



APPLICATION NOTE

Configuring Omron CJ2H PLC's with Ethernet/IP for use with Acromag Ethernet/IP Remote I/O

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OBJECTIVE

This document walks the user through the configuration of the Cx-One Network Configurator software that is used in conjunction with Omron CJ2H PLC's. It is assumed that the user has a working knowledge of the PLC and Cx-One software.

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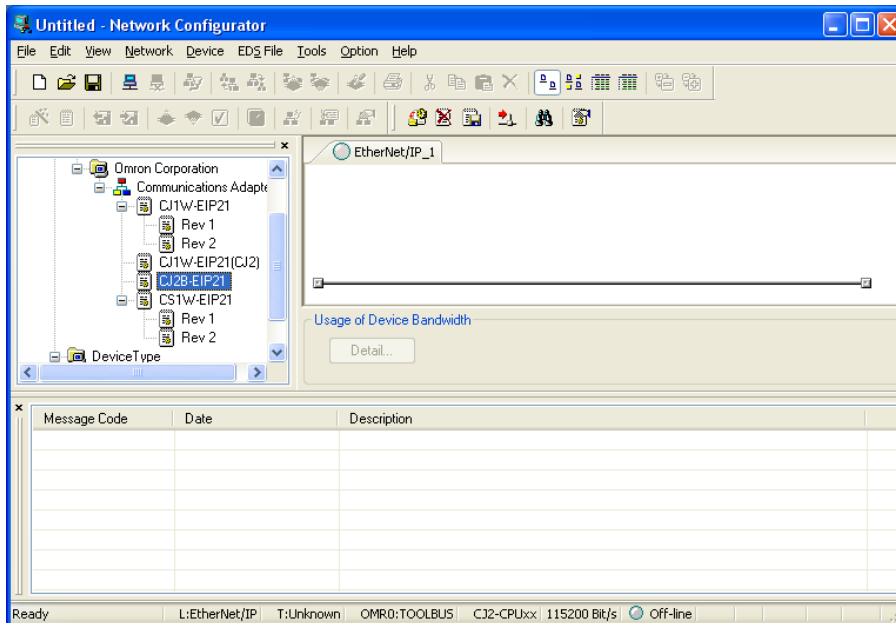
Configuring the Omron CJ2H PLC for use with Acromag Ethernet/IP Products

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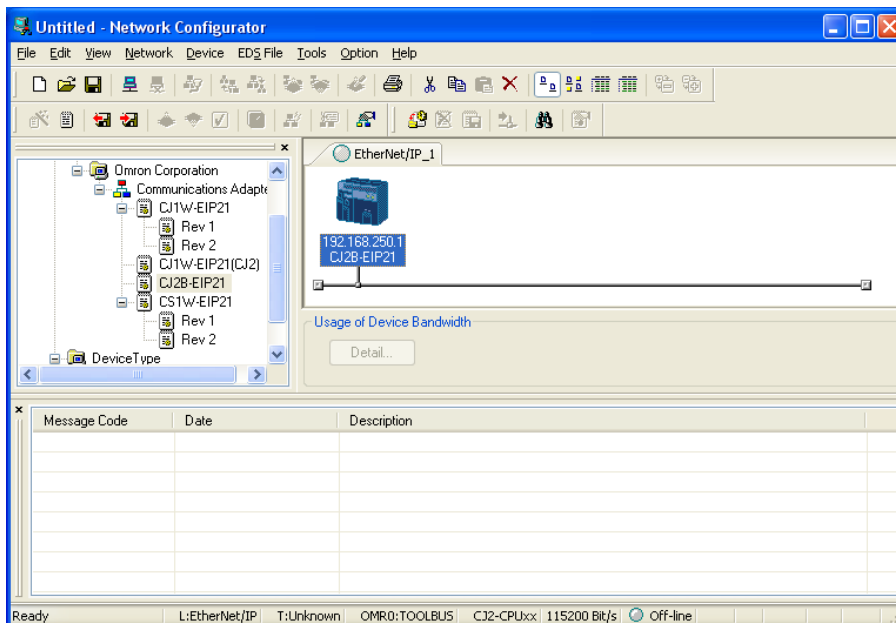
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Configuring the Cx-One “Network Configurator”

