

MGate MB3180 Setup Guide

Software & Equipment Needed

In order to setup the MGate MB3180 unit you will need to download and install the MGate Manager software from MOXA. This can be downloaded from

<http://www.moxa.com/support/DownloadFile.aspx?type=support&id=981>.

You will also need a connection from your laptop to the MGate unit using either a crossover cable or through a switch. I always go through a switch to make things a little easier.

Setting up the MGate MB3180 Unit

Start MGate Manager software and you will see this screen.

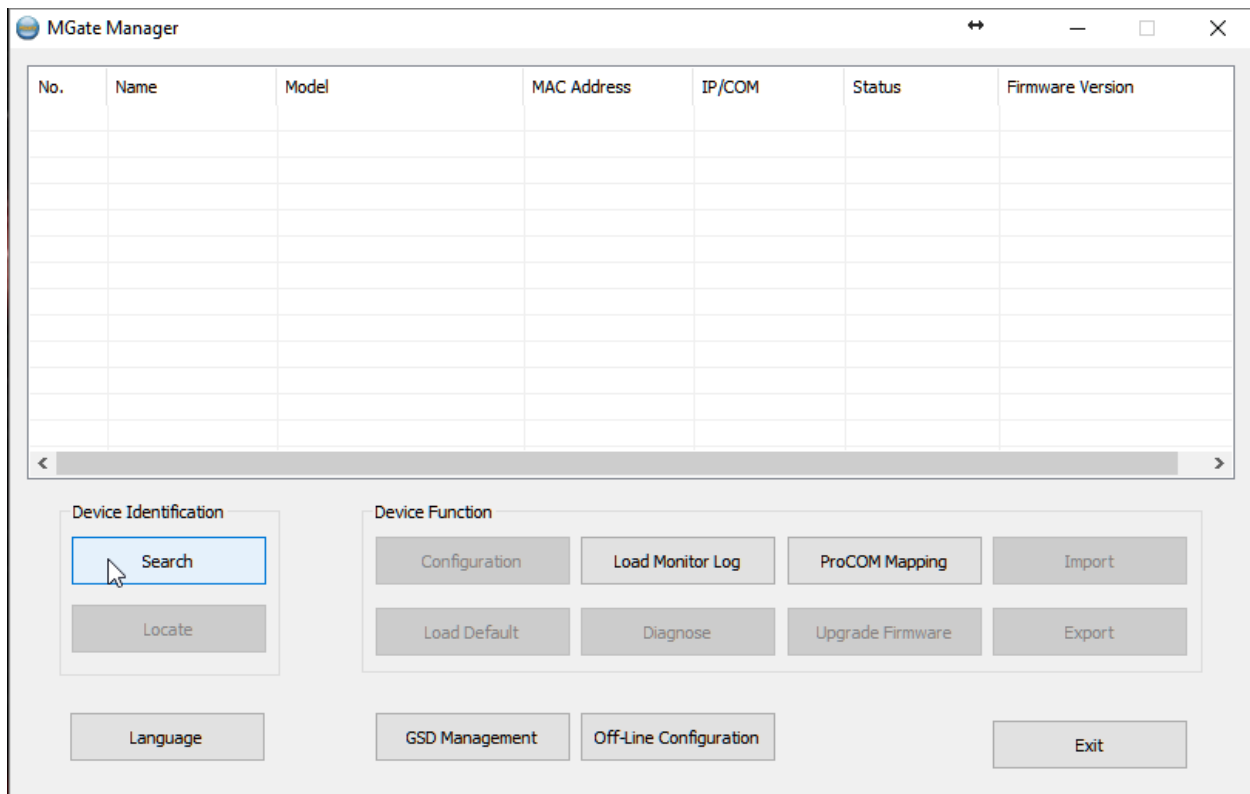


Figure 1 - MGate Manager

Make sure you are connected to the MGate MB3180 unit and select the Search button. Use the broadcast search to locate the unit you are trying to configure.

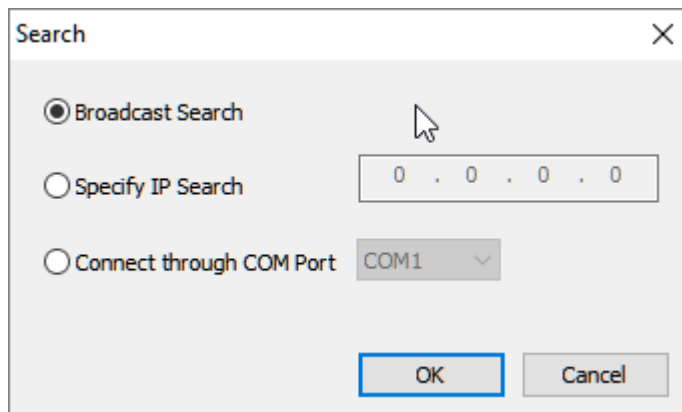


Figure 2 - Broadcast Search

If the IP address has already been configured use the Specify IP Search and enter the IP address of the unit. This will search for the specific IP to allow you to change the setting if needed.

Once the unit is located it will show up in the main part of the screen as shown.

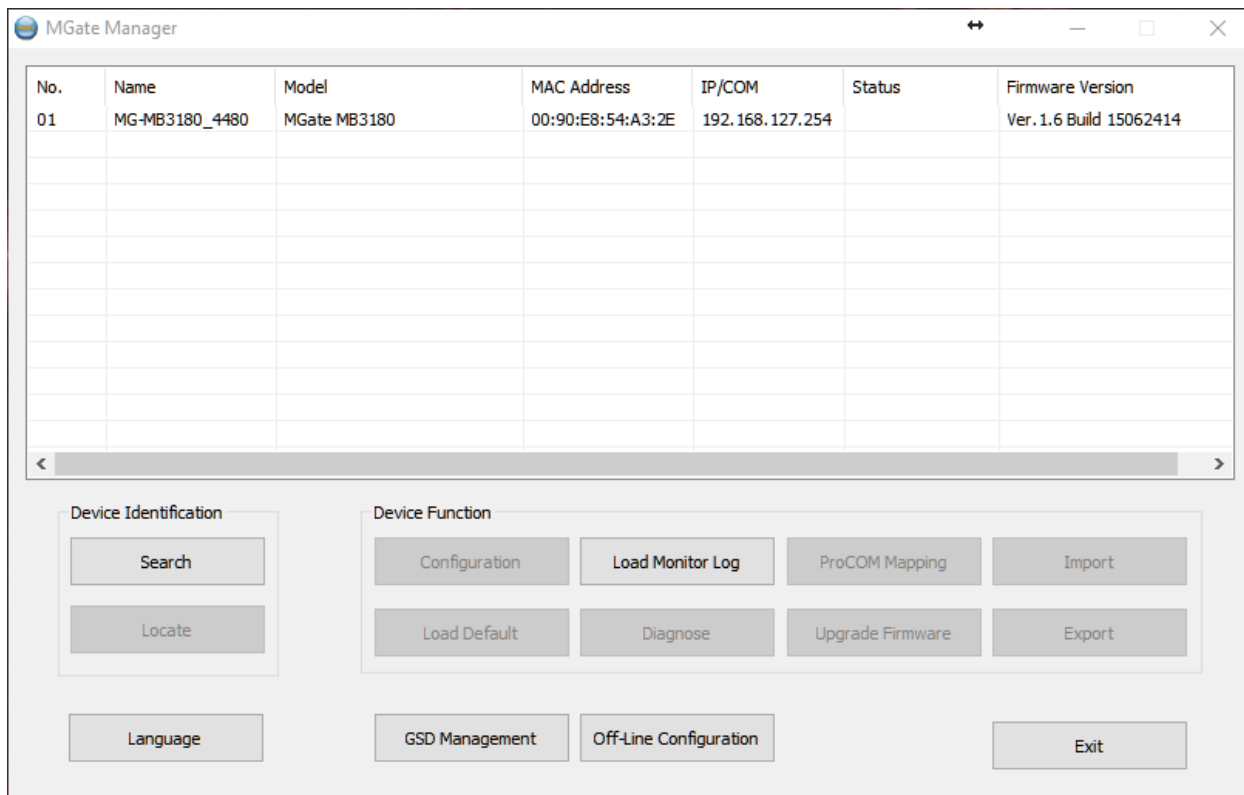


Figure 3 - Located Unit

Once the unit is discovered select it and press the configuration button.

