

# MOXA MGate Manager Setup

## 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. If this is the computer's first time opening the MGate Manager software, allow MGate access to all networks (the crossover cable will be a PUBLIC network).

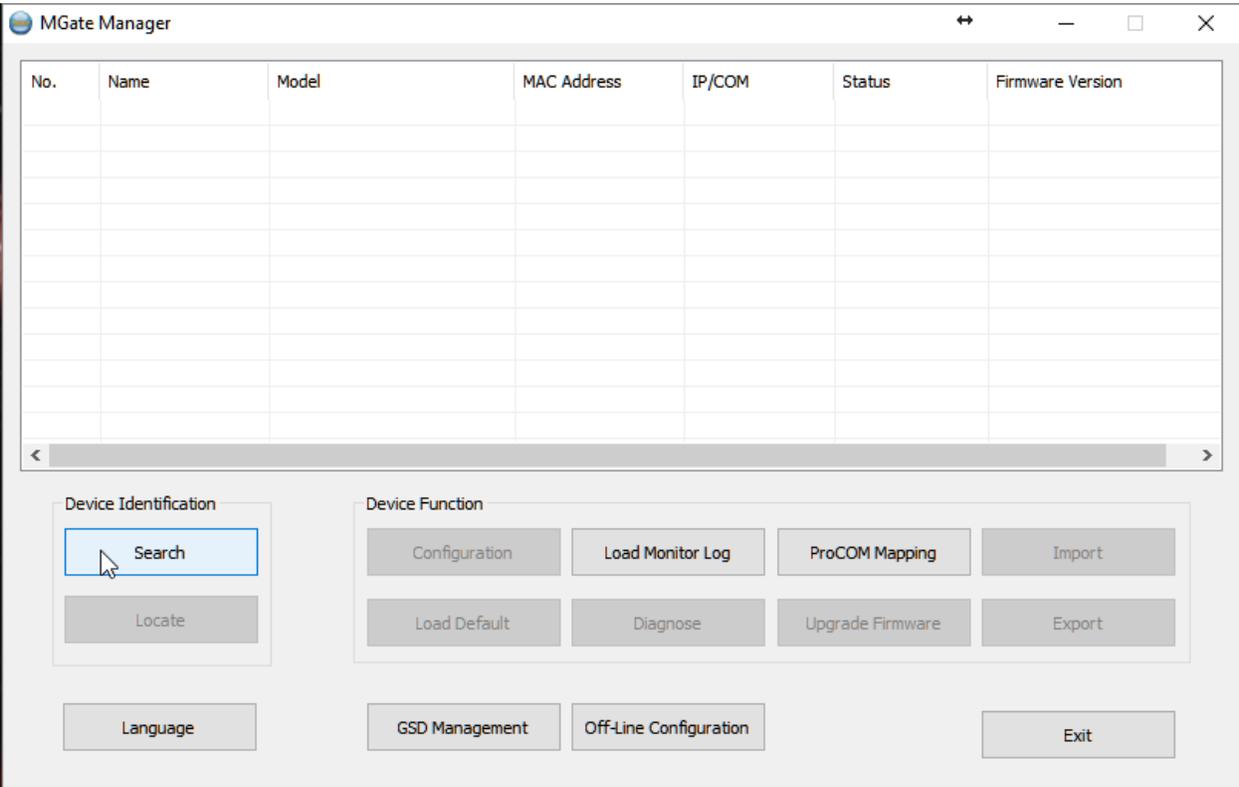


Figure 1 - MGate Manager

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.

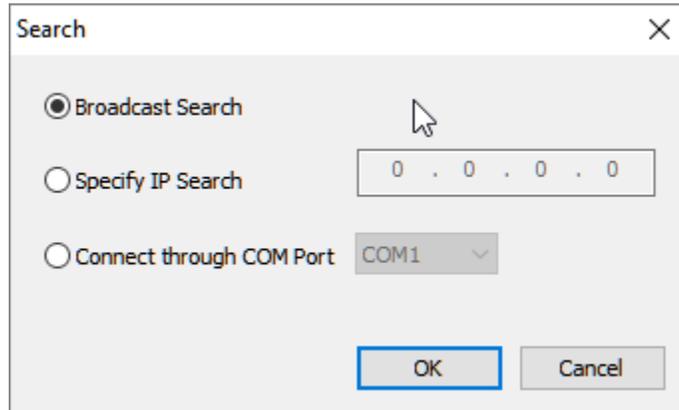


Figure 2 - Broadcast Search

*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. If the unit is NOT located, check the network configuration of the crossover cable to ensure the TCP/IP network settings are set to automatic detection. Control Panel > Network and Internet > Network and Sharing Center > Ethernet > Properties > TCP/IP v4 > Properties

