PiiGAB
PROCESSINFORMATION

Getting started PiiGAB 900

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Contents

1. Document Information

This document will describe how to configure the PiiGAB 900 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

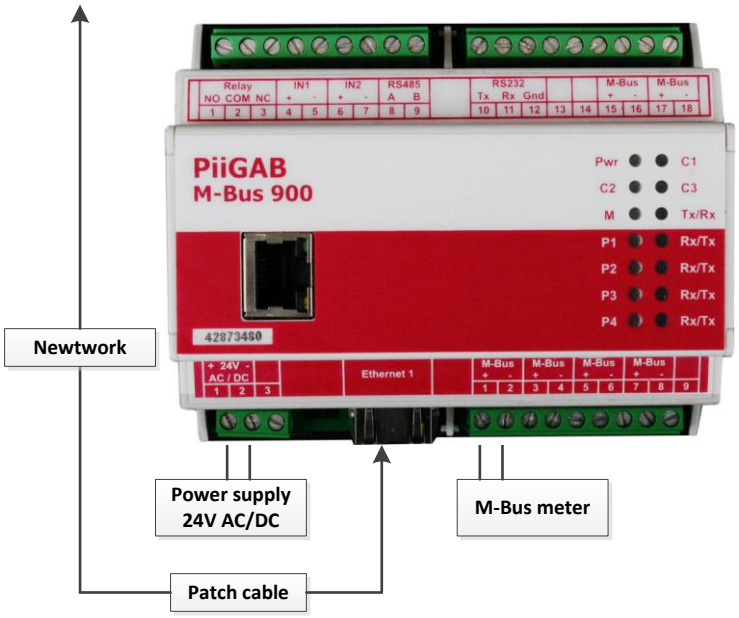
Object	Detail
One PiiGAB 900	For at least 5 M-Bus loads and one client
One M-Bus meter	Supports EN13757
One power supply	24V AC/DC
A patch cable	
PiiGAB M-Bus Setup Wizard	Version 3.1.0 or later

2.1 Optional requirements

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

3. Installation and connections

1. Install the PiiGAB M-Bus Setup Wizard
2. Connect the PiiGAB 900 gateway to your computer with the patch cable
3. Connect the M-Bus meter to the PiiGAB 900
4. Connect the PiiGAB 900 gateway to a 24V AC or DC power supply
5. Turn the power supply on
6. Wait for the PiiGAB 900's *Pwr* LED to go steady red



4. PiiGAB 900's MAC-address and serial number

On the right gable of the PiiGAB 900 you'll find a label containing the MAC-address and serial number of your PiiGAB 900. You can use this to identify your PiiGAB 900 with the PiiGAB M-Bus Setup Wizard.

Object	Starts with
MAC-address	E8-99-5A
Serial number	167#####

5. IP-configuration

You can either connect your PiiGAB 900 gateway to a static or DHCP network. The most common IP-configuration of the PiiGAB 900 gateway is for static IP-address. The gateway is by default set to DHCP when delivered.

5.1 DHCP network

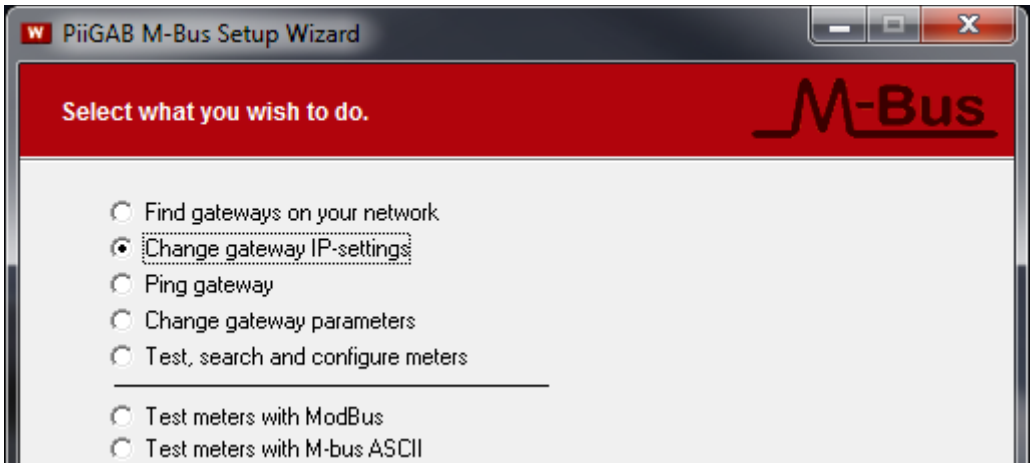
If you have a network with DHCP you can connect your PiiGAB 900 gateway to it and the gateway will receive the IP-configuration automatically.

5.2 Static IP

If you don't have a network with DHCP you must set your PiiGAB 900 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 900 gateway.

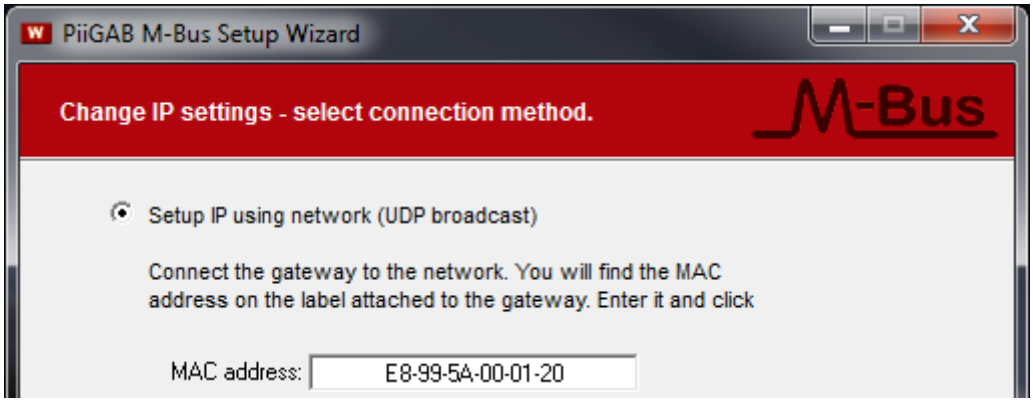
1. Set your computer to a static IP-address
2. Start the PiiGAB M-Bus Setup Wizard and go to the main menu
3. Select *Change gateway IP-settings*



