

Configuring Modbus TCP

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Version: 1.0.0



This following guide is to setup the legacy -MBT addon module. Please see [CM1-T User Guide](#) to setup the CM1-T.

The user will want to setup the network settings for the Modbus TCP motor. This could include setting a static/dynamic IP and/or a password.

Requirements

To configure a CM1 with Modbus TCP you should have the following

1. CM1 motor with -MBT module (e.g. CM1-C-23L20-MBT)
2. [Control Room](#) (which can be found [here](#))

Configure Network Settings

Two main network settings can be changed

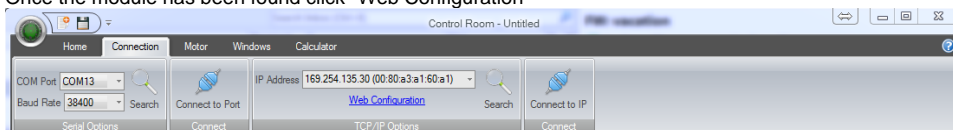
1. Static or dynamic (default) IP address
2. Network password

When you logon to the Modbus TCP web configuration page there are other Modbus related settings. These should be left as they are. If you reset the module to defaults please refer to the [Configuring Modbus](#) section at the bottom of this page.

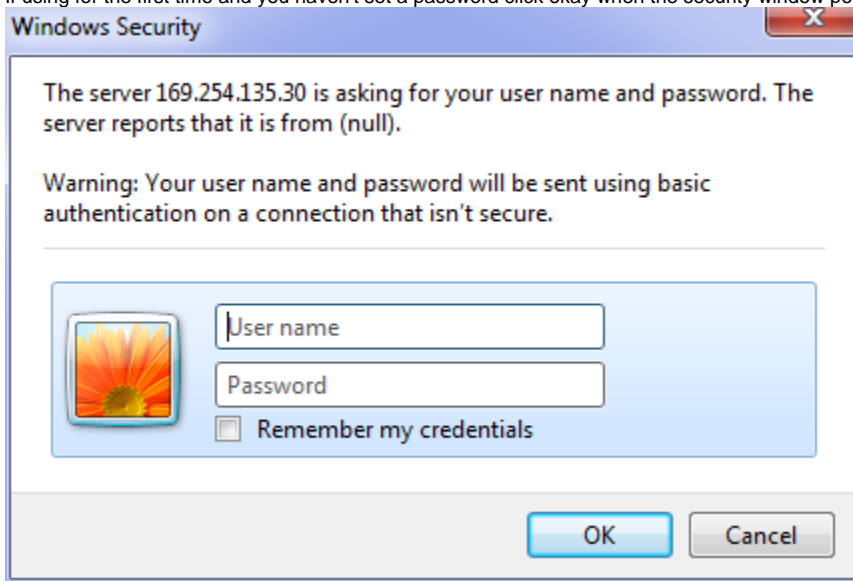
Logon to the Configuration page

When logging onto the configuration page for the first time there is no password. Follow the steps below to logon.

1. Open Control Room and search for the module under the TCP/IP options
2. Once the module has been found click "Web Configuration"



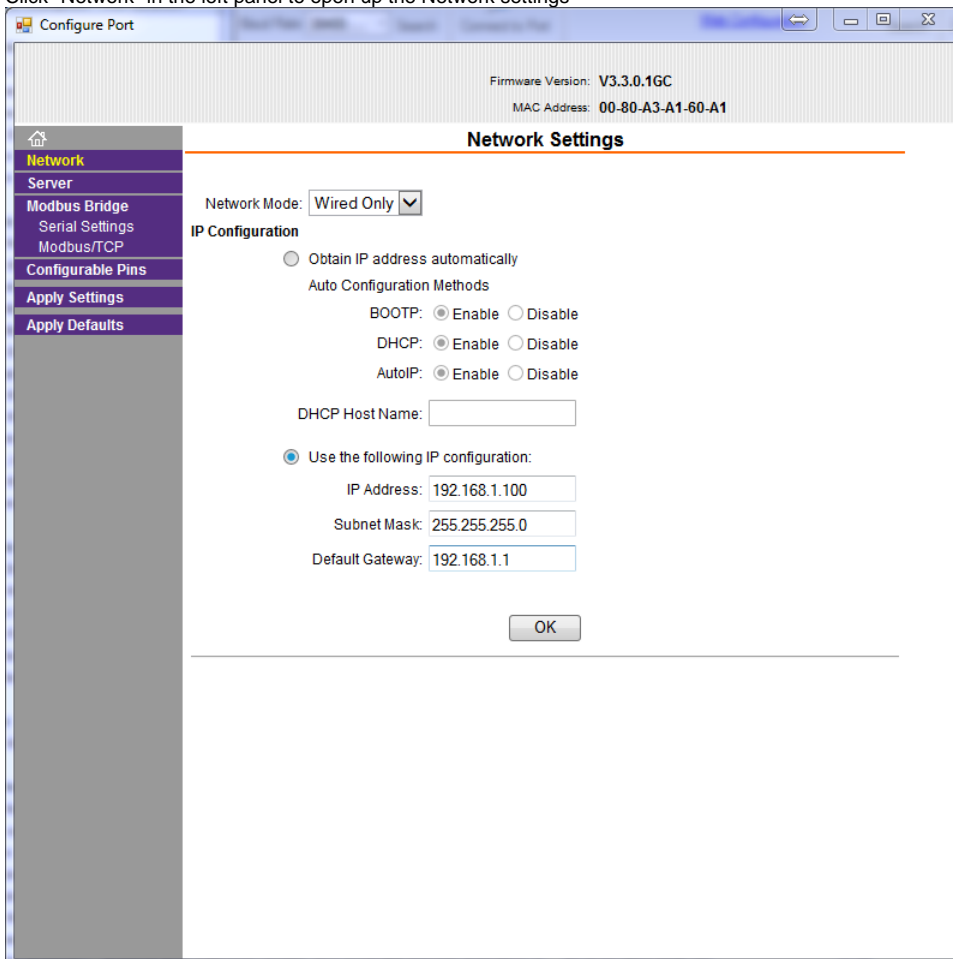
3. If using for the first time and you haven't set a password click okay when the security window pops up.