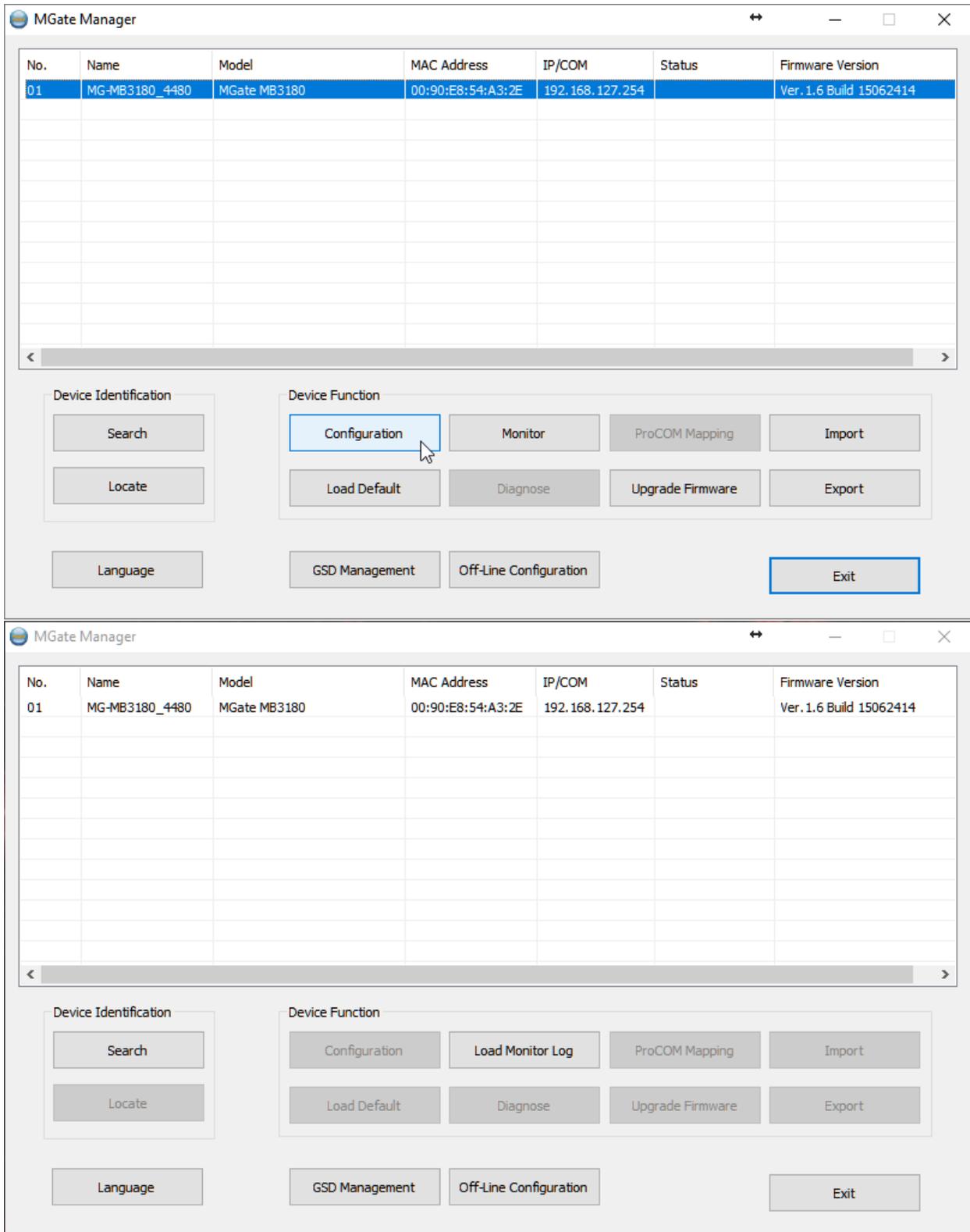


Figure 3 - Located Unit

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.

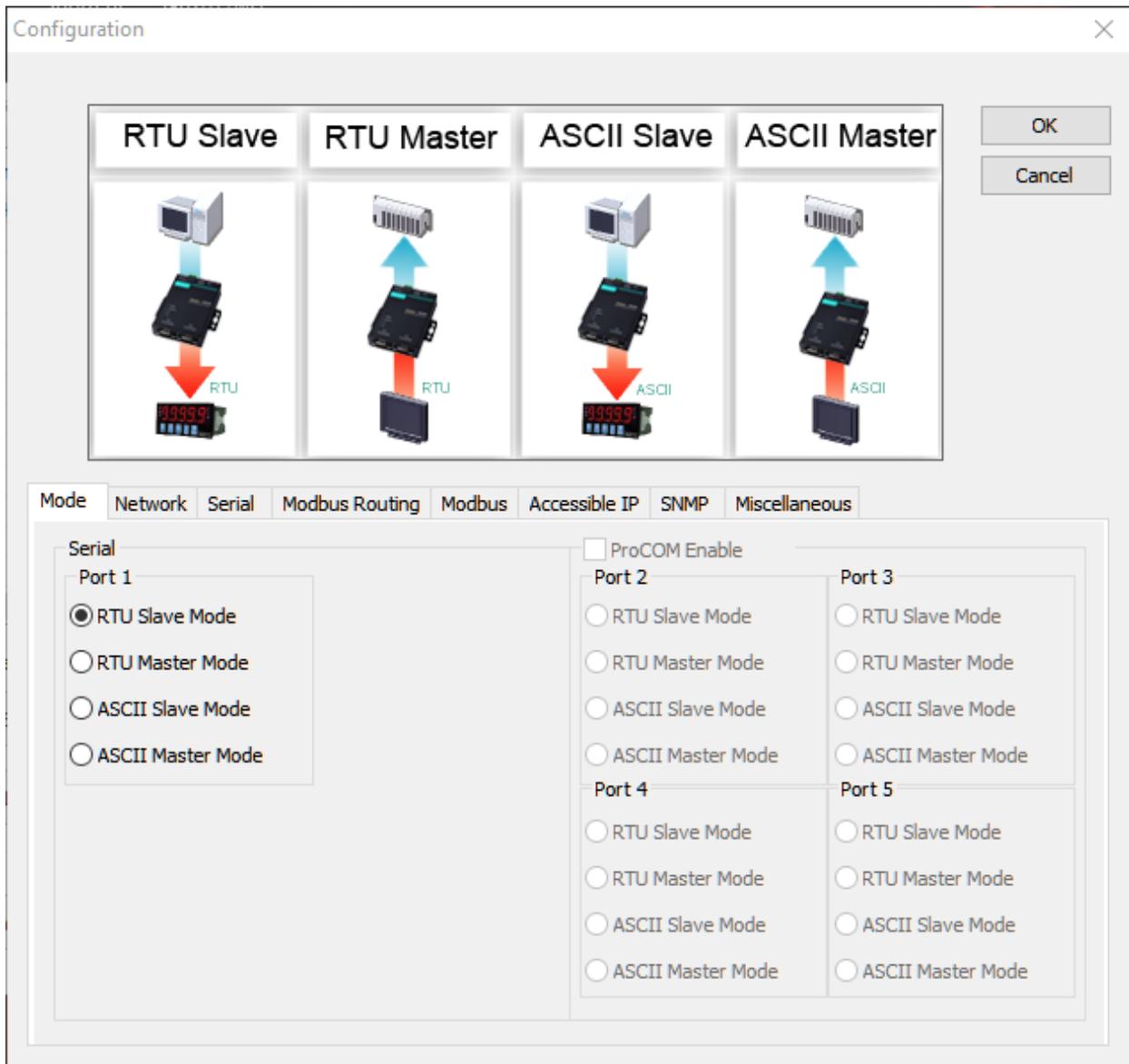


Figure 5 - Configuring the Unit - Mode

Select the RTU Master Mode for this screen as shown.

