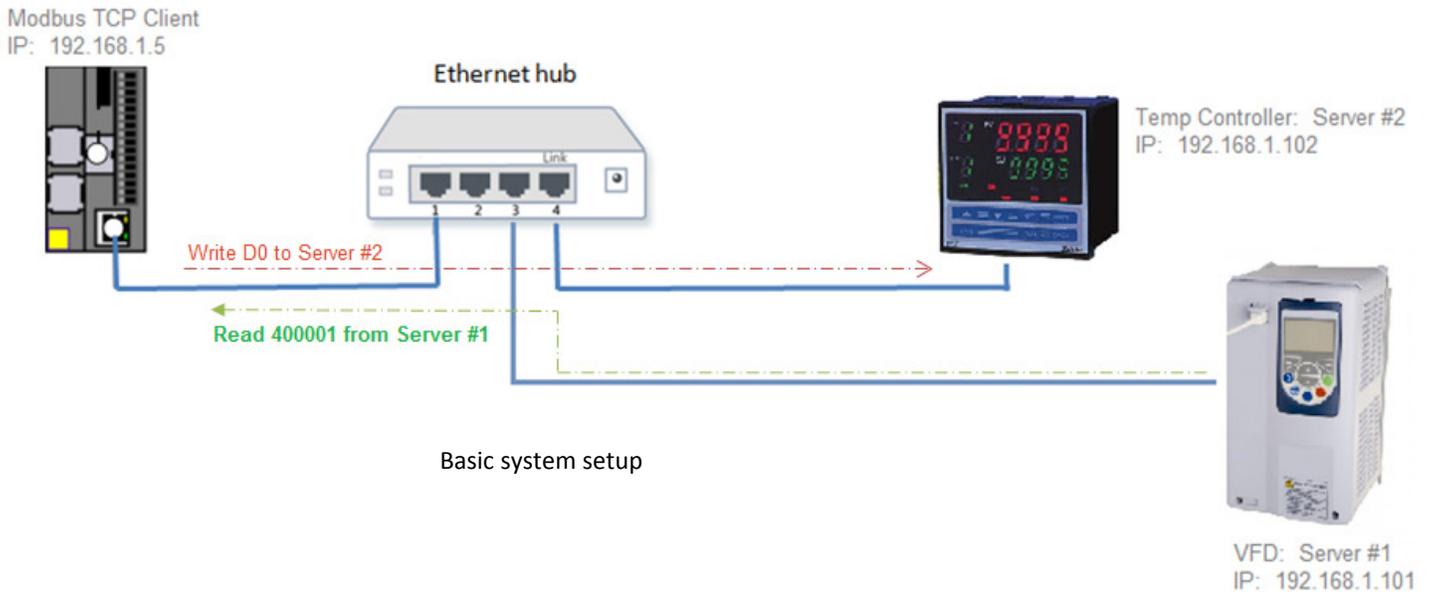


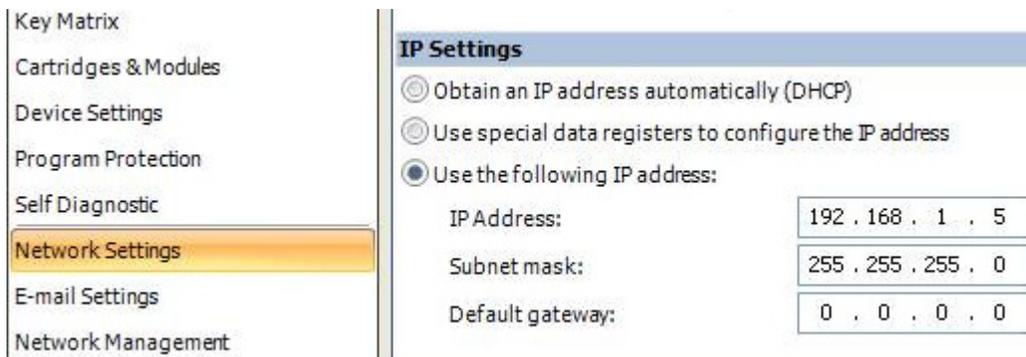
Application Notes

How to configure FC5A-D12% CPU as Modbus TCP Client (Master)