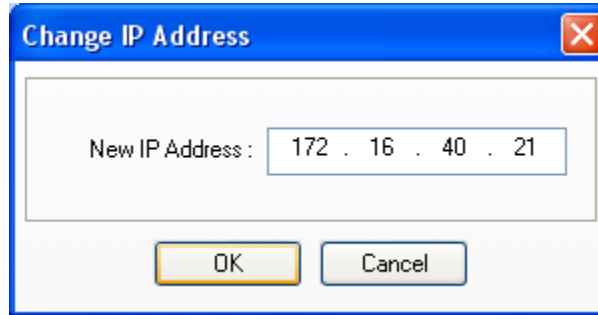
1. Start the Cx-One **Network Configurator** by selecting **Start-> All Programs->Omron-> Cx-One-> Network Configurator for Ethernet/IP-> Network Configurator**.



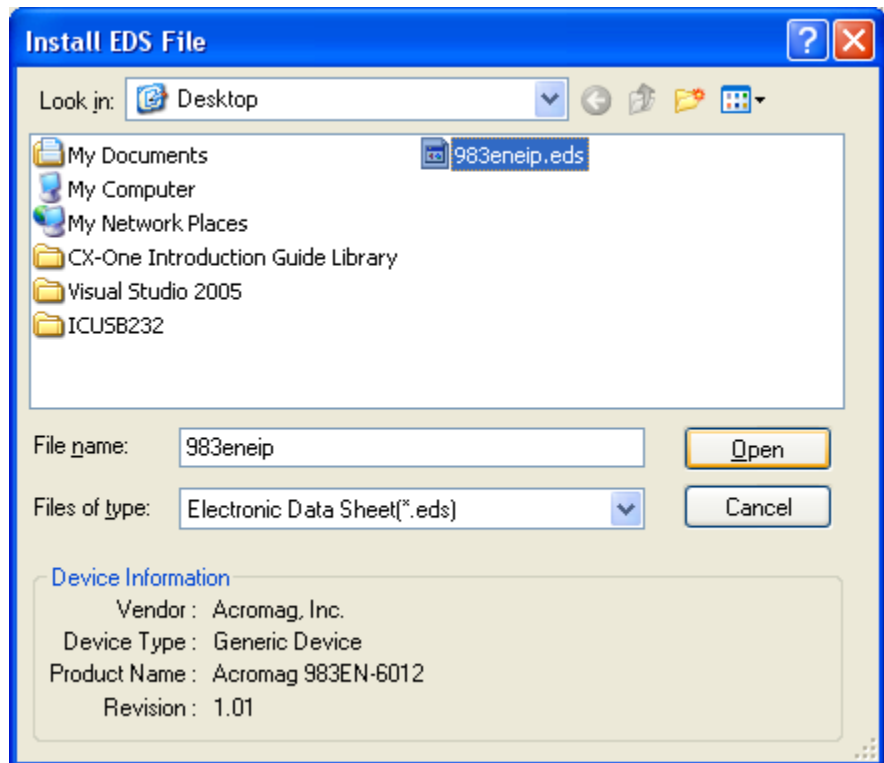
2. Expand the **Communications Adapter** tree and double click on **CJ2B-EIP21**. The PLC will be loaded into the **Ethernet/IP_1** window. Highlight the PLC as shown, right click on it and select **Change Node Address**.



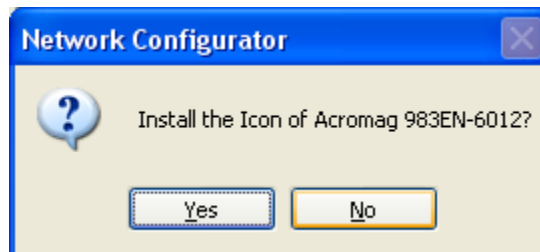
3. In this box, enter the IP Address of the PLC and then click **OK**.