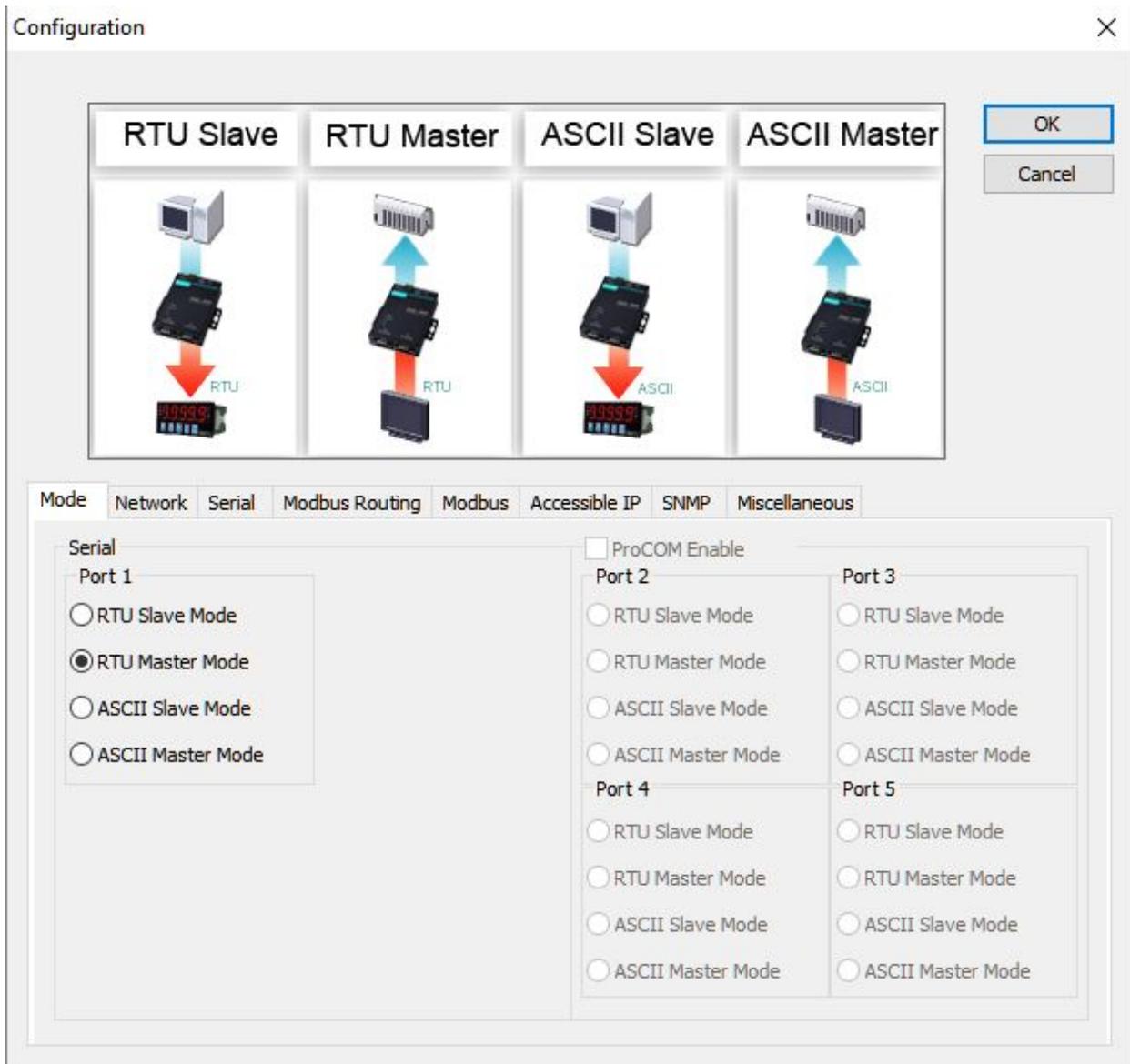


Figure 6 - Select RTU Master Mode

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.

The screenshot shows a 'Configuration' window with a close button (X) in the top right corner. The window is divided into several sections:

- Terminal Pinout:** On the left, there is a diagram of an 8-pin terminal block and a table mapping pins to signals.
- Device Diagrams:** On the right, there are two diagrams showing a laptop connected to a device. The top diagram shows a yellow padlock on the device, indicating a locked state. The bottom diagram shows the device without a padlock, indicating an unlocked state.
- Configuration Fields:** Below the diagrams, there are tabs for 'Mode', 'Network', 'Serial', 'Modbus Routing', 'Modbus', 'Accessible IP', 'SNMP', and 'Miscellaneous'. The 'Network' tab is selected. The fields are:
  - Name: MG-MB3180\_4480
  - Password: [Empty field]
  - Network Configure: Static (dropdown menu)
  - Confirm Password: [Empty field]
  - IP Address: 192 . 168 . 127 . 254
  - Netmask: 255 . 255 . 255 . 0
  - Gateway: 255 . 255 . 255 . 255
  - DNS1: 0 . 0 . 0 . 0
  - DNS2: 0 . 0 . 0 . 0

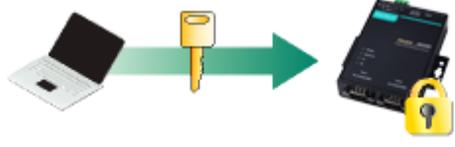
Figure 7 – Setup IP Address

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





Mode **Network** Serial Modbus Routing Modbus Accessible IP SNMP Miscellaneous

Name	<input type="text" value="MG-MB3180_4480"/>	Password	<input type="text"/>
Network Configure	<input type="text" value="Static"/> ▾	Confirm Password	<input type="text"/>
IP Address	<input type="text" value="169 . 253 . 95 . 80"/>		
Netmask	<input type="text" value="255 . 255 . 255 . 0"/>		
Gateway	<input type="text" value="169 . 253 . 95 . 1"/>		
DNS1	<input type="text" value="0 . 0 . 0 . 0"/>		
DNS2	<input type="text" value="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.