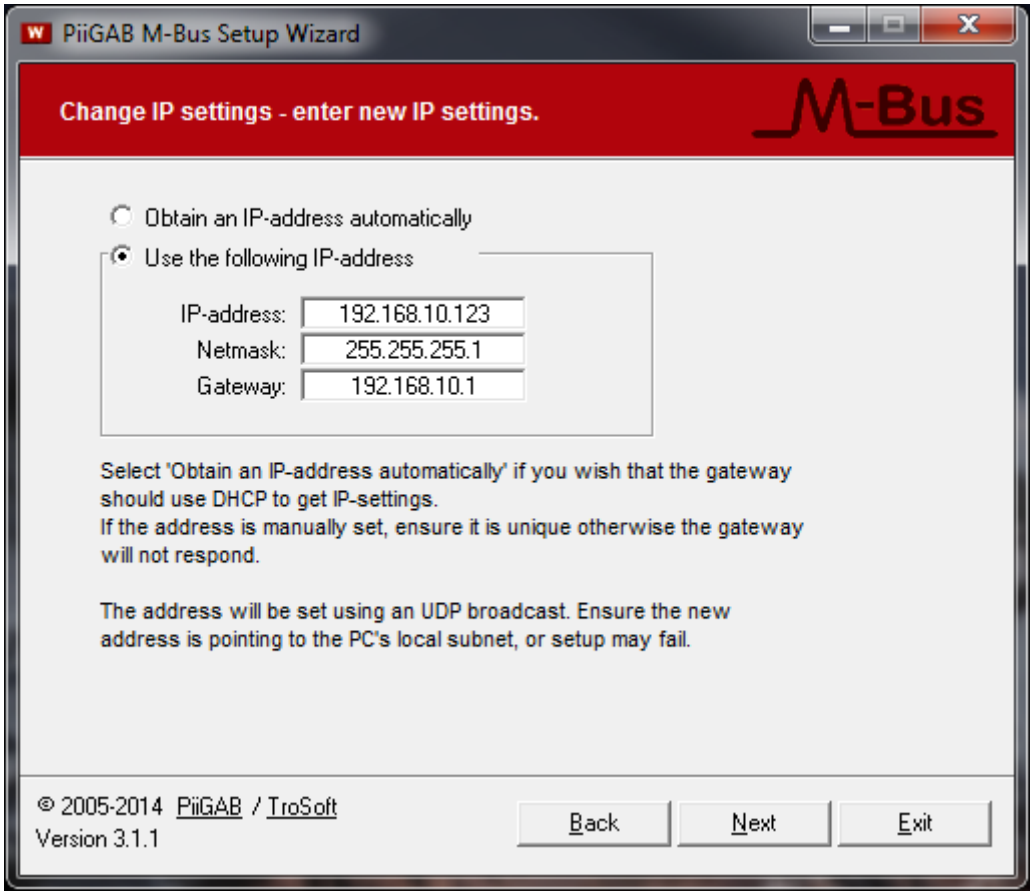
4. Press *Next* to continue

Note:
You can change the IP-address of a PiiGAB 900 with the PiiGAB M-Bus Setup Wizard if you have the PiiGAB 900 Version 2.0.0 or later.

5. Select *Setup IP using network (UDP broadcast)*
6. In the *MAC-address* field specify the PiiGAB 900 gateway's MAC-address