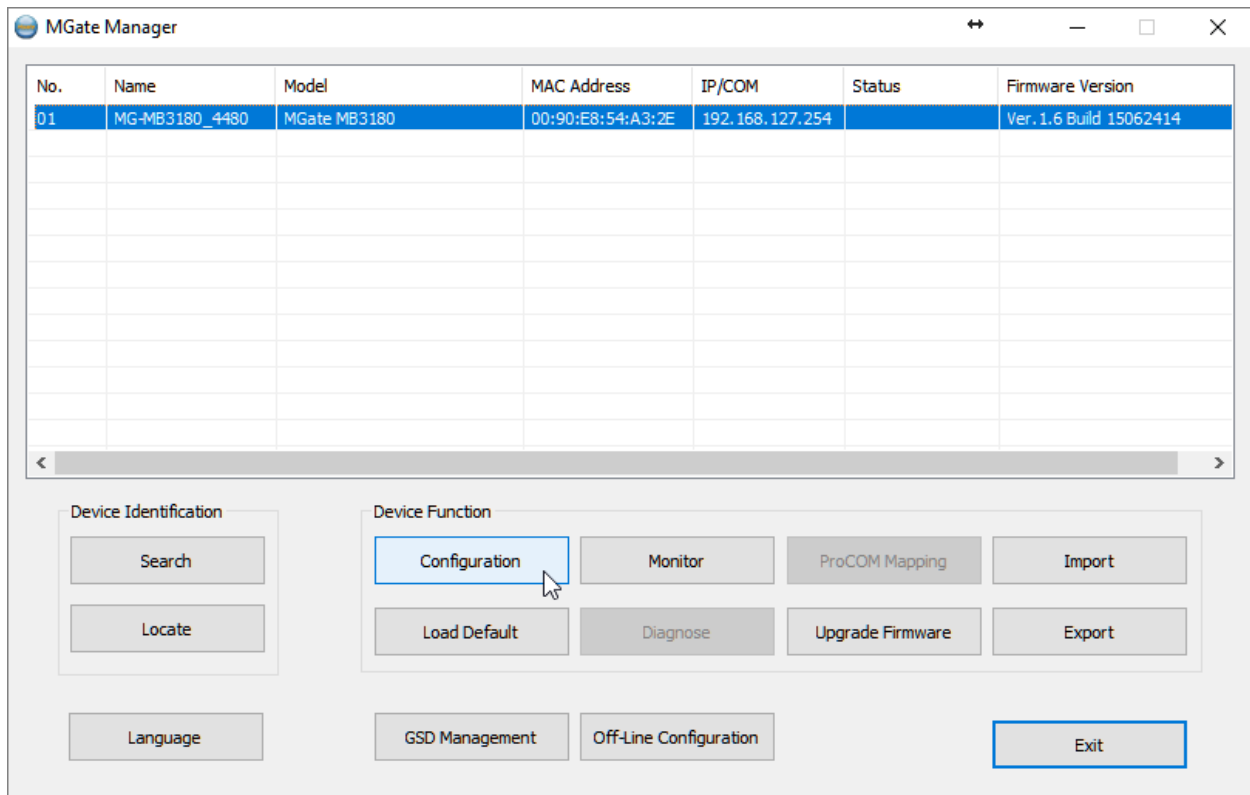


Figure 4 - Configure the Unit

The next screen is where you start the configuration process of the unit. You will see the screen below.

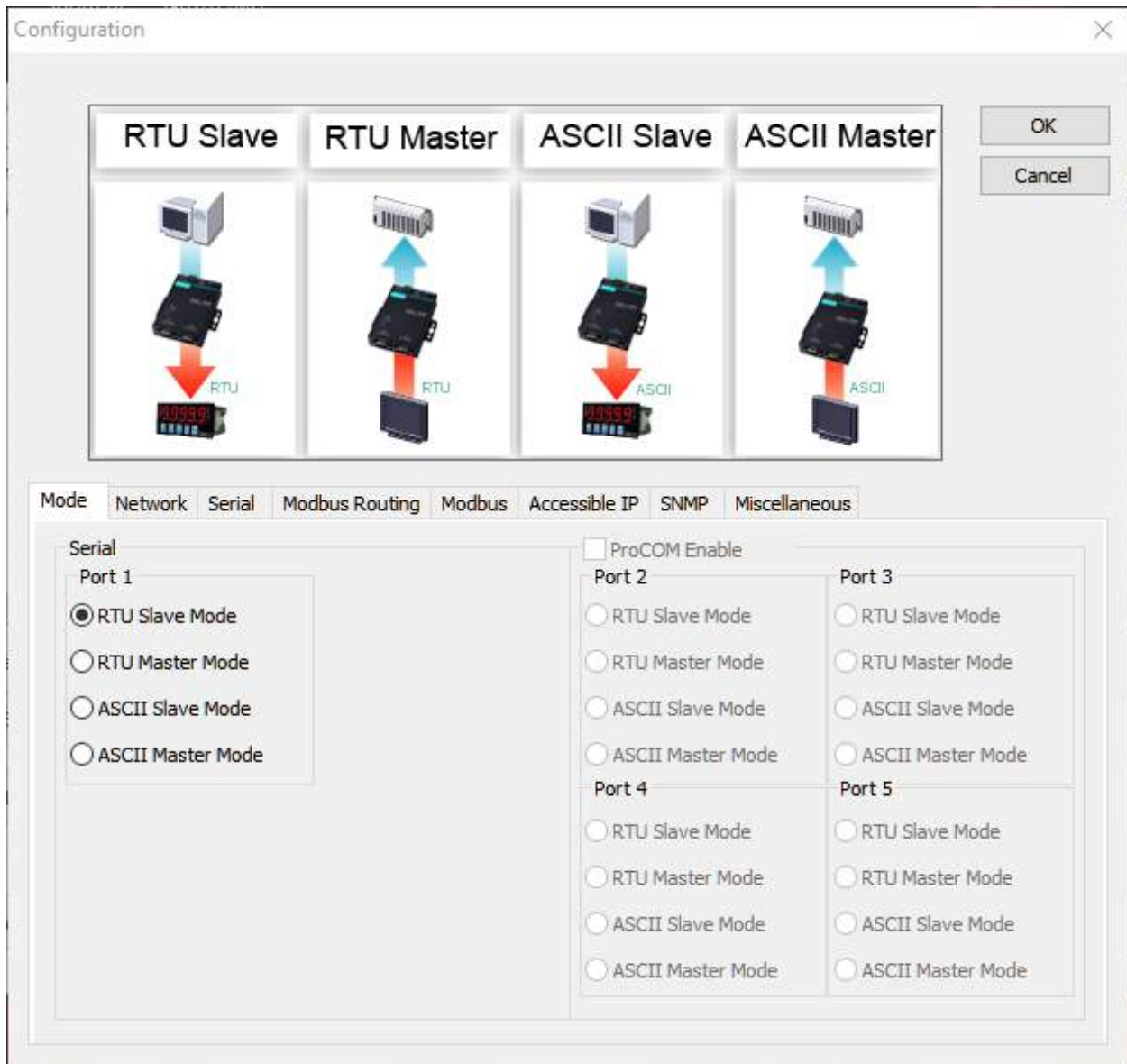


Figure 5 - Configuring the Unit - Mode

Select the RTU Master Mode for this screen as shown.