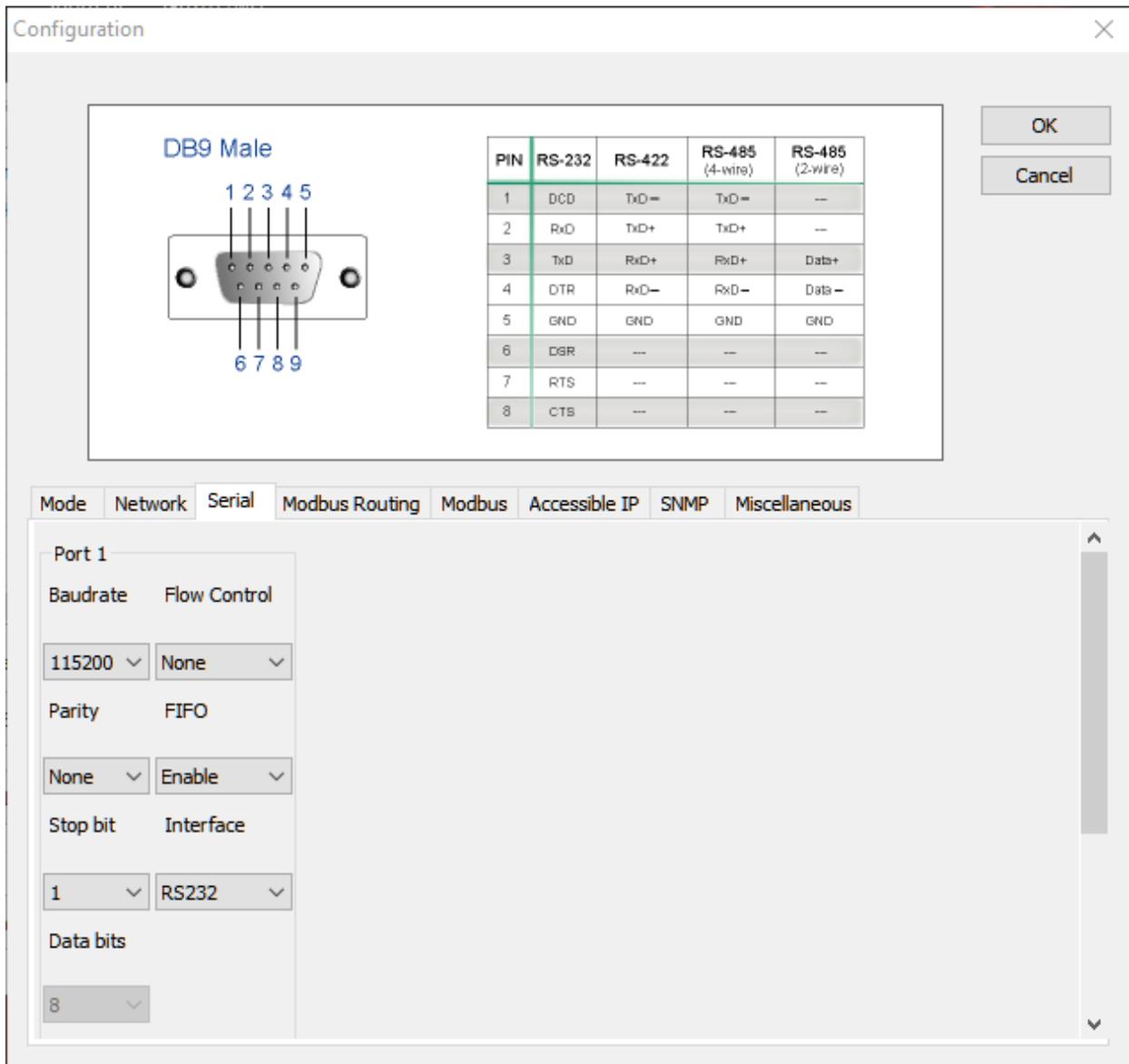


Figure 9 - Configuration - Serial

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

The image shows a 'Configuration' window with a 'DB9 Male' connector diagram and a table of pin assignments. Below the table are tabs for 'Mode', 'Network', 'Serial', 'Modbus Routing', 'Modbus', 'Accessible IP', 'SNMP', and 'Miscellaneous'. The 'Serial' tab is active, showing settings for 'Port 1'.

PIN	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxD-	TxD-	--
2	RxD	TxD+	TxD+	--
3	TxD	RxD+	RxD+	Data+
4	DTR	RxD-	RxD-	Data-
5	GND	GND	GND	GND
6	DSR	--	--	--
7	RTS	--	--	--
8	CTS	--	--	--

Port 1 settings:

- Baudrate: 38400
- Flow Control: None
- Parity: None
- FIFO: Disable
- Stop bit: 1
- Interface: RS232 (dropdown menu open showing RS232, RS422, RS485 2-wire, RS485 4-wire)
- Data bits: 8

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.

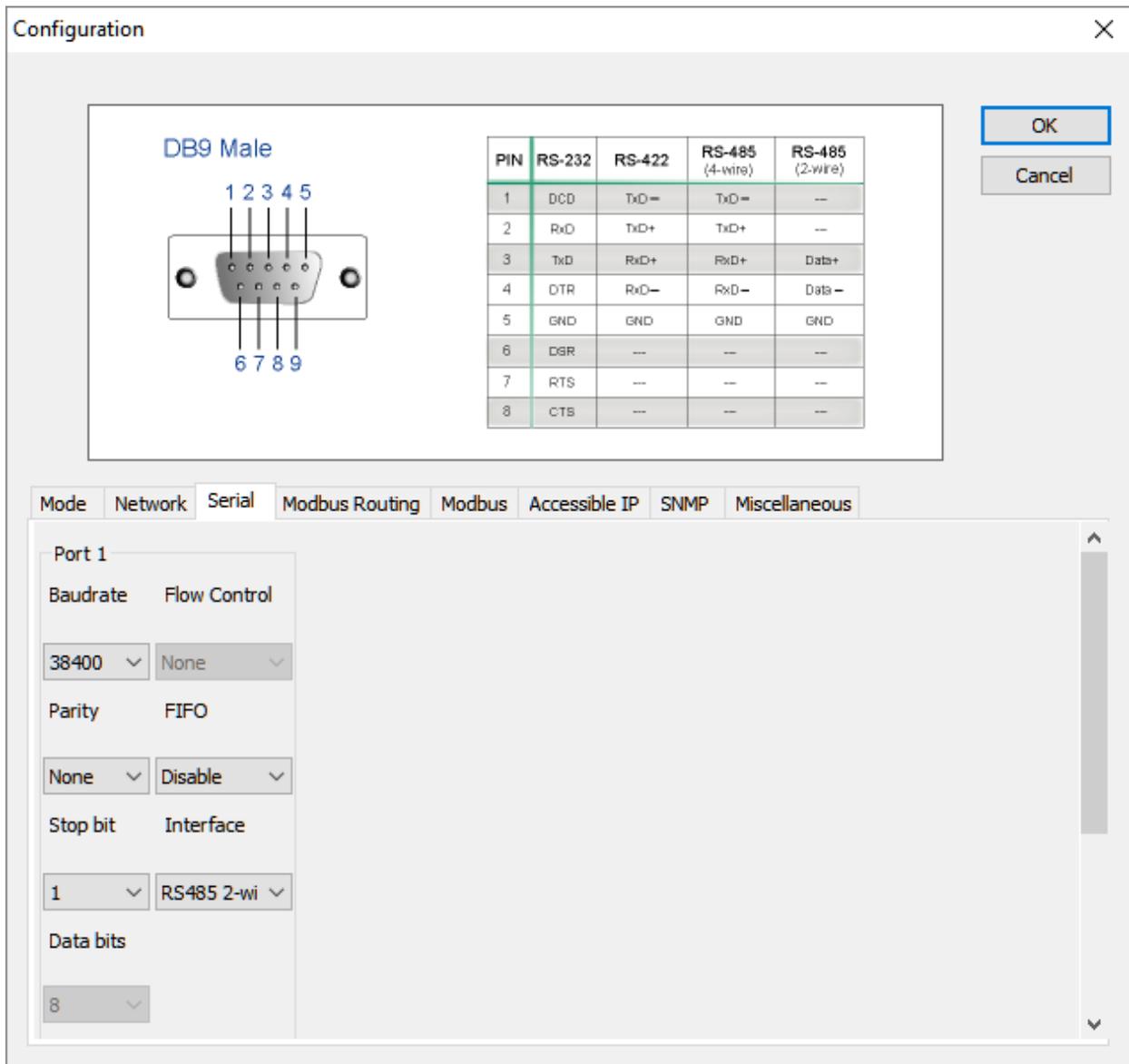


Figure 11 – Completed Serial Configuration

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.