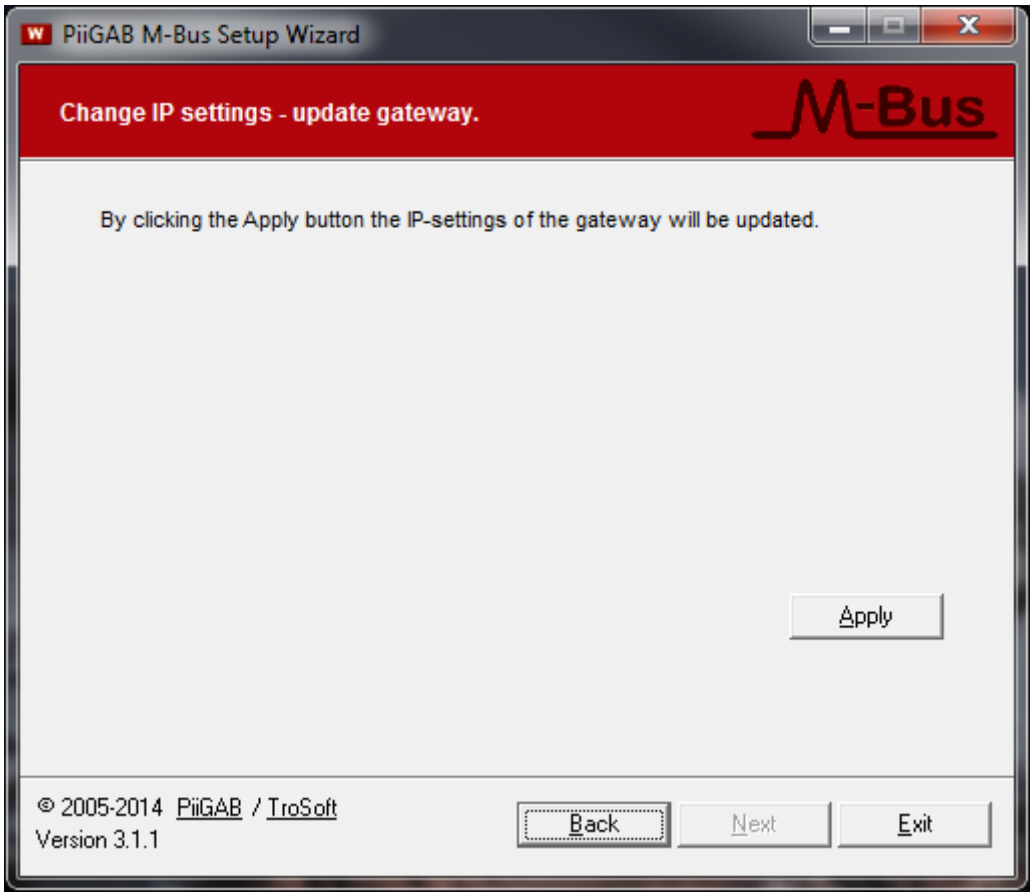


7. Press *Next* to continue
8. Select *Use the following IP-address*

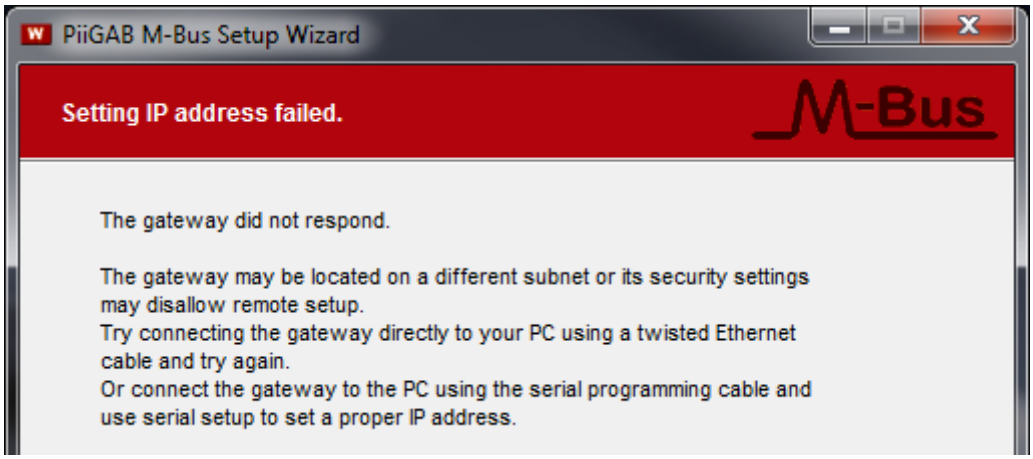


9. Specify the IP-configuration. The PiiGAB 900 gateway should match your computer's IP-address
10. Press *Next* to continue

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



12. Wait for the PiiGAB 900 gateway to reboot



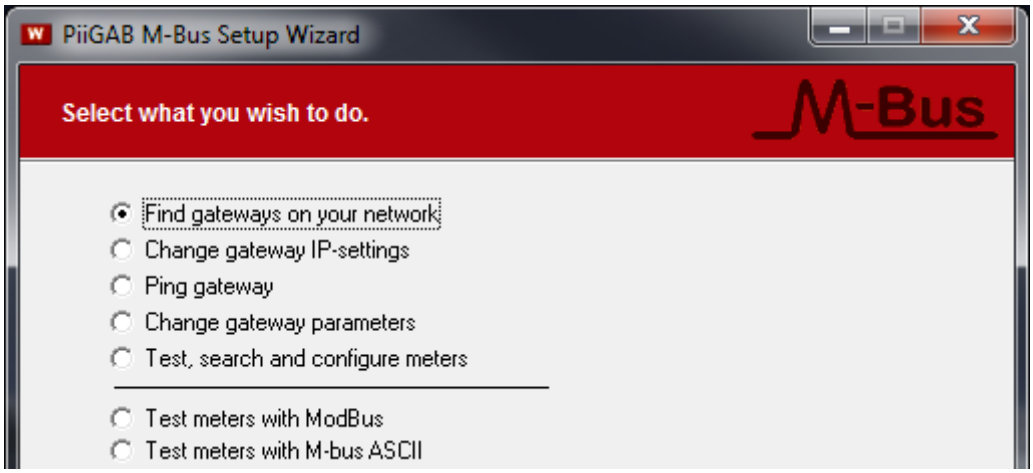
Note that your PiiGAB M-Bus Setup Wizard may signal that it failed to set the MAC-address. Please ignore this warning. The IP-address should be set anyway.

13. Press *Back* three times to return to the main menu

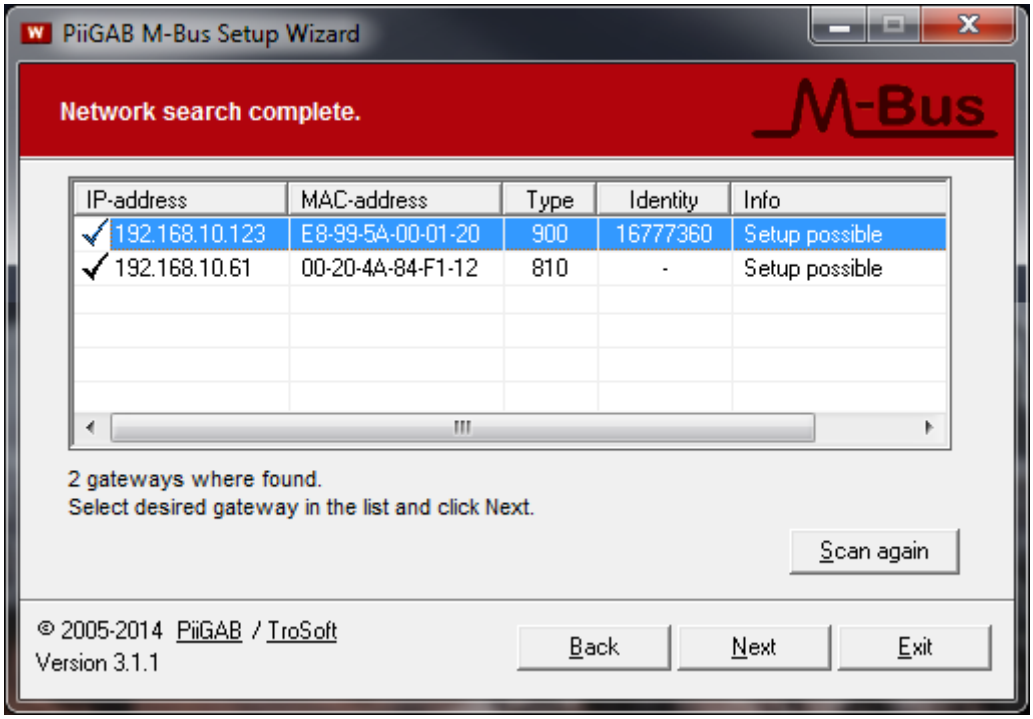
6. Find your PiiGAB 900 on your network

You can use the PiiGAB M-Bus Setup Wizard to find your PiiGAB 900 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 900 gateway should be listed
5. Find your PiiGAB 900 by the *MAC-address* or *serial number*