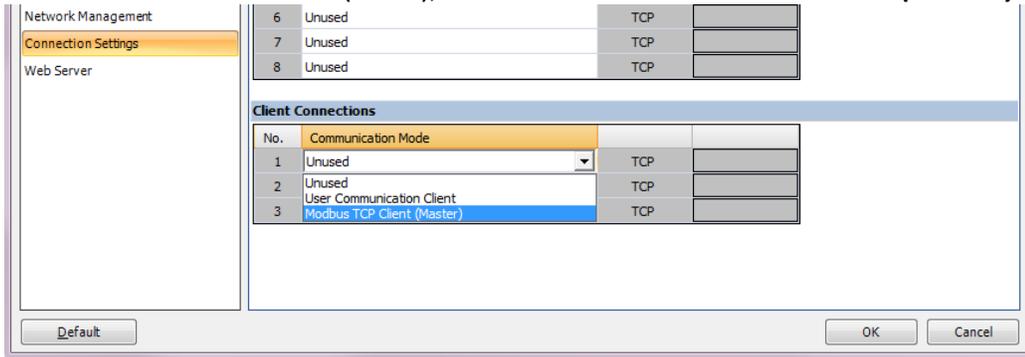
The purpose of the document is to show users how to configure IDEC Ethernet CPU FC5A-D12% as a Modbus TCP client (Master) and communicate with two Server (Slave) devices.

1. In WindLDR, click on **Configuration** tab → **Network Settings**
2. In this tutorial, we'll use the default settings for FC5A-D12% CPU
 - a. IP Address: 192.168.1.5
 - b. Subnet mask: 255.255.255.0

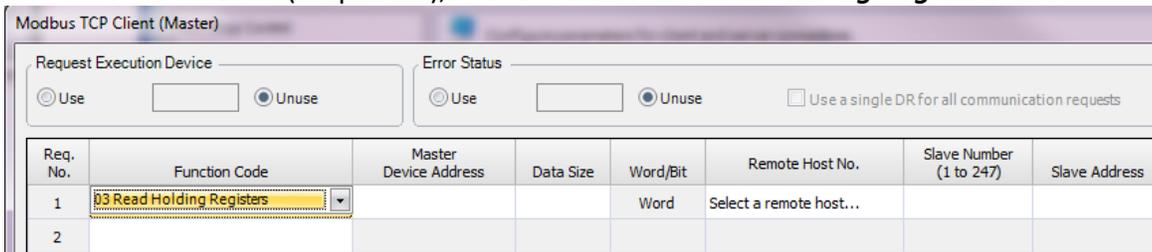


Application Notes

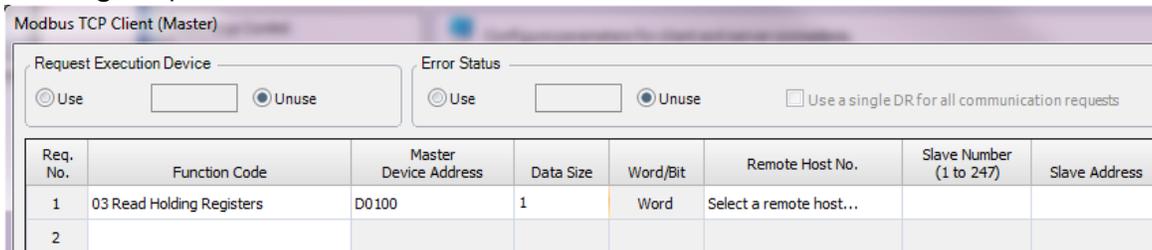
3. Click **Connection Settings**
4. Under Client Connections (No. 1), click and select **Modbus TCP Client (Master)**