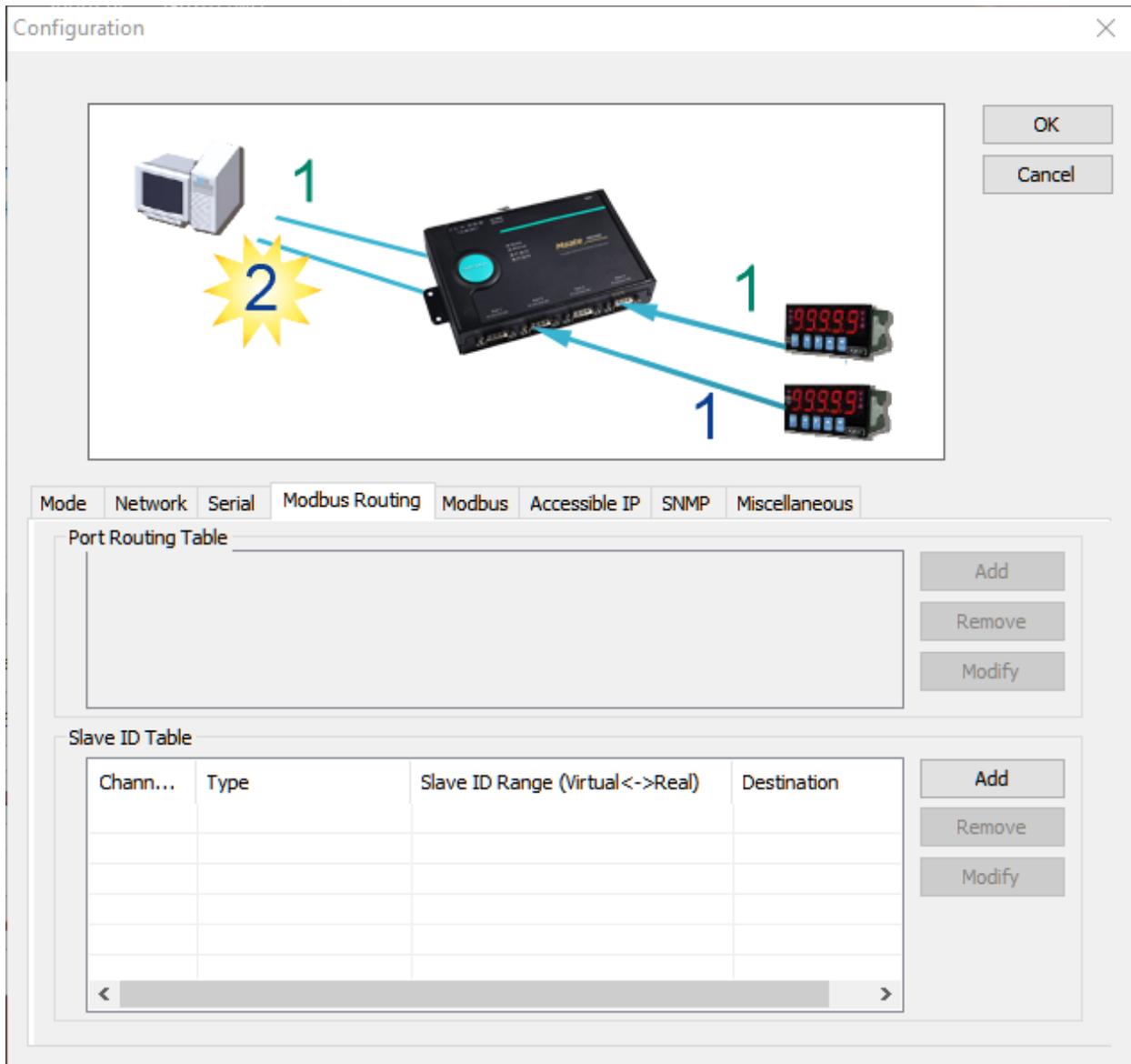
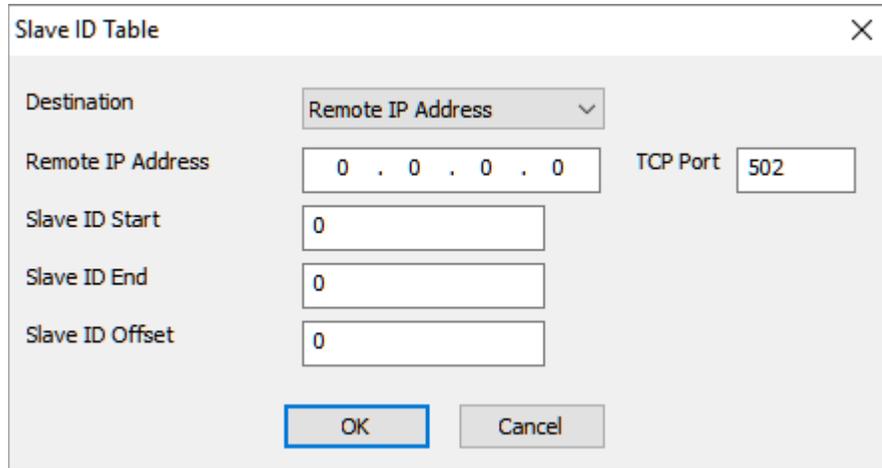


Figure 12 - Configuration - MODBUS Routing

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.*

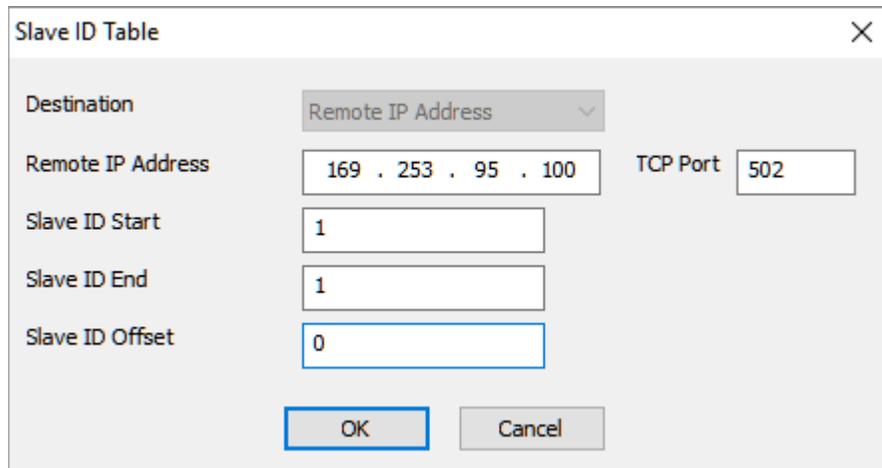


The image shows a dialog box titled "Slave ID Table" with a close button (X) in the top right corner. It contains the following fields and controls:

- Destination:** A dropdown menu set to "Remote IP Address".
- Remote IP Address:** A text box containing "0 . 0 . 0 . 0".
- TCP Port:** A text box containing "502".
- Slave ID Start:** A text box containing "0".
- Slave ID End:** A text box containing "0".
- Slave ID Offset:** A text box containing "0".
- Buttons:** "OK" and "Cancel" buttons at the bottom.

Figure 13 - Slave ID Table

It should look similar to this.



The image shows the same "Slave ID Table" dialog box, but with the following values entered:

- Remote IP Address:** "169 . 253 . 95 . 100".
- Slave ID Start:** "1".
- Slave ID End:** "1".
- Slave ID Offset:** "0".

The "OK" button is highlighted with a blue border.

Figure 14 – Completed Slave ID Table

Once you finish entering the PLC information select OK and the window should look similar to this.