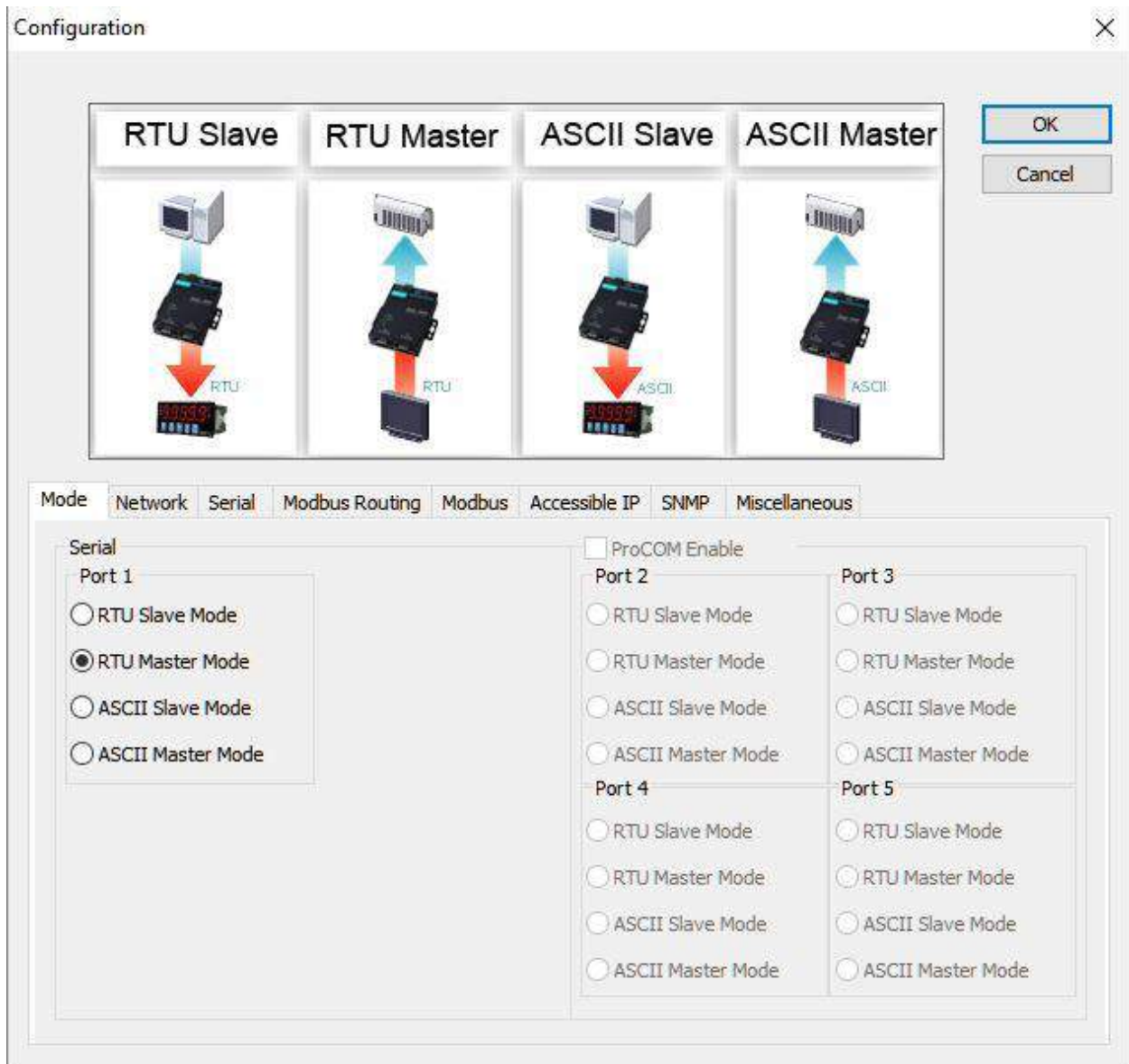



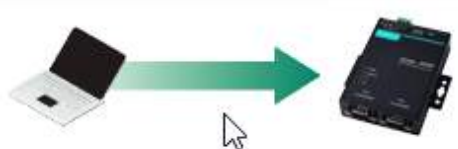

Figure 6 - Select RTU Master Mode

Now go to the Network Tab. This is where you will set up the IP address for the unit. As you can see from the screen it is set as the default IP of the unit.

Configuration



PIN	SIGNAL
1	RXD+
2	RXD-
3	TXD+
4	X
5	X
6	TXD-
7	X
8	X



OK
Cancel

Mode Network Serial Modbus Routing Modbus Accessible IP SNMP Miscellaneous

NameMG-MB3180_4480Password

Network ConfigureStaticConfirm Password

IP Address192 . 168 . 127 . 254

Netmask255 . 255 . 255 . 0

Gateway255 . 255 . 255 . 255


DNS10 . 0 . 0 . 0

DNS20 . 0 . 0 . 0

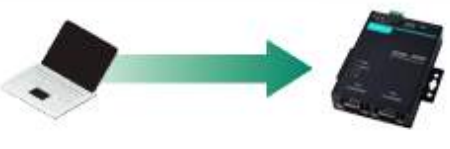

Figure 7 – Setup IP Address

Change this to match your PLC network.

Configuration ✕



PIN	SIGNAL
1	RXD+
2	RXD-
3	TXD+
4	X
5	X
6	TXD-
7	X
8	X



OK
Cancel

Mode Network Serial Modbus Routing Modbus Accessible IP SNMP Miscellaneous

Name MG-MB3180_4480 Password

Network Configure Static Confirm Password

IP Address 169 . 253 . 95 . 80

Netmask 255 . 255 . 255 . 0

Gateway 169 . 253 . 95 . 1

DNS1 0 . 0 . 0 . 0

DNS2 0 . 0 . 0 . 0

Figure 8 - Match the PLC Network

I always leave the password fields blank but if you want to secure this enter the password you would like to use.

Next go to the Serial tab. You will see the default settings for the serial port.

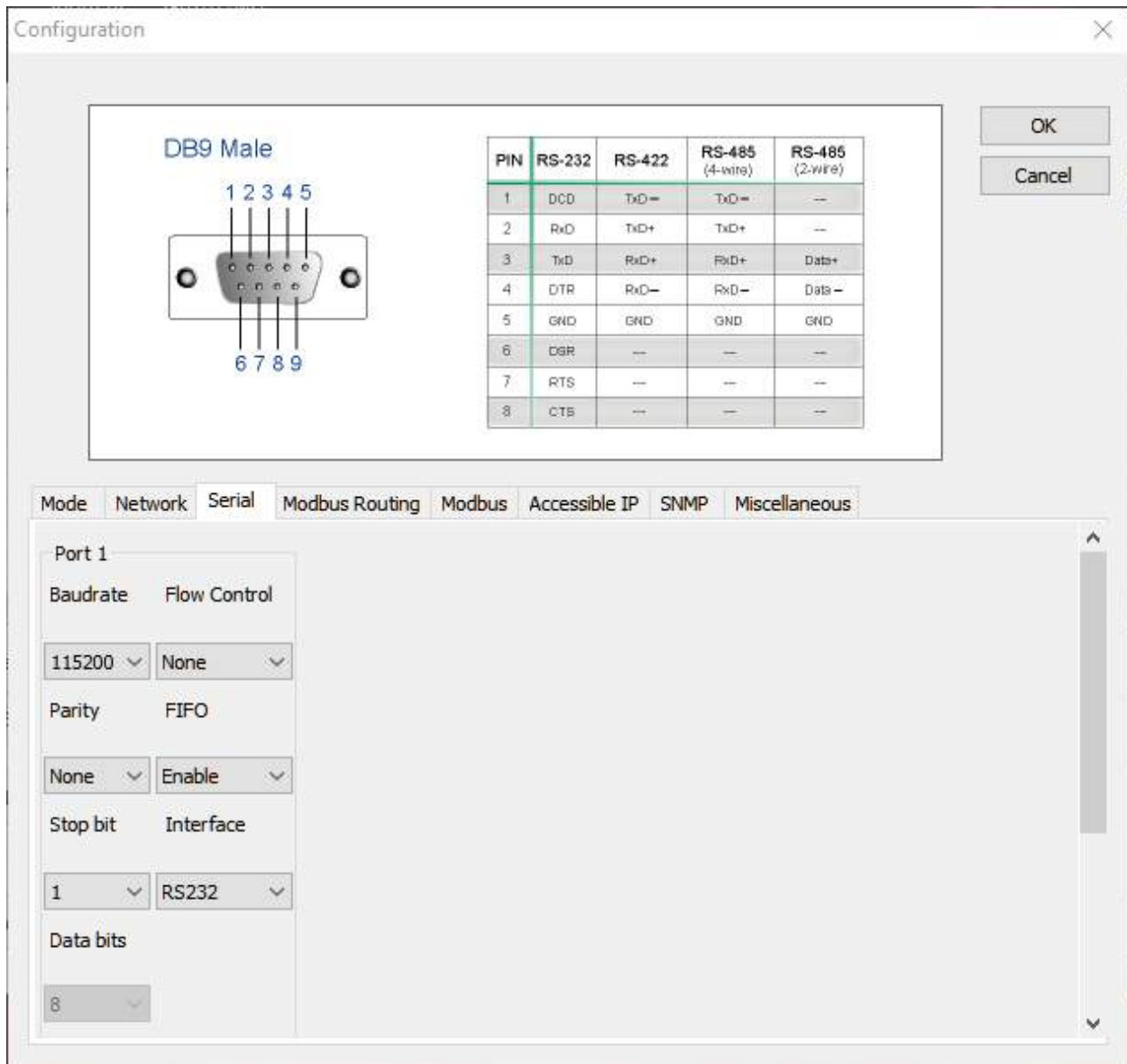


Figure 9 - Configuration - Serial

Set these as follows to match the setting that will be used for the RS-485 (MODBUS) network.