Set to Static IP

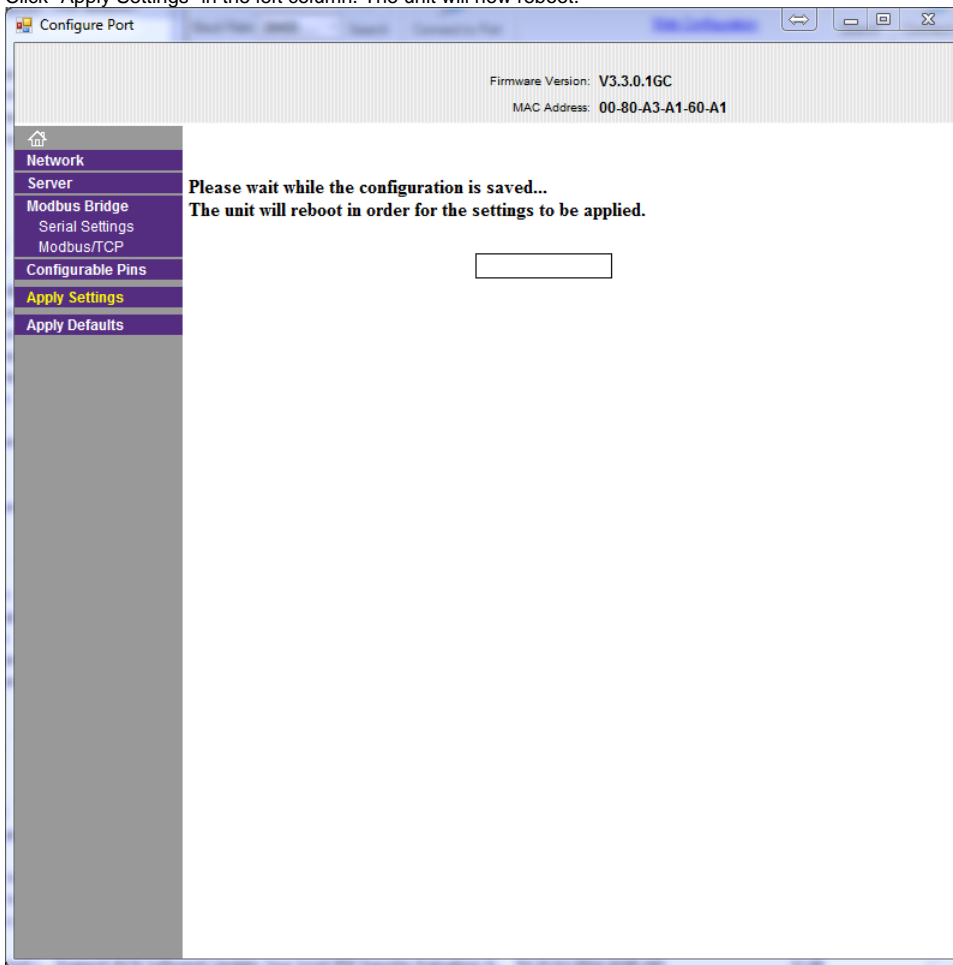
The motor comes standard with a dynamic IP looking for a DHCP server. If no server is found the module will assign itself and address in the 169.254 range. If the module is plugged directly into a computer it will typically get set in this manner. To assign a static IP use the following step-by-step guide.