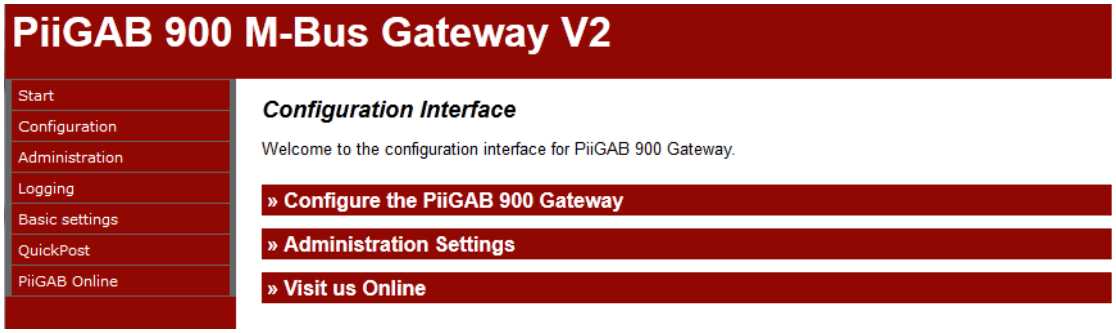
6. Double click on your PiiGAB 900 gateway
7. Select *Yes* when you are asked to start the PiiGAB 900's web interface

Note: If you have placed your PiiGAB 900 gateway on a different sub network you might not find it in the list of available gateways.

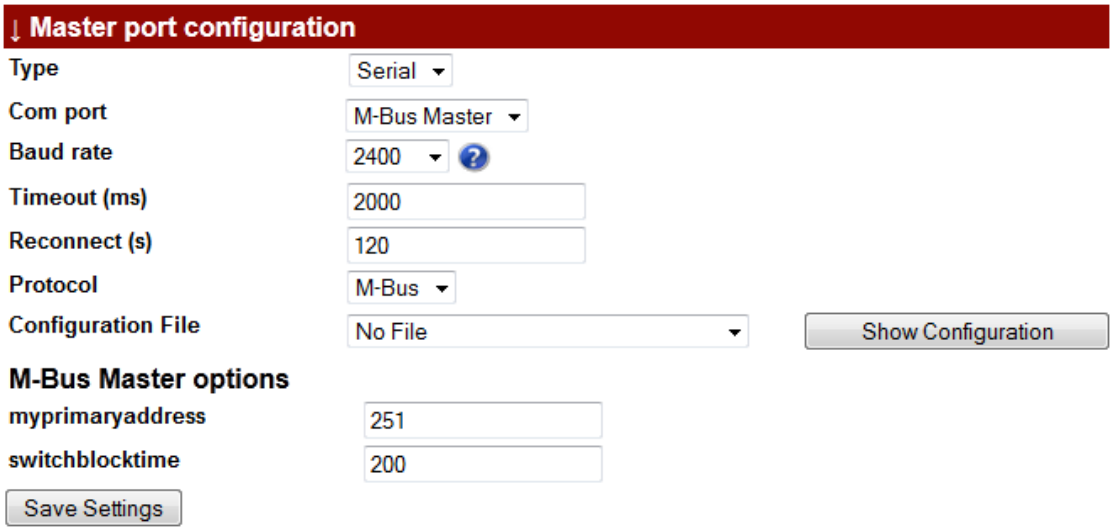
7. Configure the PiiGAB 900

This section describes how the PiiGAB 900 should be configured for M-Bus communication using 2400 baud, UDP and port 10001 through slave port 1. All configuration of the PiiGAB 900 is done in the gateway's web interface.

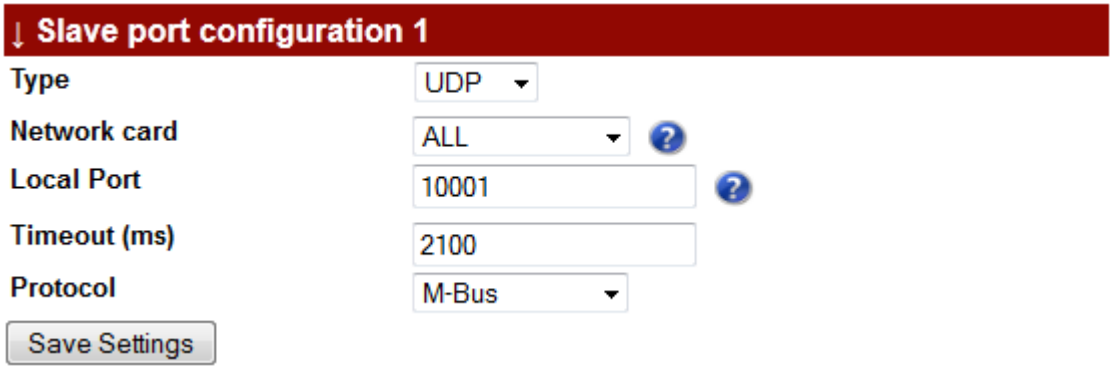
1. Start the PiiGAB 900's web interface
2. Specify the PiiGAB 900's name and password to login
   Default login name and password are: Admin/Admin