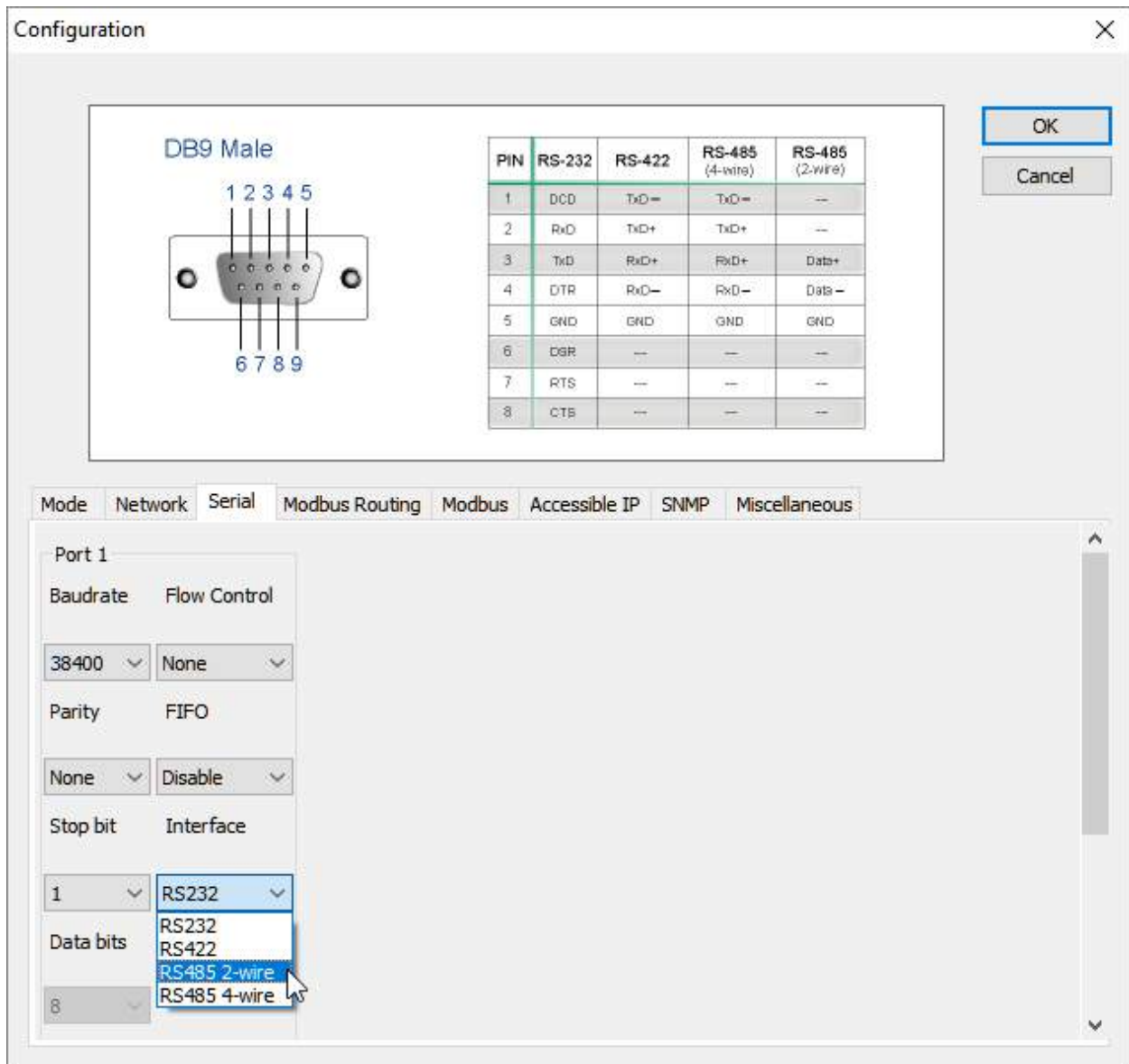


Figure 10 - Match RS-485 (MODBUS) Network

Make sure you select the RS485 2-wire for the interface selection.

After the serial configurations are complete it should look something like this.

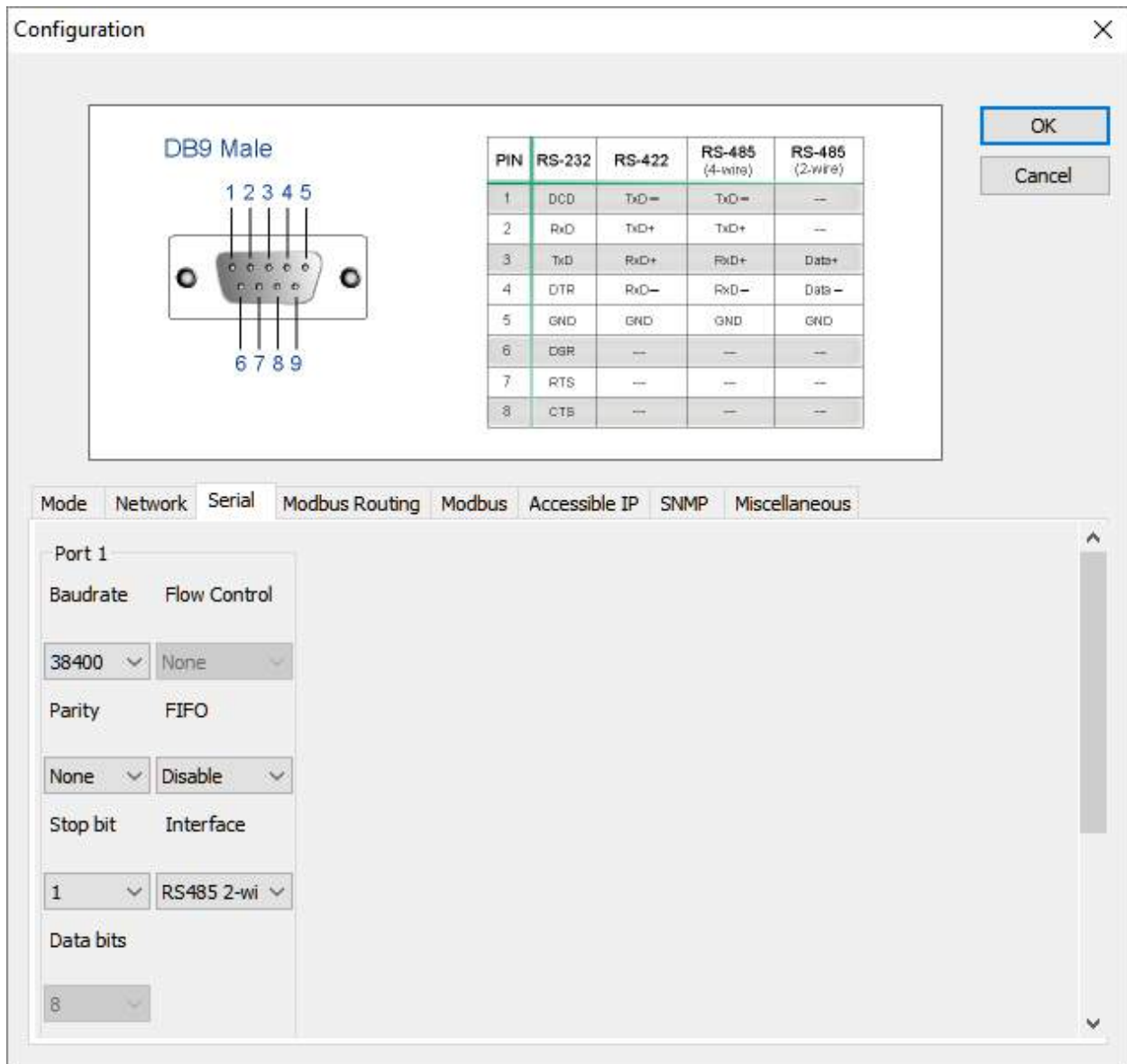


Figure 11 – Completed Serial Configuration

Notice that wiring for the serial port is shown in the top section. This will be the wiring from the MGate unit to the XL200 series controller.

Now go to the Modbus Routing tab.

It defaults to no routing as shown. We have to add a route in order for this unit to work.