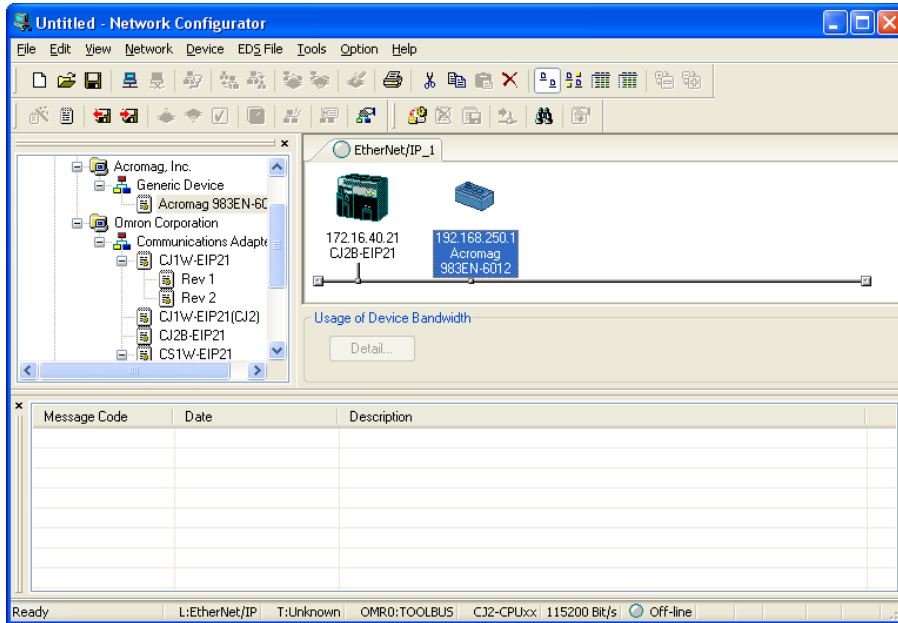


4. Click on **EDS Files->Install** in the main window to bring up this dialog box. Navigate to where the EDS files are stored on your system and then double click on the model being installed.

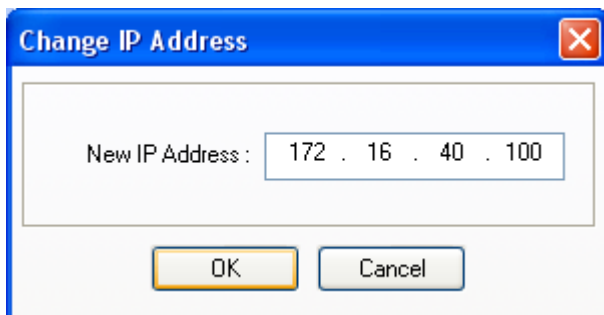


5. Click on **No** when it asks if the icon should be installed.



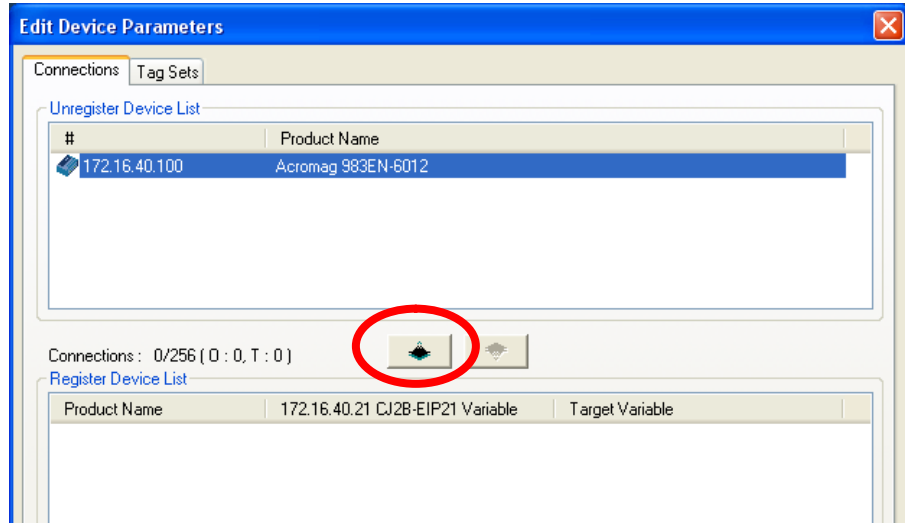


- The Acromag device has now been added to the Communications Adapter tree, double click on it to add it to the **Ethernet/IP_1** network window. Then right click on the Acromag device and select **Change Node Address**.