3. Click *Configuration* in the left panel
4. Click on *Master Port* and configure it with these settings



5. Press *Save Settings*
6. Click on Slave port 1 and configure it with these settings

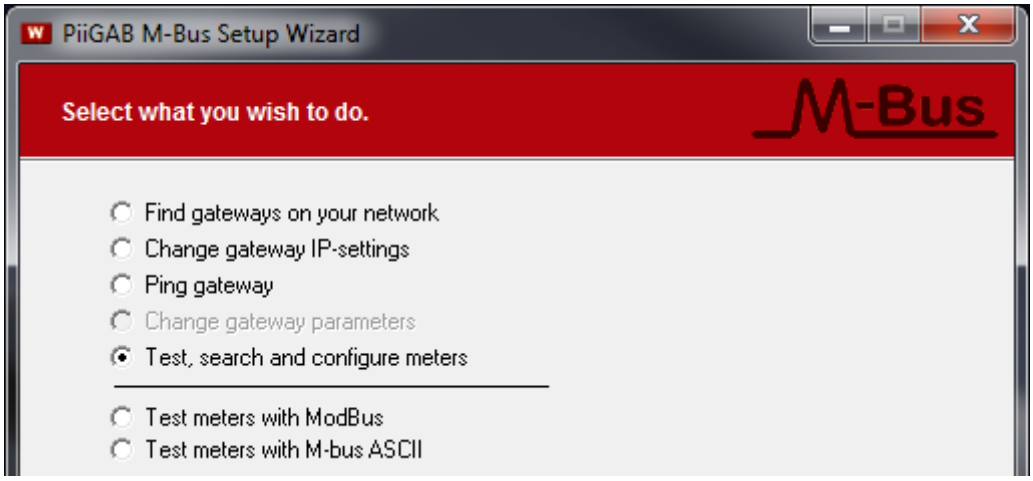


7. Press *Save settings*

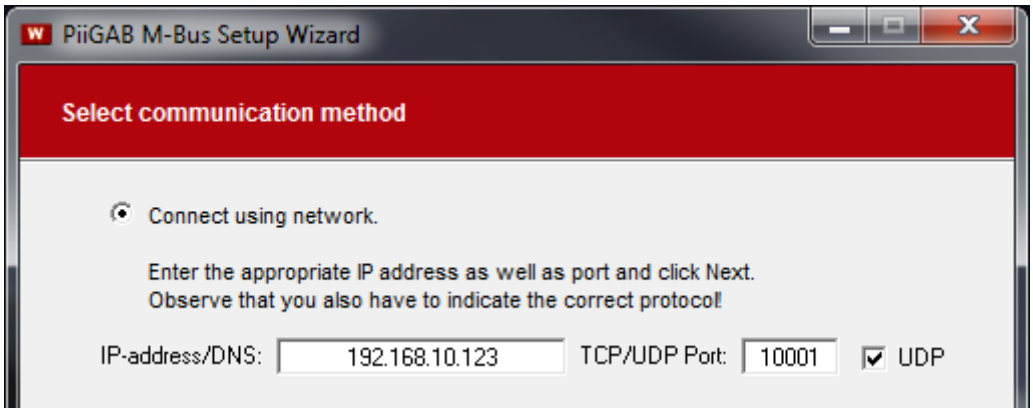
8. PiiGAB M-Bus Setup Wizard – M-Bus communication

This section will use the PiiGAB M-Bus Setup Wizard to verify if the PiiGAB 900 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



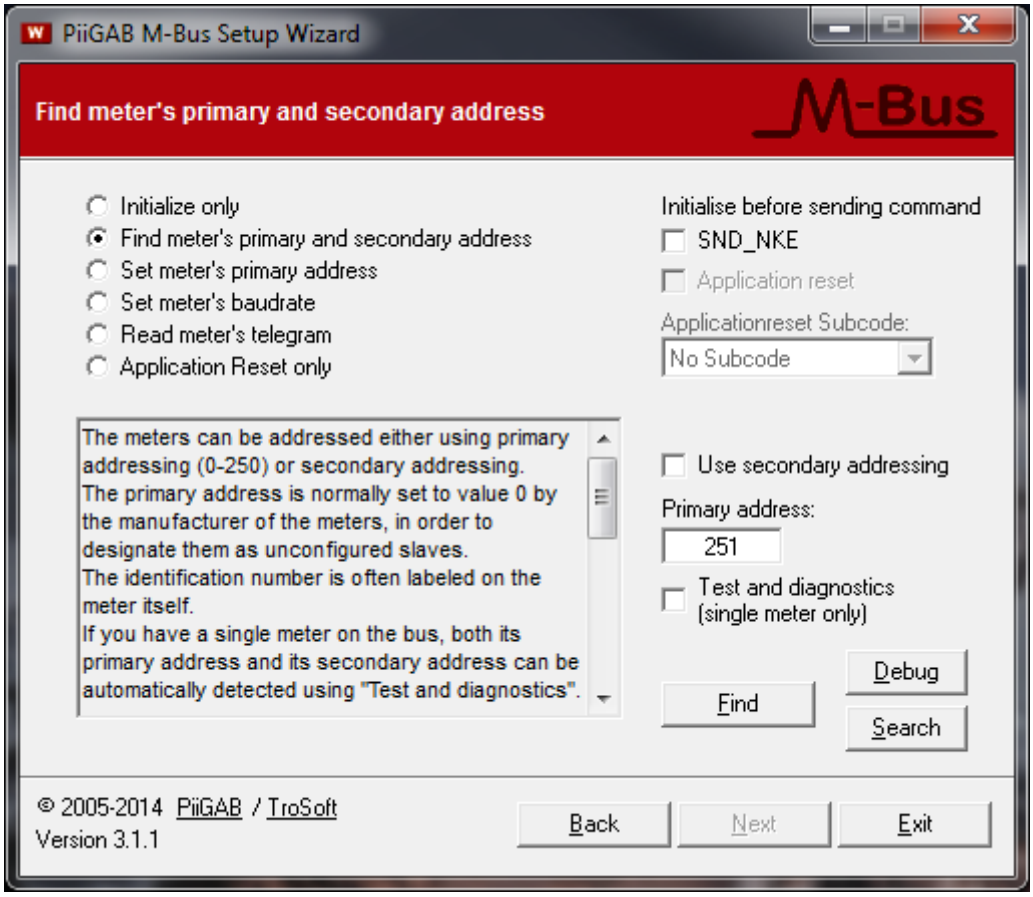
Note: Your PiiGAB 900's IP-address may not be 192.168.10.123. The PiiGAB M-Bus Setup Wizard only fills in the IP-address automatically as you selected in *Find your PiiGAB 900 on your network*.

4. Click *Next* to continue

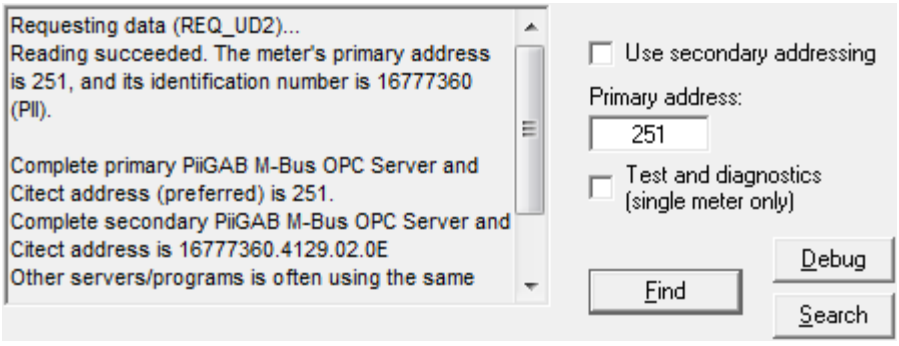
8.1 Communication with the PiiGAB 900's internal meter

Inside the PiiGAB 900 there is an internal M-Bus meter which can be used to read the PiiGAB 900's serial number, M-Bus voltage and M-Bus current. This meter is accessed by primary address 251. By using the internal meter, you can confirm that you have a working communication with the PiiGAB M-Bus Setup Wizard and your PiiGAB 900.

