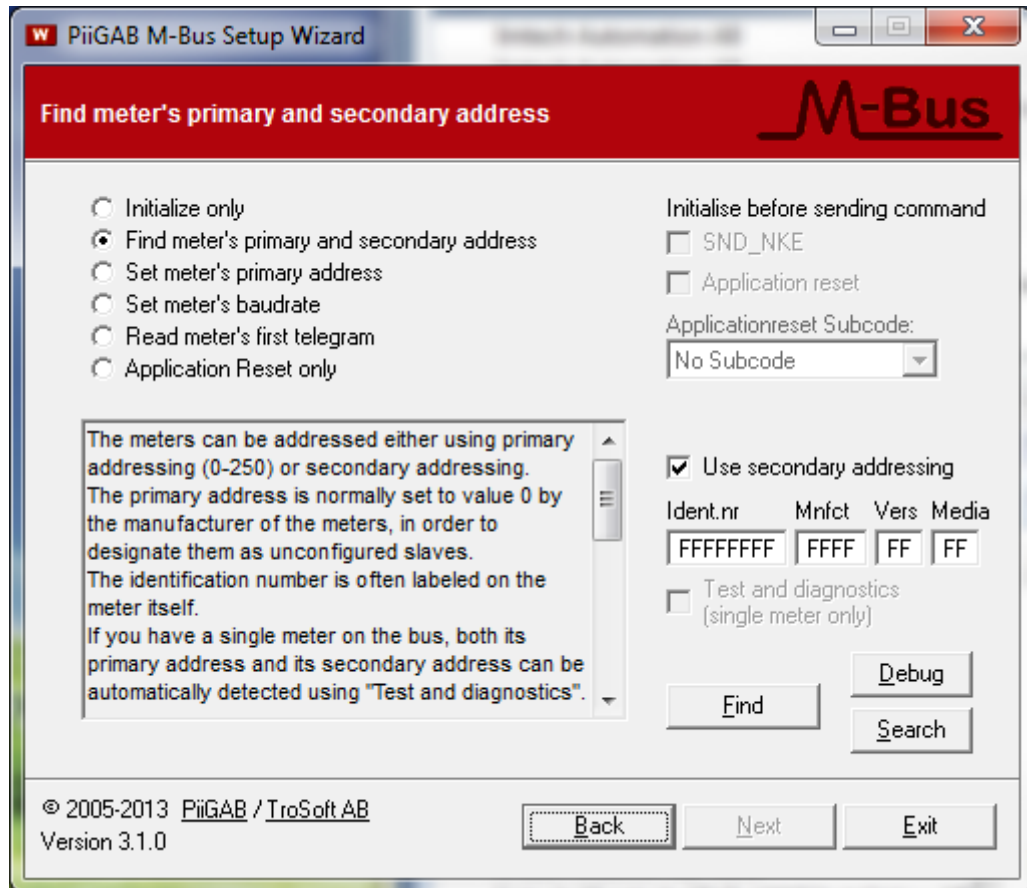


2. Press the *Find* button and test the communication with the meter.

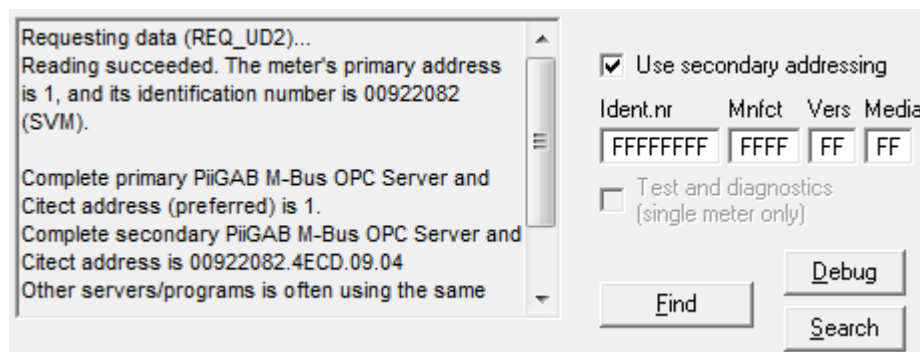
8.7 Wild card with secondary address

Very few M-Bus meters don't support usage of primary addresses. If that is the case then the meter's secondary address must be used. The opposite of *Test and diagnostic* from primary addresses usage is wild cards in the secondary address.

1. Configure as the picture shown below



2. Press the *Find* button to test communication with the M-Bus meter



As expected the meter responded.

9. Appendix

9.1 Contacts

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