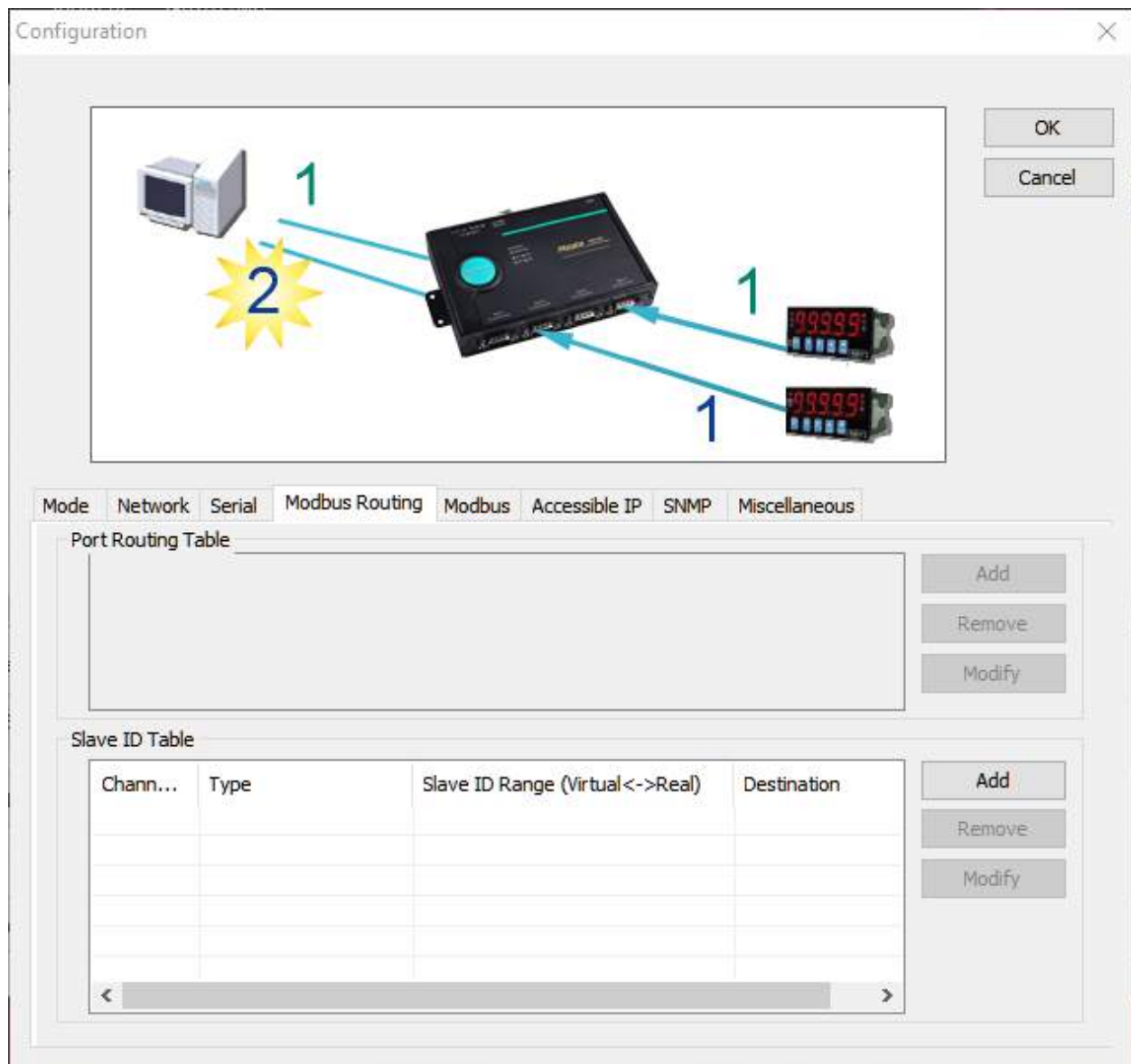
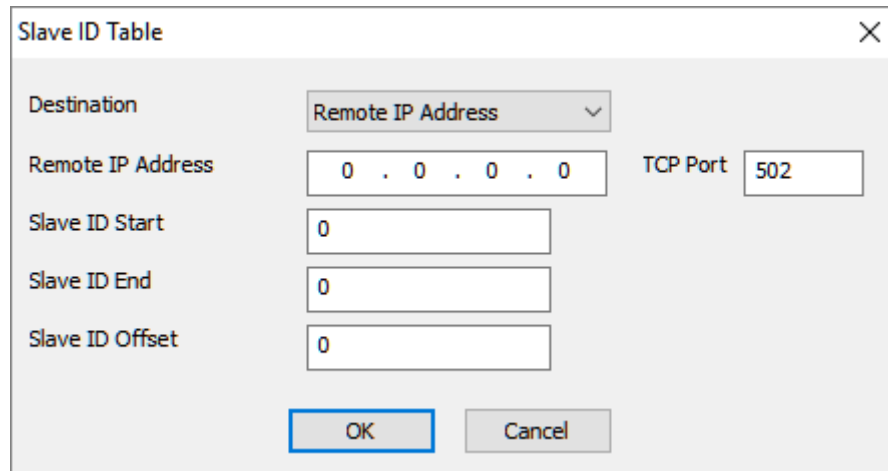


Figure 12 - Configuration - MODBUS Routing

In order to add a route select add next to the lower window. This will give you a pop-up window to add the routing (shown below).

Enter the IP address, slave ID start address and slave ID end address of the PLC into this window.
Leave the TCP port at the default 502. This is the default Rockwell Automation MODBUS TCP.



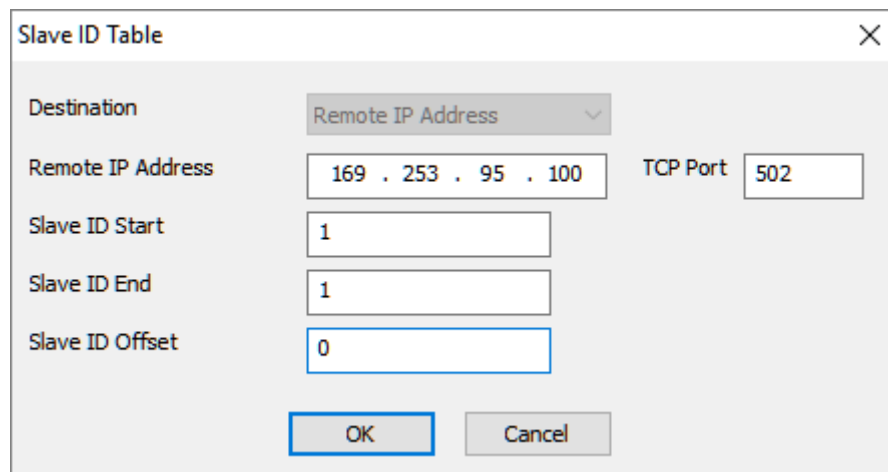
The 'Slave ID Table' dialog box is shown with the following fields and values:

Field	Value
Destination	Remote IP Address
Remote IP Address	0 . 0 . 0 . 0
TCP Port	502
Slave ID Start	0
Slave ID End	0
Slave ID Offset	0

Buttons: OK, Cancel

Figure 13 - Slave ID Table

It should look similar to this.



The 'Slave ID Table' dialog box is shown with the following fields and values:

Field	Value
Destination	Remote IP Address
Remote IP Address	169 . 253 . 95 . 100
TCP Port	502
Slave ID Start	1
Slave ID End	1
Slave ID Offset	0

Buttons: OK, Cancel

Figure 14 – Completed Slave ID Table

One you finish entering the PLC information select OK and the window should like similar to this.