1. Configure as the picture shown below



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

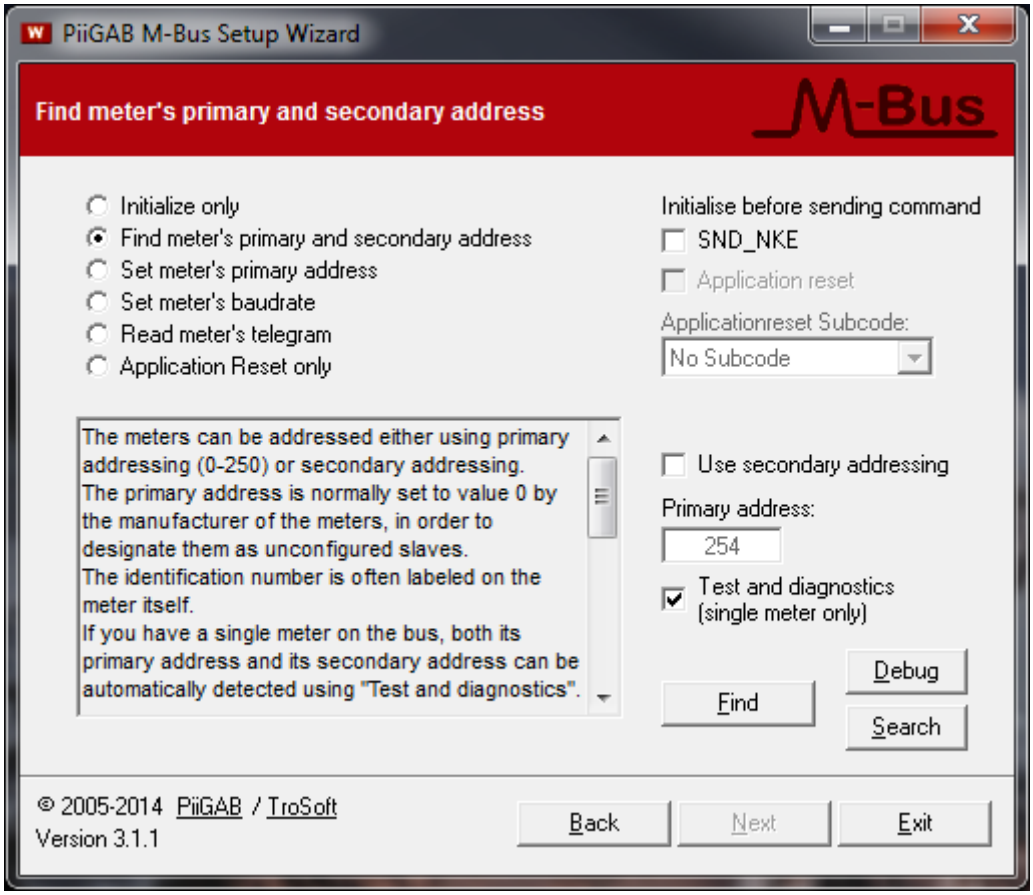


The internal meter responded and you can see the primary address and secondary address. The identification number in the secondary address is the PiiGAB 900's serial number.

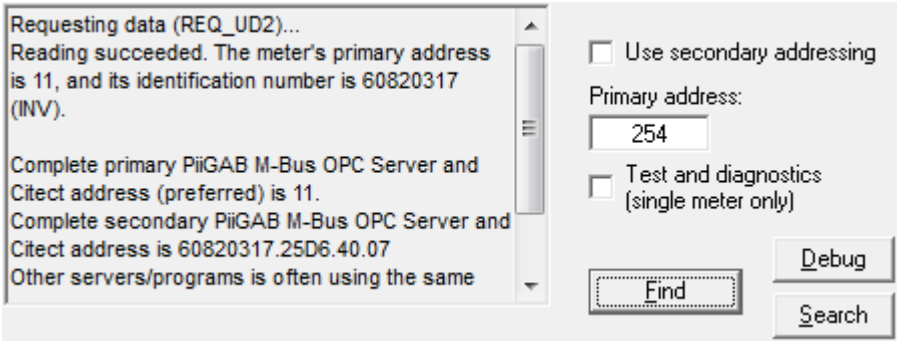
8.2 Communicate with Test and diagnostic address