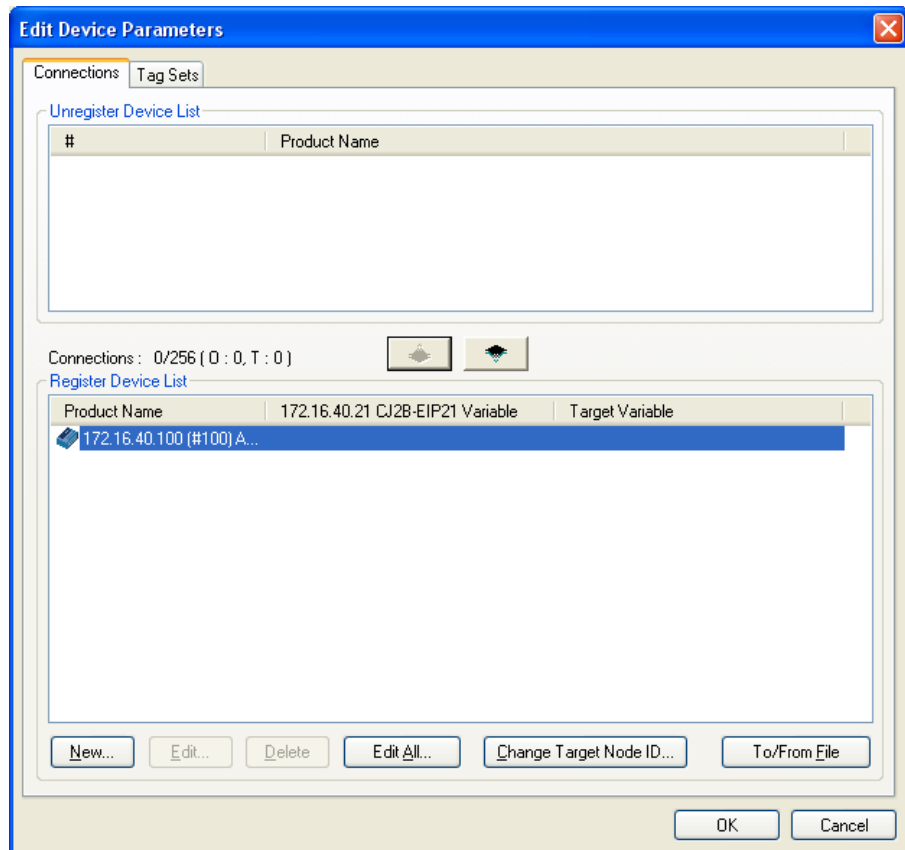


- In this box, enter the IP Address of the Acromag device and then click **OK**.