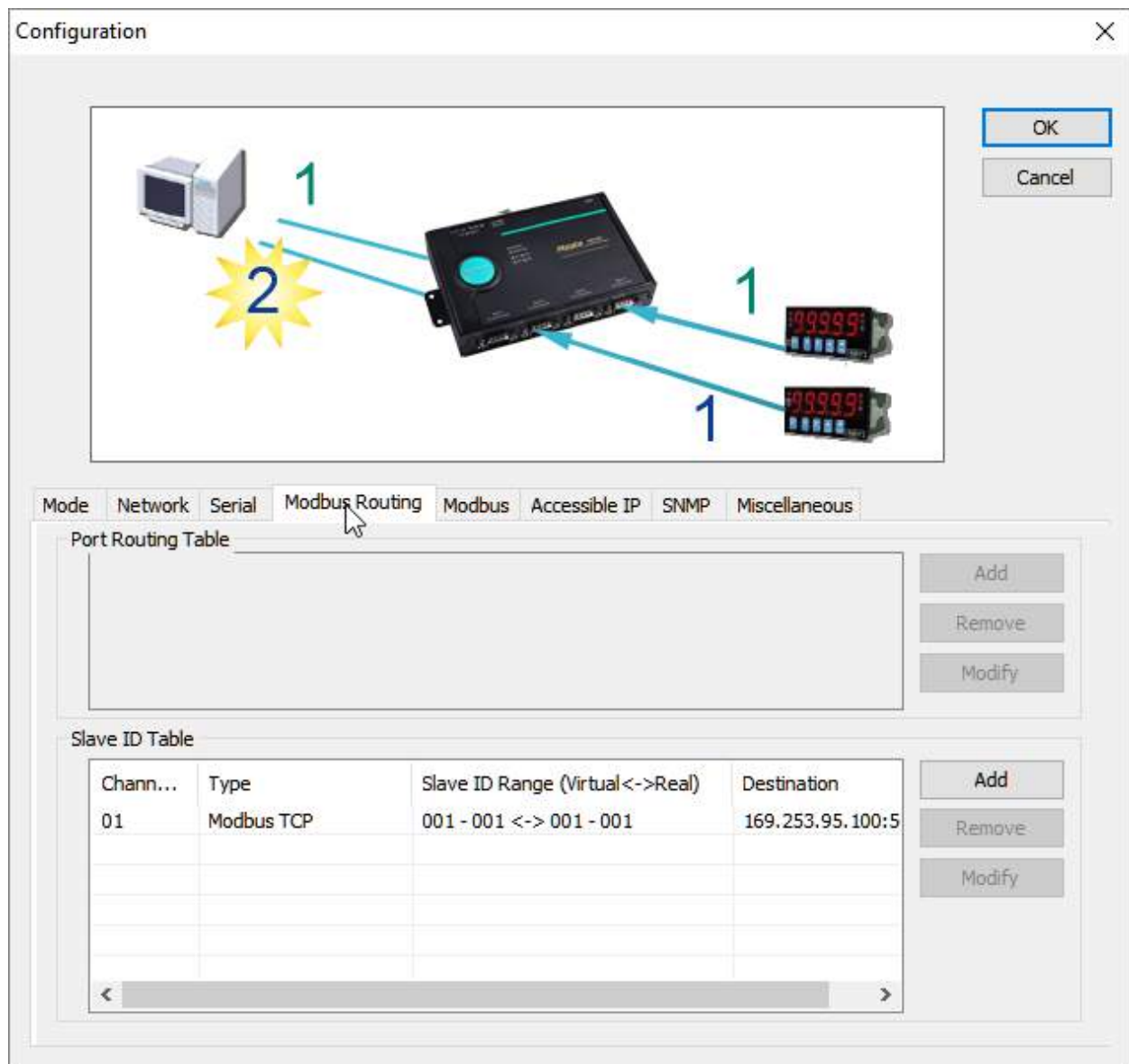


Figure 15 - Completed MODBUS Routing Configuration

Next select the Modbus tab. Make sure these are at the defaults. No need to change any of these settings.

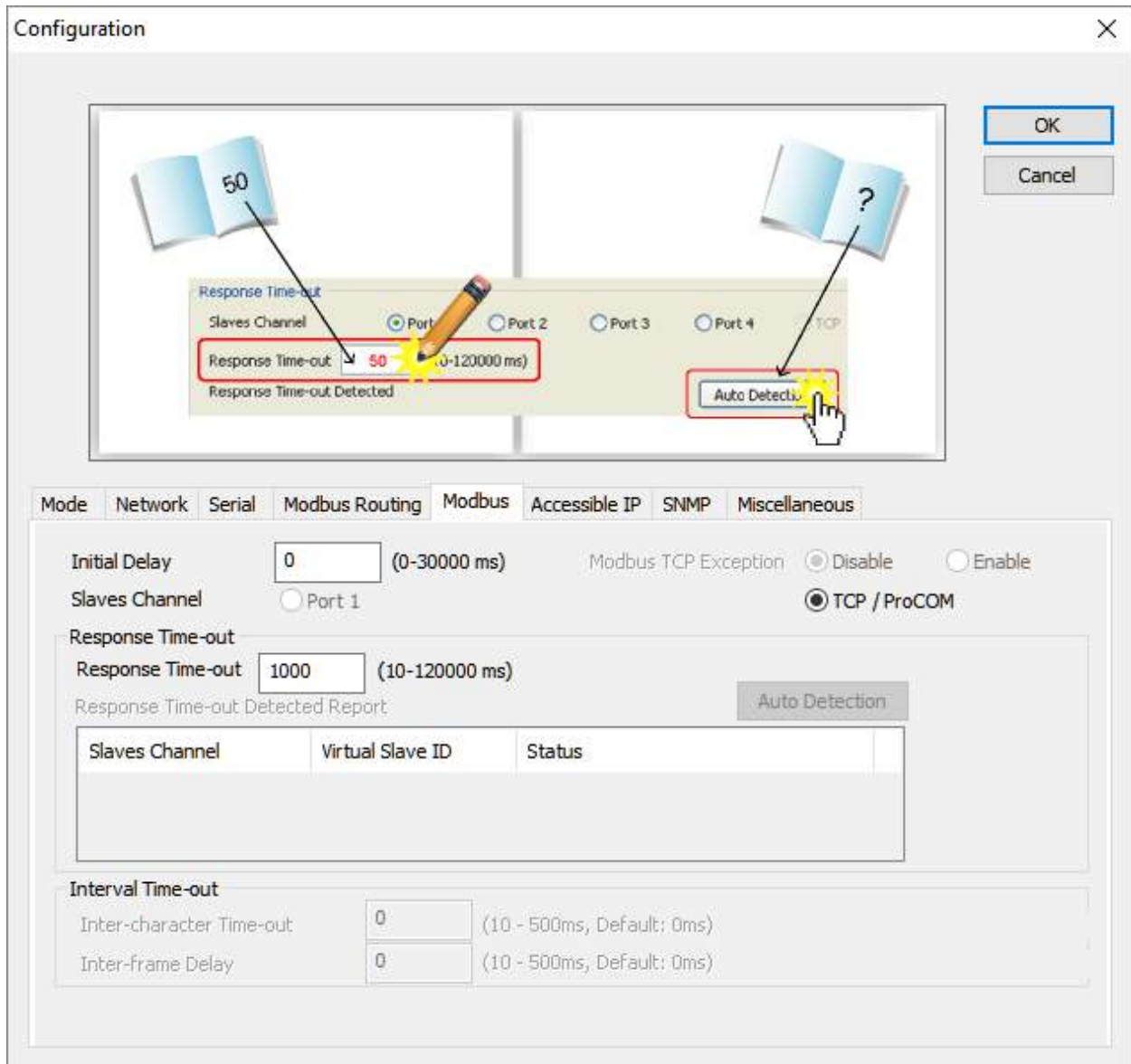


Figure 16 - Configuration - MODBUS

Next select the Accessible IP tab. Make sure these are at the defaults. No need to change any of these settings.

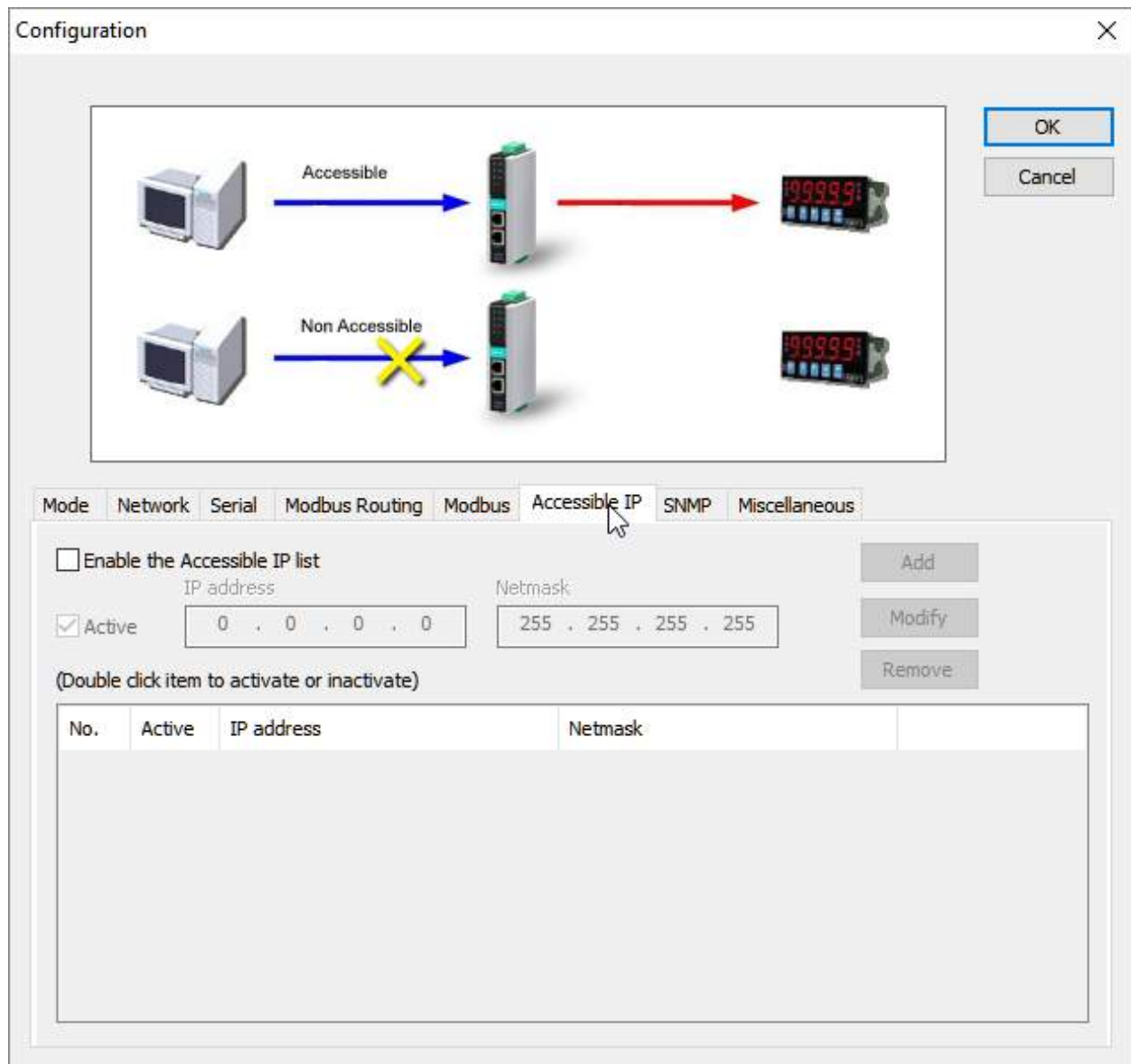


Figure 17 - Configuration - Accessible IP

Next select the SNMP tab. Make sure these are at the defaults. No need to change any of these settings.