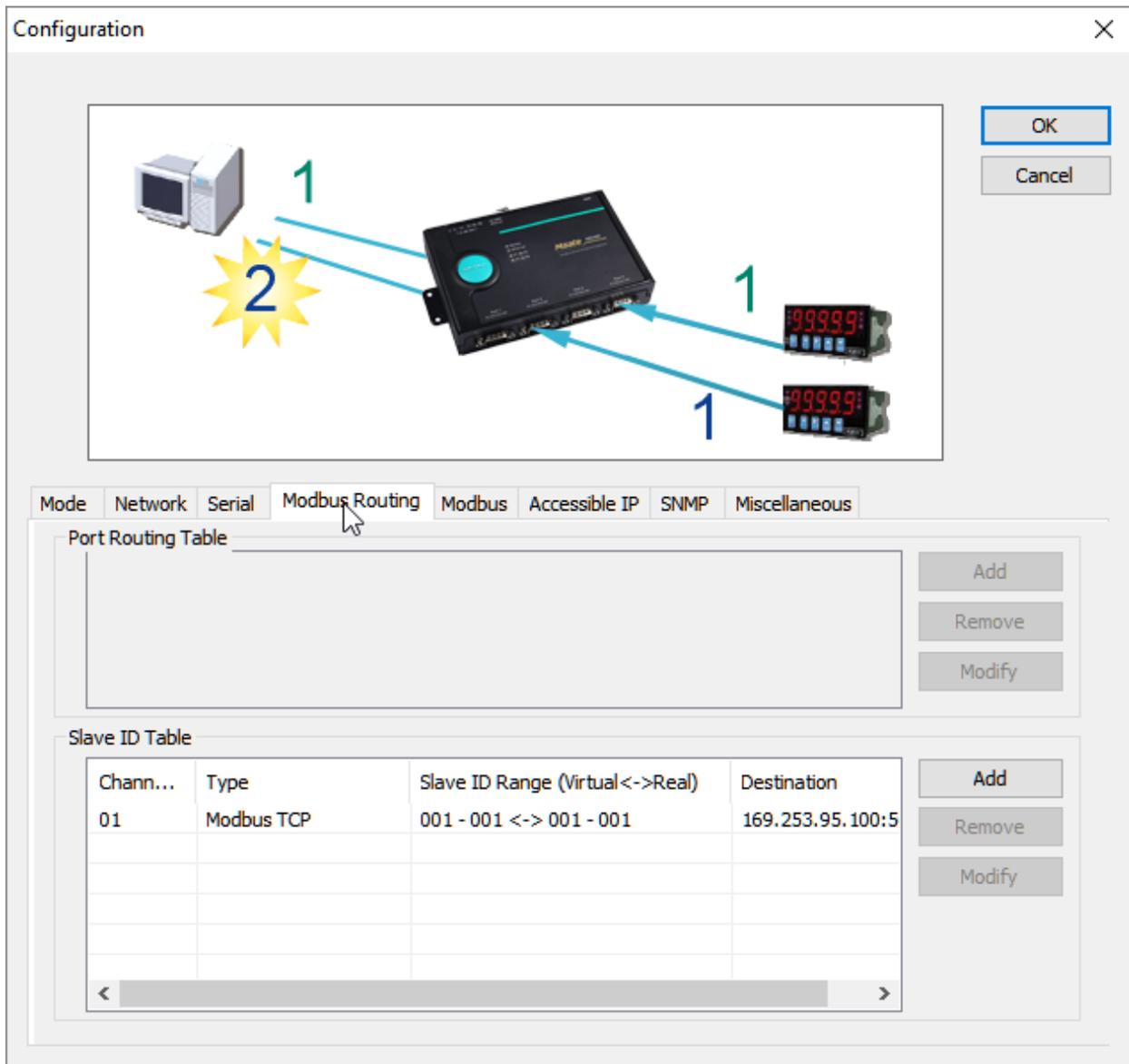


Figure 15 - Completed MODBUS Routing Configuration

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

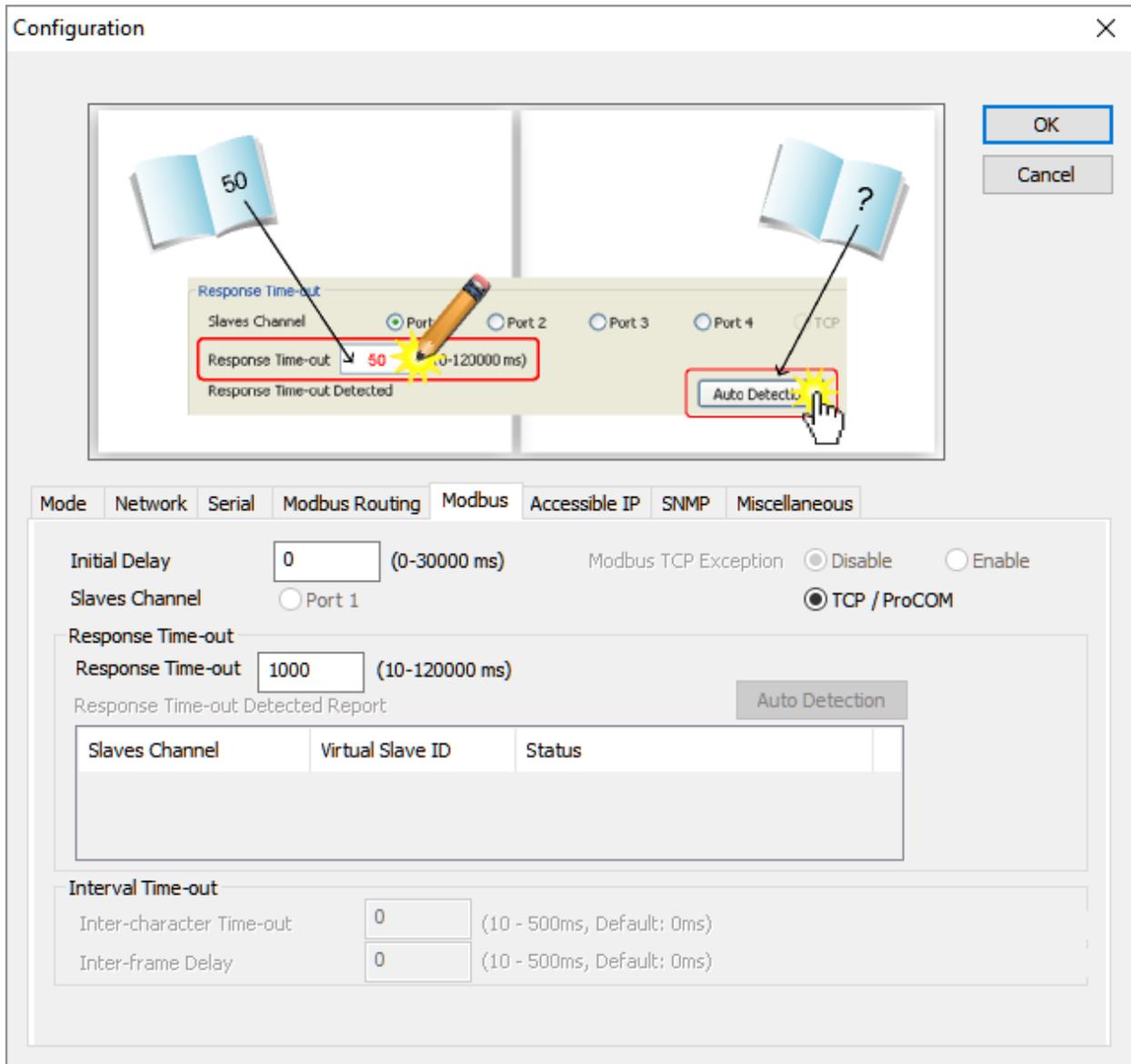


Figure 16 - Configuration - MODBUS

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

Configuration

OK  
Cancel

Accessible  
Non Accessible

Mode Network Serial Modbus Routing Modbus Accessible IP SNMP Miscellaneous

Enable the Accessible IP list

IP address: 0 . 0 . 0 . 0      Netmask: 255 . 255 . 255 . 255

Active

(Double click item to activate or inactivate)

No.	Active	IP address	Netmask
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Add  
Modify  
Remove

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.