1. Logon as described above in the logon guide
2. Click "Network" in the left panel to open up the Network settings



- a. Select "Use the following IP configuration" and set your required network settings
- b. Click the OK button

3. Click "Apply Settings" in the left column. The unit will now reboot.



To set back to DHCP or another configuration for a dynamic IP select the "Obtain IP address automatically" radio button.

Set Network Password

The web configuration can be protected with a password.



There is no way to reset the password if it is forgotten without returning the module to the factory.

1. Logon to the web configuration as described above

2. Click "Server" in the left column

Configure Port

Firmware Version: V3.3.0.1GC
MAC Address: 00-80-A3-A1-60-A1

Server Settings

Server Configuration

Enhanced Password: ☒ Enable ☐ Disable

Telnet/Web Manager Password:

Retype Password:

Advanced

ARP Cache Timeout (secs):

TCP Keepalive (secs):

Monitor Mode @ Bootup: ☒ Enable ☐ Disable

CPU Performance Mode: ☐ Low ☒ Regular ☐ High

HTTP Server Port:

MTU Size:

TCP Re-transmission timeout (ms):

OK

- a. Click the Enable radio button on "Enhanced Password"
 - b. Enter a password
 - c. Click OK
3. Click "Apply Settings" in the left column.
 4. The module will reboot. To login again use the password that has just been set.

Windows Security

The server 169.254.197.1 is asking for your user name and password. The server reports that it is from (null).

Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure.

User name:

☐ Remember my credentials

OK Cancel

Configuring Modbus



This section is relevant if a user has clicked "Apply Defaults" on the web interface. The module will have arrived with the correct Modbus TCP settings. Do not change Modbus settings unless instructed to by a Myostat engineer.

1. Click "Serial Settings"
 - a. changed the Baud Rate to 38400
 - b. Click OK

The screenshot shows the 'Configure Port' window with the 'Serial Settings' tab selected. The window title is 'Configure Port' and it includes a 'New Thread' button. At the top, it displays 'Firmware Version: V3.3.0.1GC' and 'MAC Address: 00-80-A3-A1-60-A1'. The left sidebar contains a menu with options: Network, Server, Modbus Bridge, Serial Settings (highlighted), Modbus/TCP, Configurable Pins, Apply Settings, and Apply Defaults. The main area is titled 'Serial Settings' and contains two sections: 'Port Settings' and 'Modbus'. In the 'Port Settings' section, the 'Baud Rate' is set to 38400, which is circled in red. Other settings include 'Interface: RS232', 'Data Bits: 8', 'Parity: None', 'Stop Bits: 1', 'Flow Control Out: Active Always', 'Delay before Transmit (1):' (empty), 'Hold after Transmit(4):' (empty), 'Flow Control In:' (empty), 'Wait til Active (2): No', 'Delay after Active (3):' (empty), and 'Modem Control Out: Active Always'. The 'Modbus' section shows 'Protocol: RTU' selected, 'Character Timeout: 50 ms (0=auto)', 'Tx Delay after Rx: 0 ms', and 'Message Timeout: 5000 ms'. An 'OK' button is located at the bottom of the settings area.

Configure Port

Firmware Version: V3.3.0.1GC
MAC Address: 00-80-A3-A1-60-A1

Serial Settings

Port Settings

Channel: 1
Baud Rate: 38400
Interface: RS232
Data Bits: 8
Parity: None
Stop Bits: 1
Flow Control Out: Active Always
Delay before Transmit (1): ms
Hold after Transmit(4): ms
Flow Control In:
Wait til Active (2): No
Delay after Active (3): ms
Modem Control Out: Active Always

Modbus

Protocol: ☒ RTU ☐ ASCII
Character Timeout: 50 ms (0=auto)
Tx Delay after Rx: 0 ms
Message Timeout: 5000 ms

OK

2. Select "Modbus/TCP"
 - a. Change "Fixed Slave Address" to 1

b. Click Okay

The screenshot shows a 'Configure Port' window with a sidebar on the left containing the following menu items: Network, Server, Modbus Bridge, Serial Settings (highlighted in yellow), Modbus/TCP, Configurable Pins, Apply Settings, and Apply Defaults. The main area is titled 'Serial Settings' and displays the following configuration:

Firmware Version: V3.3.0.1GC
MAC Address: 00-80-A3-A1-60-A1

Port Settings

Channel: 1 Interface: RS232
Baud Rate: 38400 Data Bits: 8 Parity: None Stop Bits: 1
Flow Control Out: Active Always Delay before Transmit (1): ms Hold after Transmit(4): ms
Flow Control In: Wait til Active (2): No Delay after Active (3): ms
Modem Control Out: Active Always

Modbus

Protocol: ☒ RTU ☐ ASCII Character Timeout: 50 ms (0=auto)
Tx Delay after Rx: 0 ms Message Timeout: 5000 ms

OK

3. Click "Apply Settings"

The Modbus TCP module has now been set to correctly communicate with the motor.