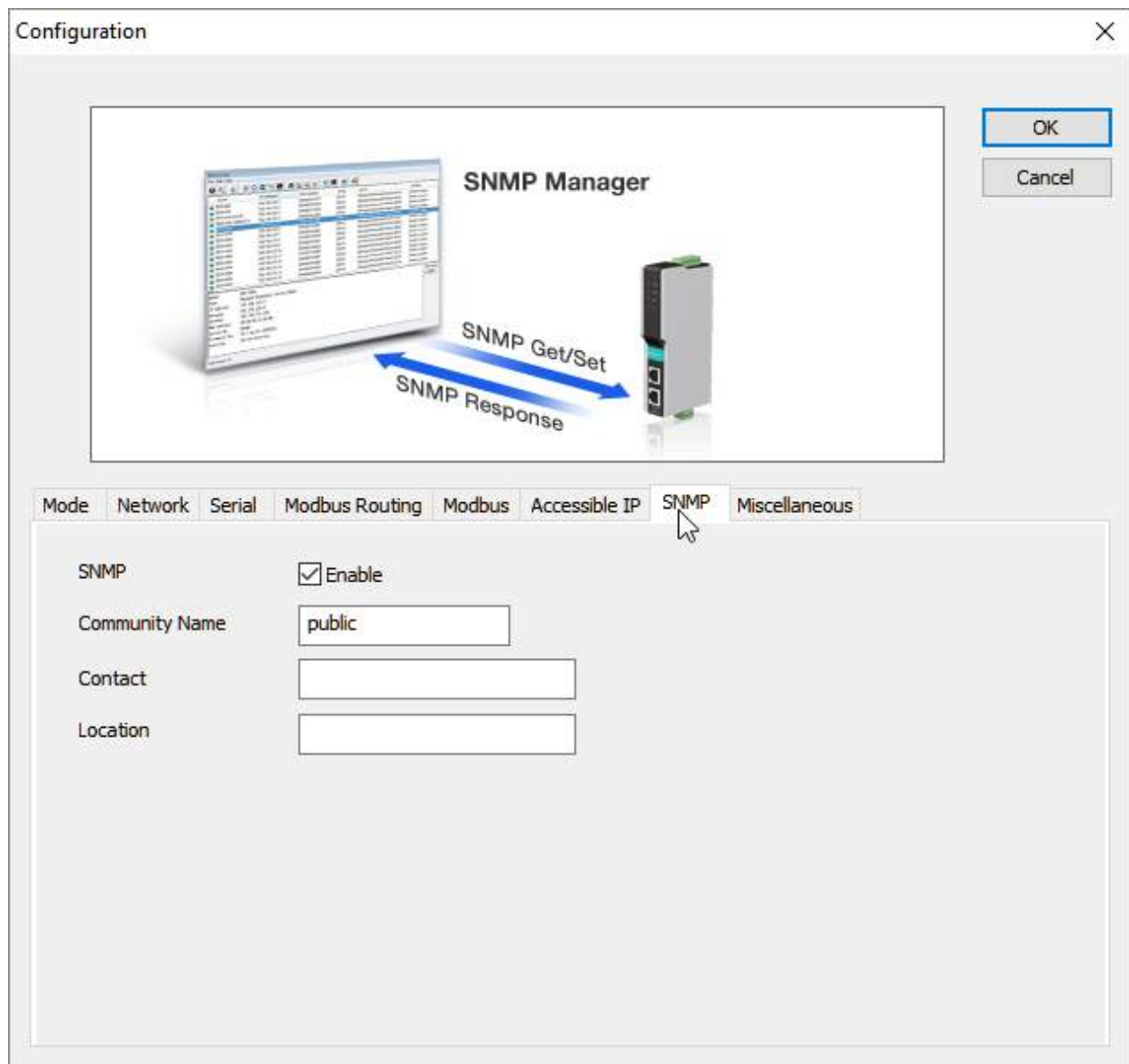


Figure 18 - Configuration - SNMP

Next select the Miscellaneous tab. Make sure these are at the defaults. No need to change any of these settings.

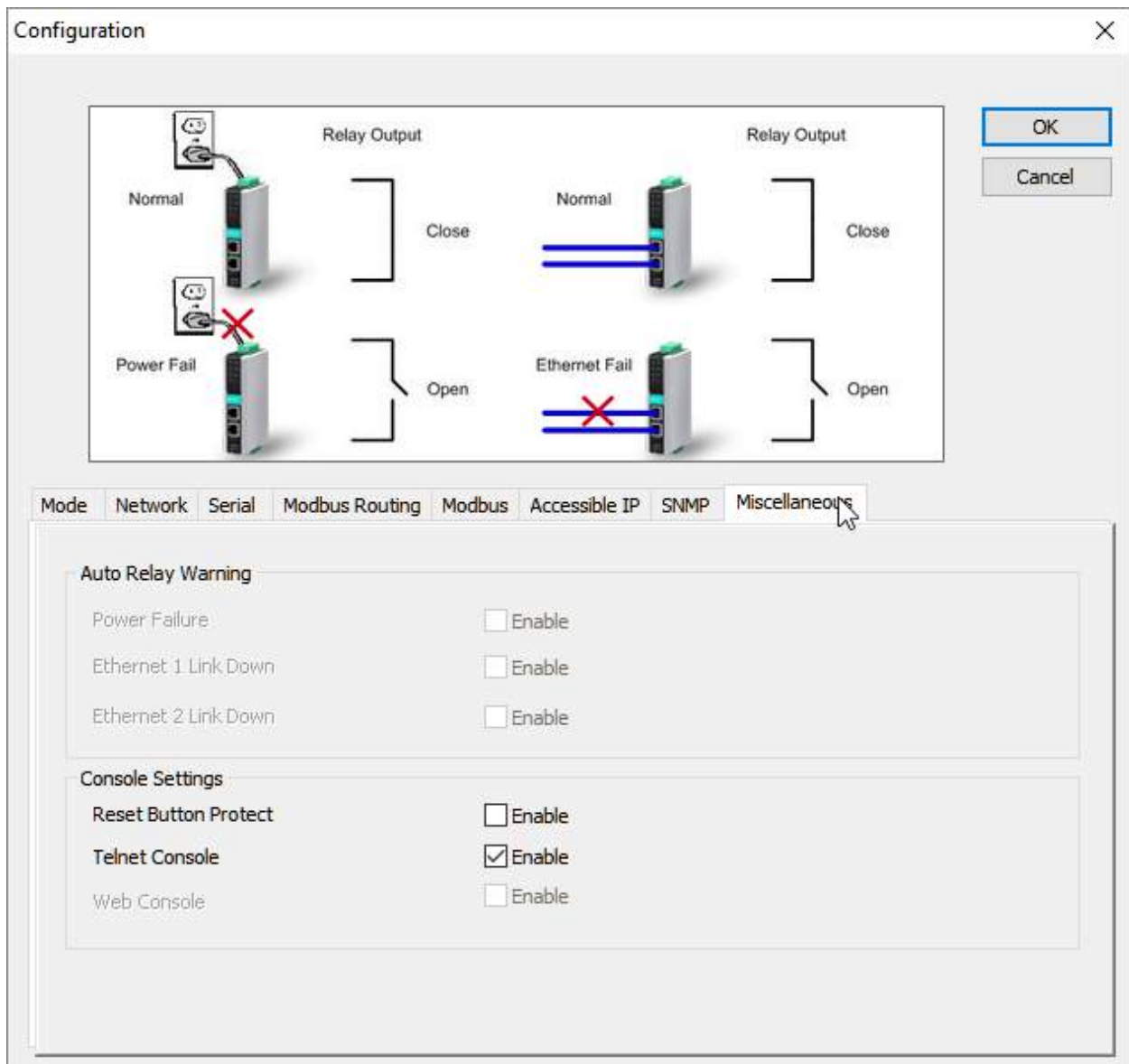


Figure 19 - Configuration - Miscellaneous

After all of the configuration tabs have been checked select the OK button.