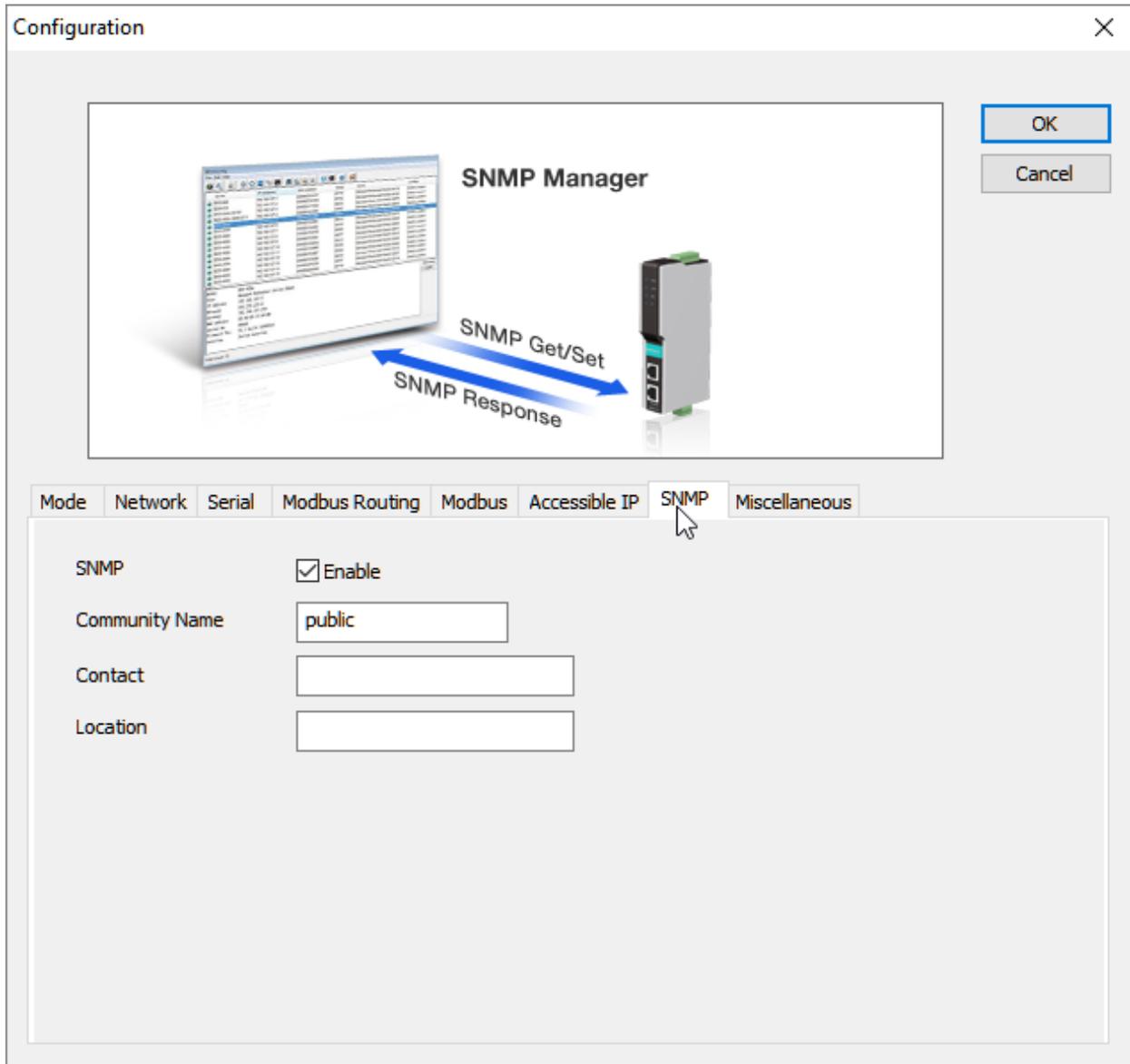


Figure 18 - Configuration - SNMP

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

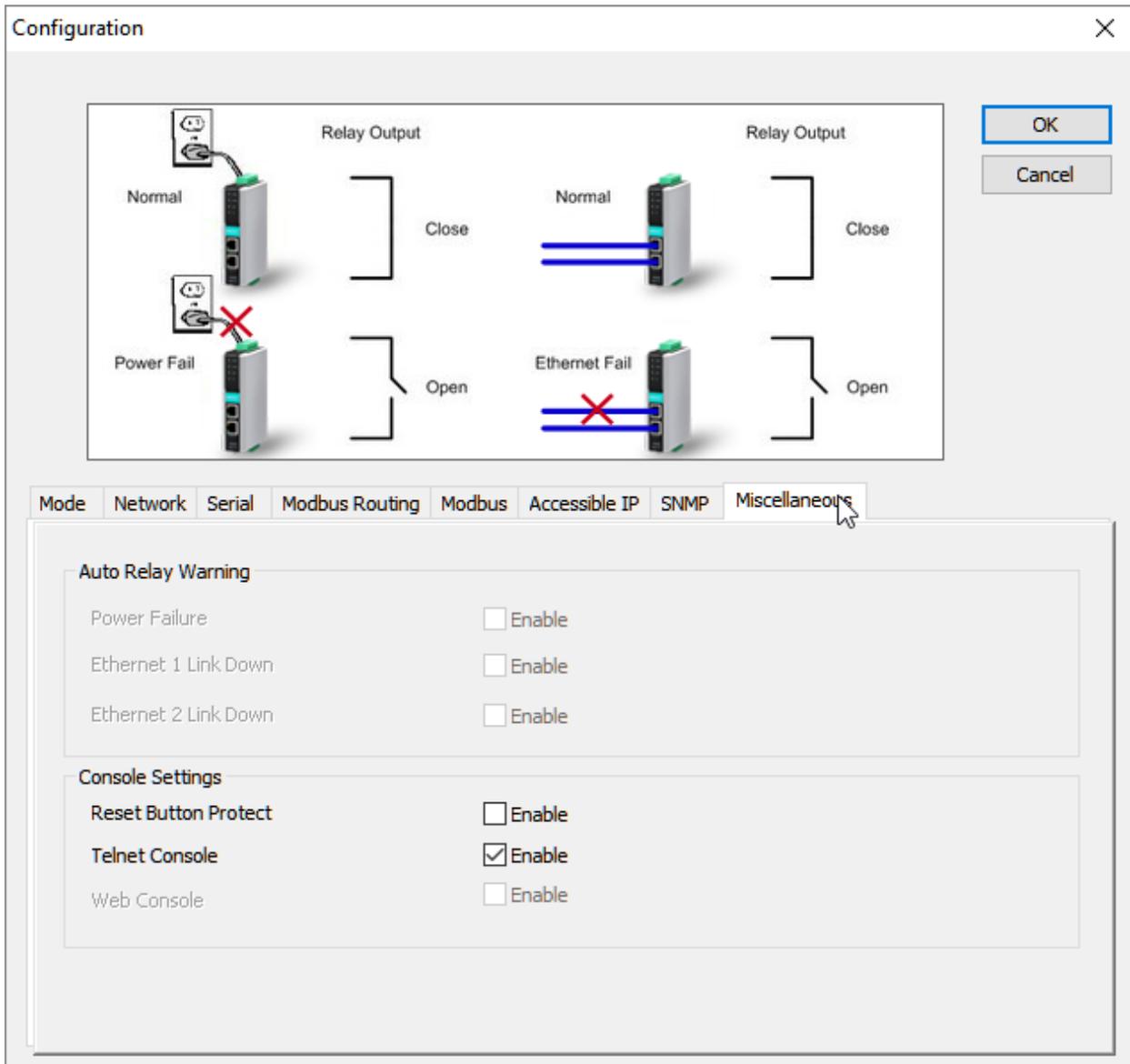


Figure 19 - Configuration - Miscellaneous

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