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

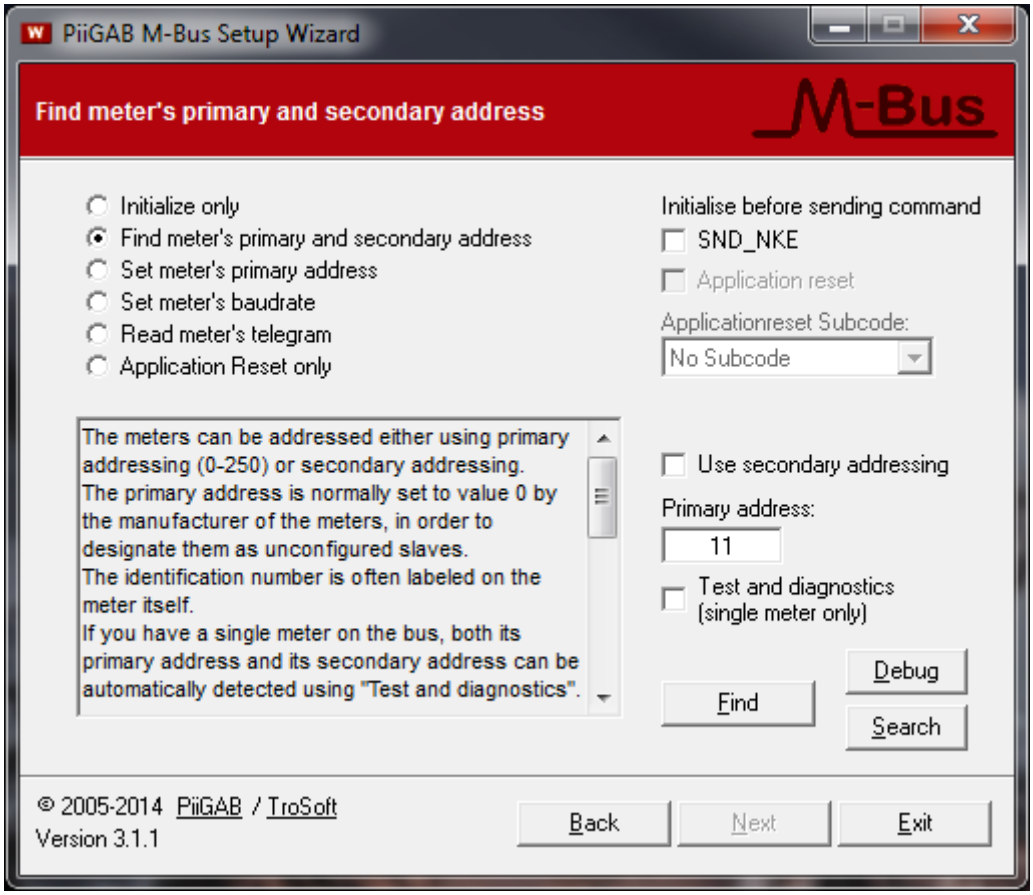


For this example the M-bus meter responded and its primary address is 11.

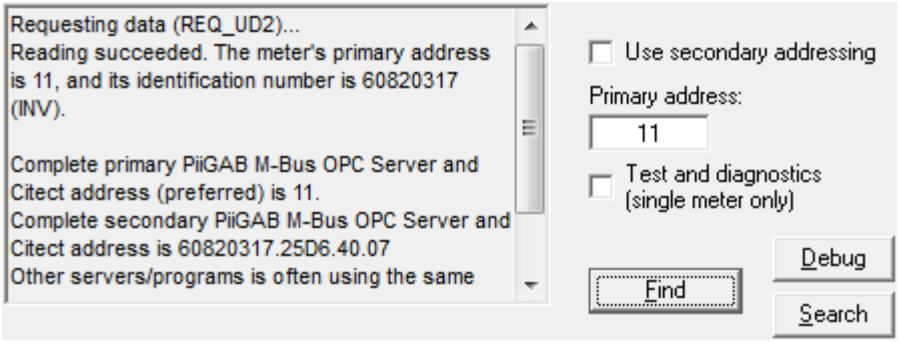
8.3 Communicate with the meter's actual primary address

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

1. Configure as the picture shown below



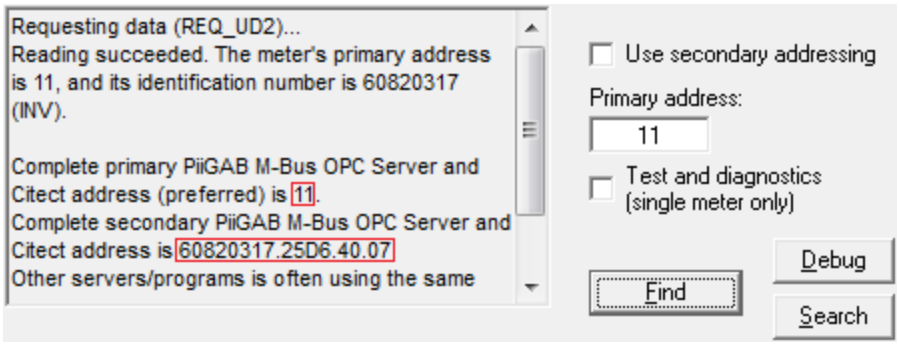
2. Press the *Find* button to test communication with the M-Bus meter



As expected the meter responded to primary address 11.

8.4 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 primary addresses were 11.



Address	Value
Primary	11
Secondary	60820317.25D6.40.07

8.5 Parts in the secondary address

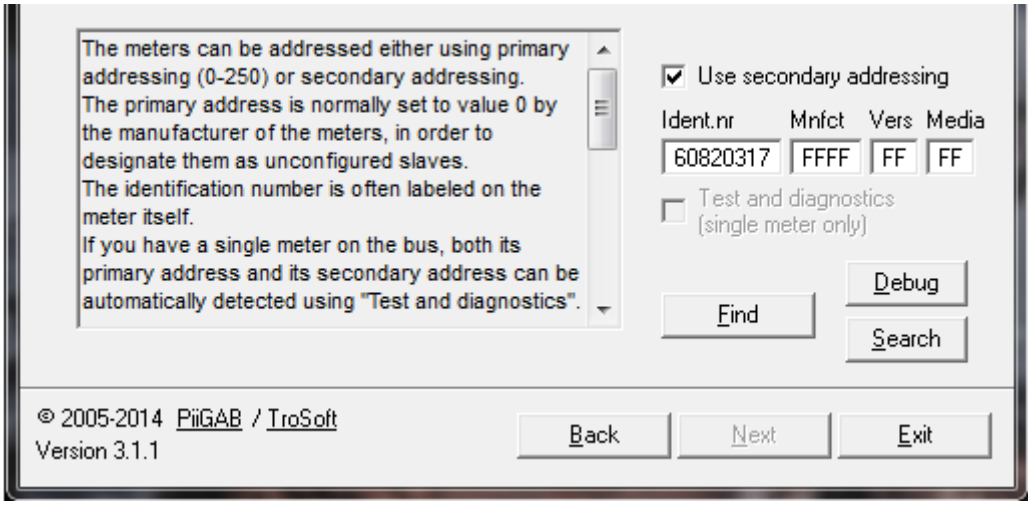
The secondary address is based on four fields. These fields make the meter's secondary address entirely unique. These fields are:

Field	Value
Identification number	60820317 (BCD)
Manufacture	25D6 (Hex)
Version	40 (Hex)
Media	07 (Hex)