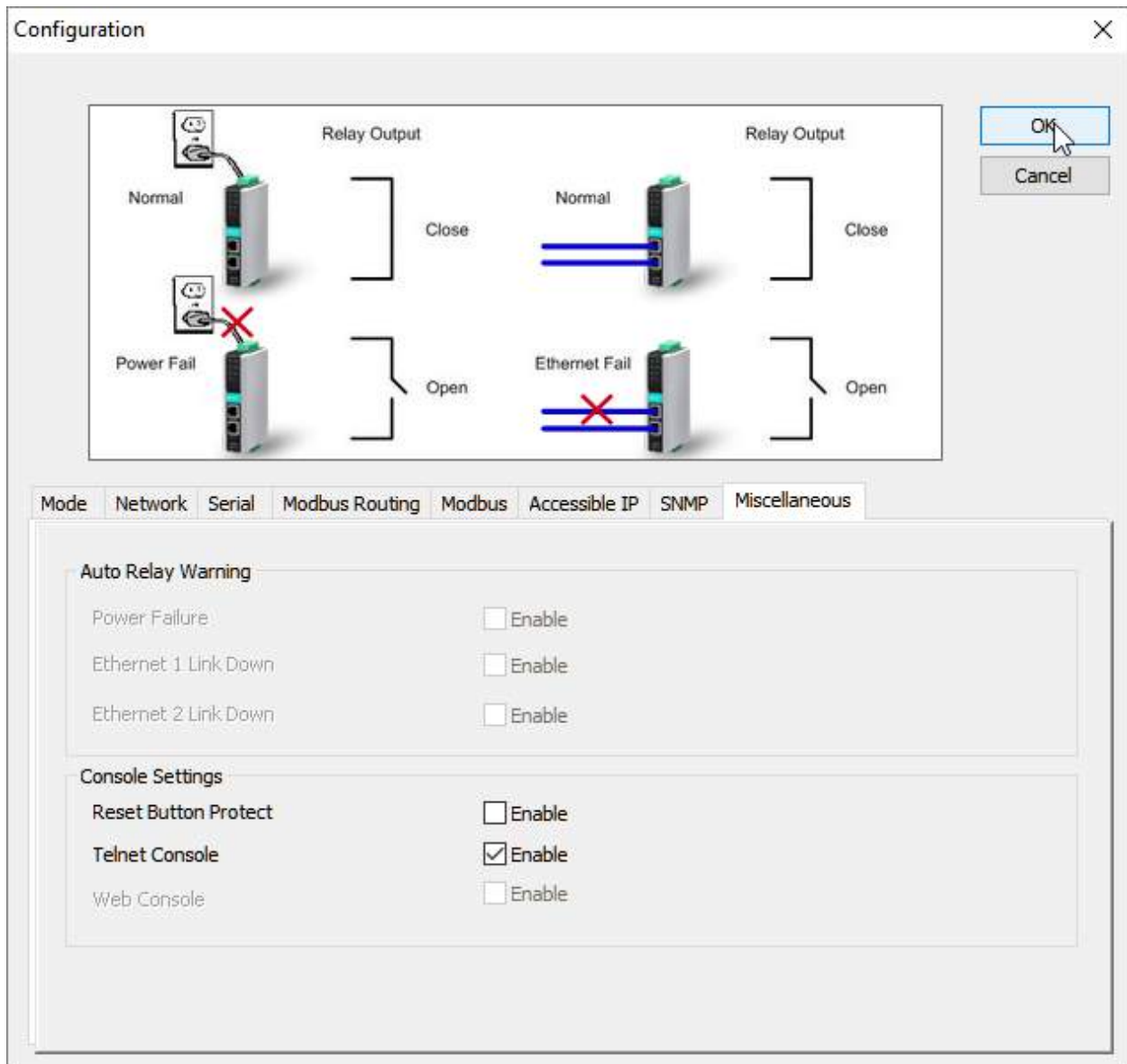


Figure 20 - Approve Configurations

You will get this pop-up.

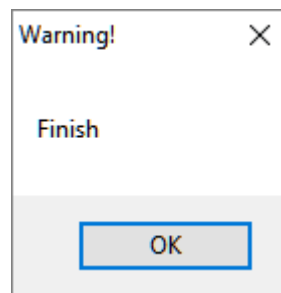


Figure 21 - Warning Pop-up

This will force the MGate Manager to start searching for the unit again.

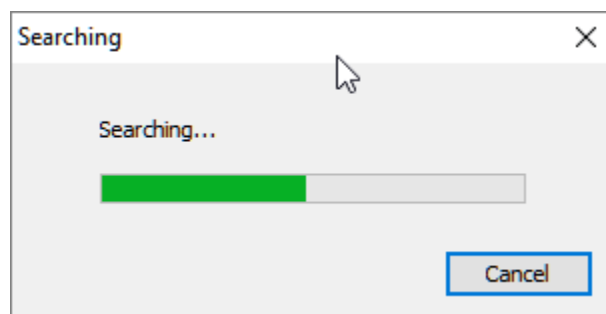


Figure 22 - Searching for Unit

After the search is completed you will see the unit listed with the new IP address.

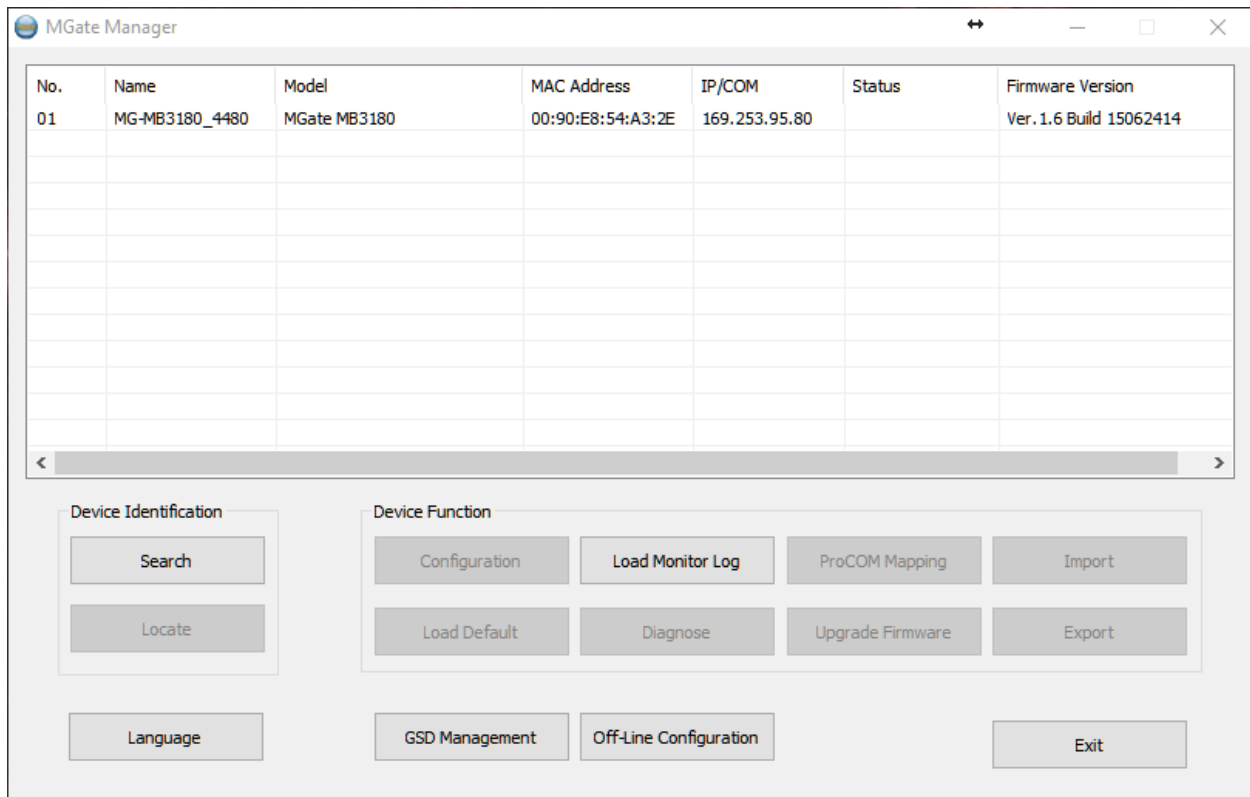


Figure 23 - Unit Listed with New IP Address

At this point the configuration for the unit is completed. Once you make the connections to the PLC and the XL200 series controller, that has the PLC Interface settings entered to match the settings of the unit the communications should be able to start. You might be required to search for the PLC the first time you connect if the controller lost communications or never connected to the PLC before with this unit.