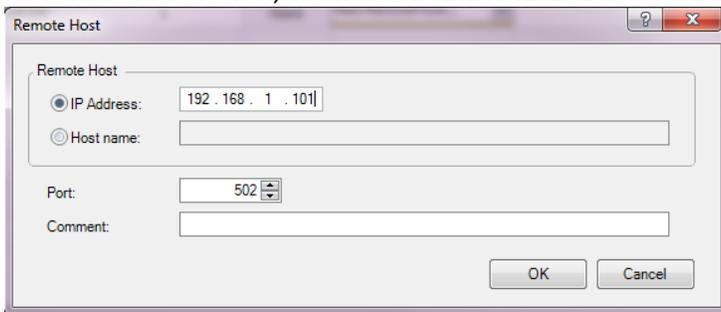
5. Modbus TCP Client (Master) dialog box appears.
6. Under Function Code (Req. No. 1), click and select **03 Read Holding Registers**



7. Under Master Device Address, enter **D100** (the value coming from VFD Server #1 will be stored into this data register) and **1** for **Data Size**.



8. Under Remote Host No., click **Select a remote host...** and select **New Remote Host...**
9. Remote Host dialog box appears. Enter Server #1 IP address.
Note: In this tutorial, we'll use 192.168.1.101 for Server #1. Leave Port 502 as default.



Application Notes

- Click **OK** button to close Remote Host dialog box.
- Under Slave Number (1 to 247) select any number from 1 to 247 (Modbus TCP communications does not use Slave number to establish communication). In this tutorial, we'll enter **1**.
- Under Slave Address, enter **400001** (this is the Modbus holding register of Server #1).

Req. No.	Function Code	Master Device Address	Data Size	Word/Bit	Remote Host No.	Slave Number (1 to 247)	Slave Address
1	03 Read Holding Registers	D0100	1	Word	1: 192.168.1.101 (502)	1	400001
2	00 No Operation						

- Next, we'll write data register D0 in the PLC to Server #2.
- Under Function Code (Req. No. 2), click and select **06 Preset Single Register**.

Req. No.	Function Code	Master Device Address	Data Size	Word/Bit	Remote Host No.	Slave Number (1 to 247)	Slave Address	Req. Execution Device	Error Status
1	03 Read Holding Registers	D0100	1	Word	1: 192.168.1.101 (502)	1	400001		
2	06 Preset Single Register		1	Word	Select a remote host...				

- Under Master Device Address, enter **D0**.
- Under Remote Host No., click **Select a remote host...** and Select **New Remote Host...**
- Remote Host dialog box appears. Enter Server #2 IP address. Click **OK** button.
Note: In this tutorial, we'll use 192.168.1.102 for Server #2. Leave Port 502 as default.

Remote Host

Remote Host

IP Address: 192.168.1.102

Host name:

Port: 502

Comment:

OK Cancel

- Under Slave Number (1 to 247) select any number from 1 to 247 (Modbus TCP communications does not use Slave number to establish communication). In this tutorial, we'll enter **1**.
- Under Slave Address, enter **400002** (this the Modbus holding register where the value coming from D0 in the PLC will be stored).

Application Notes

Modbus TCP Client (Master)

Request Execution Device: Use Unuse

Error Status: Use Unuse Use a single DR for all communication requests

Req. No.	Function Code	Master Device Address	Data Size	Word/Bit	Remote Host No.	Slave Number (1 to 247)	Slave Address
1	03 Read Holding Registers	D0100	1	Word	1: 192.168.1.101 (502)	1	400001
2	06 Preset Single Register	D0000	1	Word	2: 192.168.1.102 (502)	1	400002
3	00 No Operation						

20. Click **OK** button to close Modbus TCP Client (Master) dialog box.

21. Click **OK** button to close Function Are Settings dialog box.

END