8.6 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

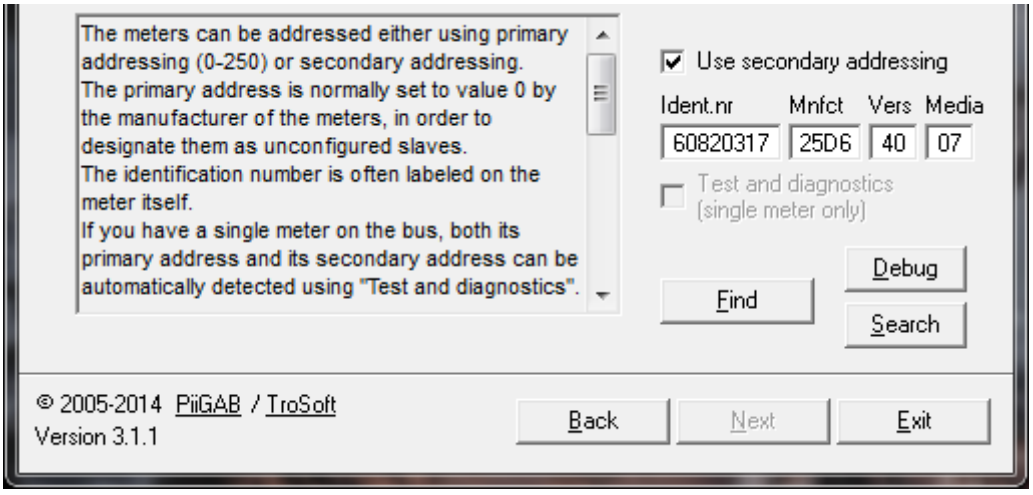


2. Press the *Find* button and test the communication with the meter.

8.7 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

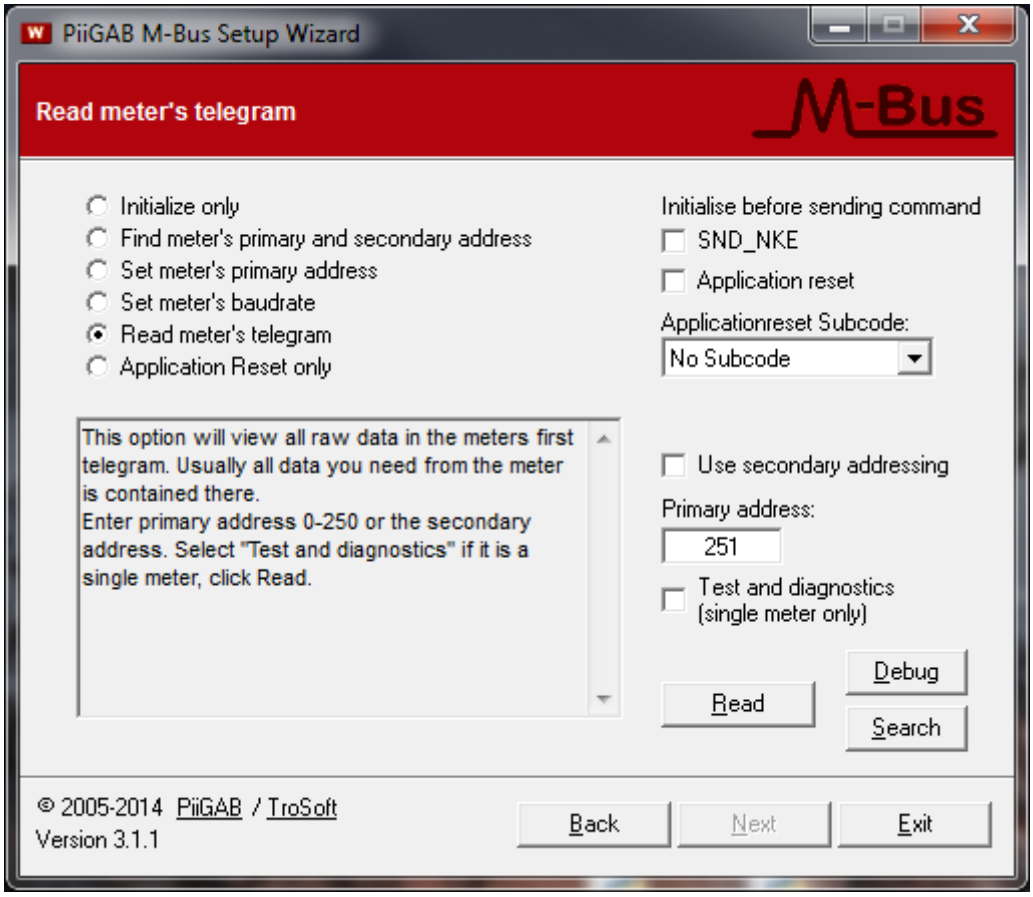


2. Press the *Find* button and test the communication with the meter.

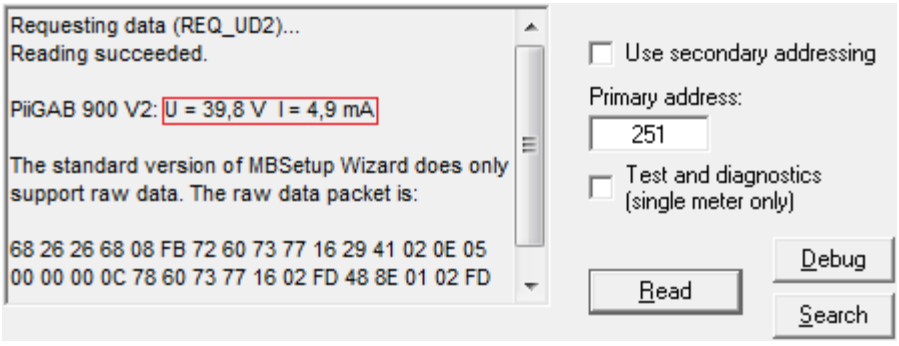
8.8 Read PiiGAB 900 M-Bus voltage and M-Bus current

With a PiiGAB 900 V2.0.0 or later and PiiGAB M-Bus Setup wizard V3.1.0 or later you can read the PiiGAB 900's M-Bus voltage and M-Bus current. This is very useful if you want to make a quick control what's the status of the PiiGAB 900 and the M-Bus loop.

1. Select *Read meter's telegram* and configure as the picture shows



2. Press the *Read* button to read the internal M-Bus meter in the PiiGAB 900



From this response the PiiGAB M-Bus Setup Wizard can read the M-Bus voltage and M-Bus current from the internal meter's response.

9. Appendix

9.1 Contacts

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