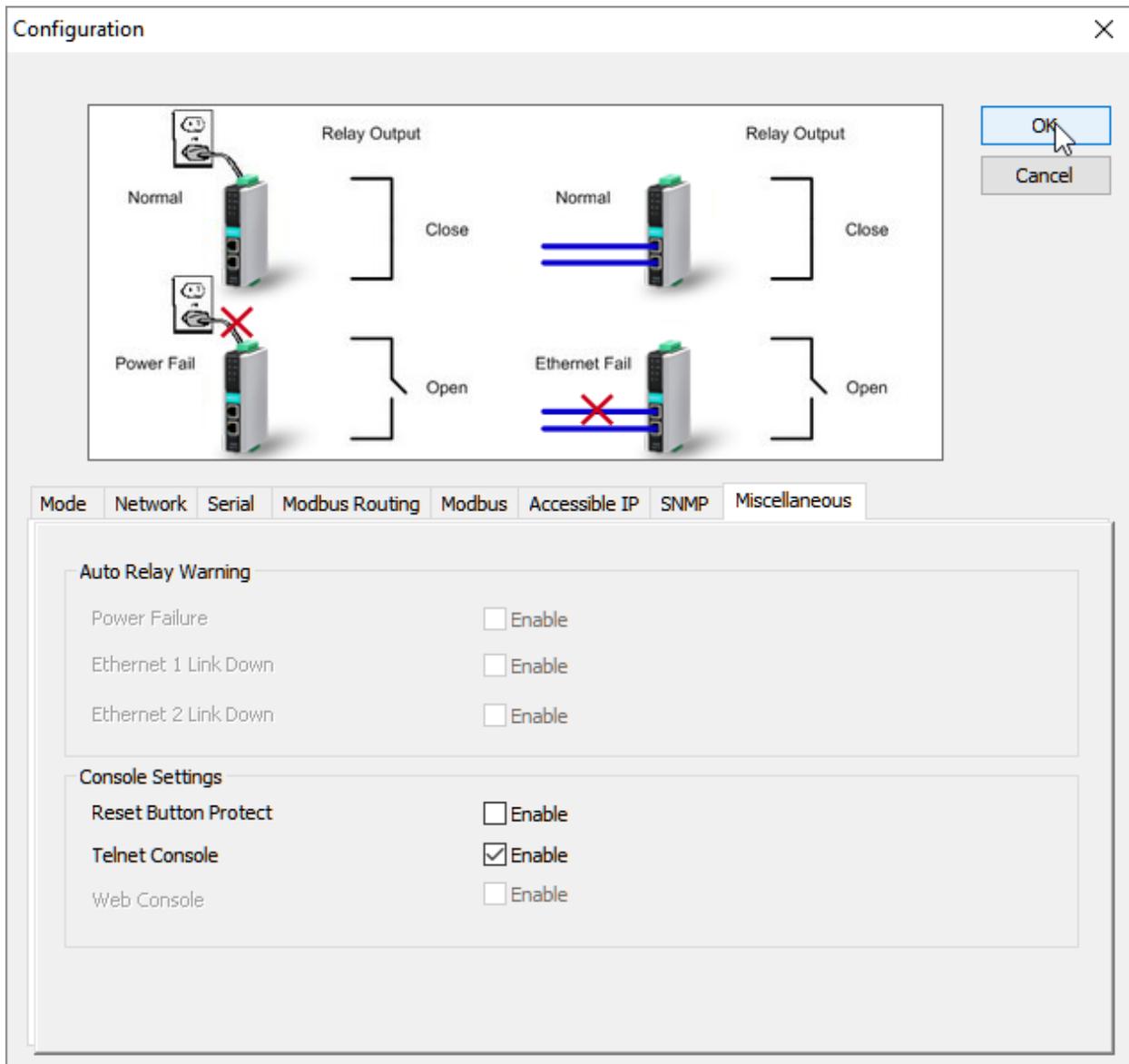


Figure 20 - Approve Configurations

You will get this pop-up.

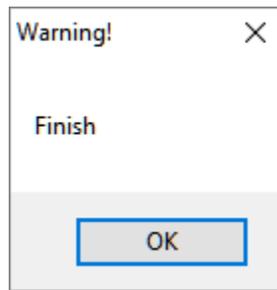


Figure 21 - Warning Pop-up

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

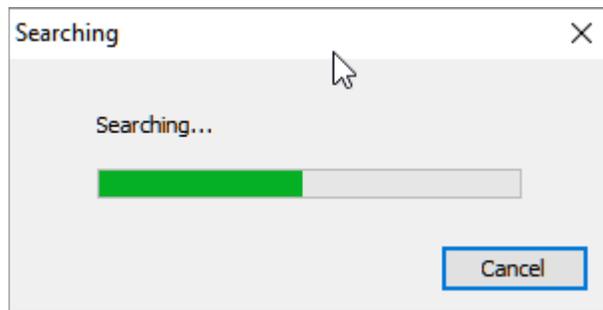


Figure 22 - Searching for Unit