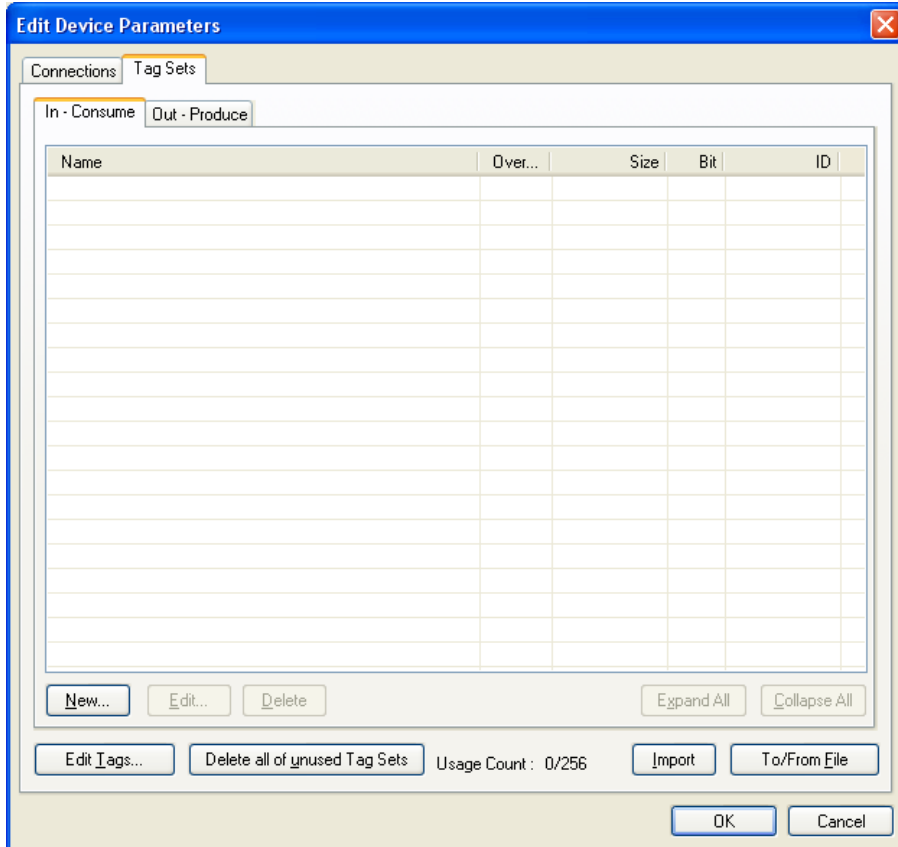
8. Double click on the PLC to bring up the **Edit Device Parameters** dialog box at the right. Then click on the Down arrow to move the Acromag device from the **Unregister Device List** to the **Register Device List** as shown below.



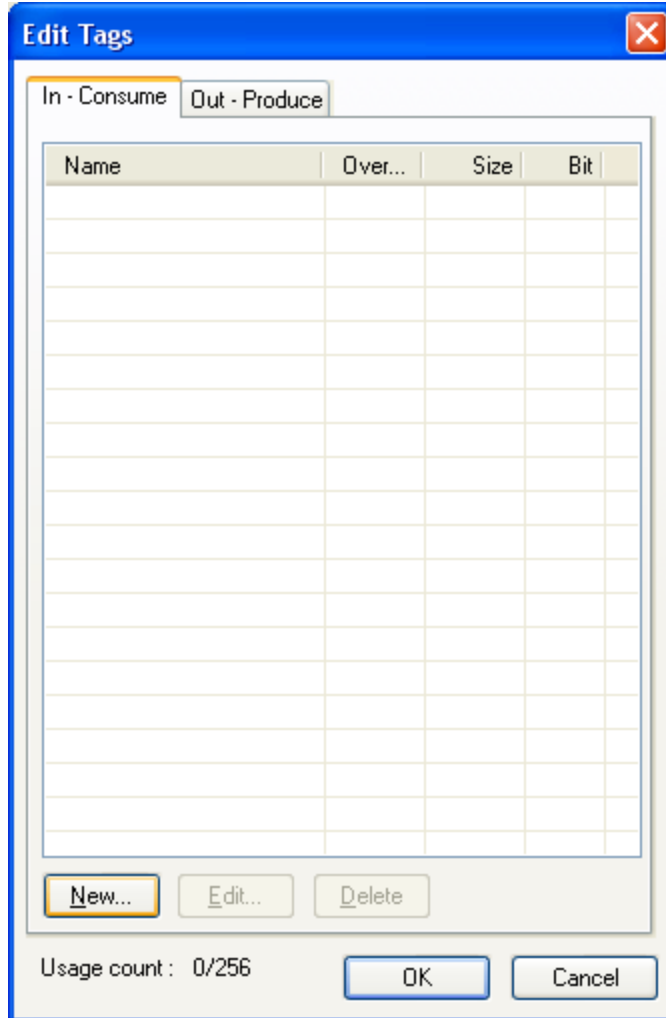
9. Click on the **Tag Sets** tab to bring up the next window.



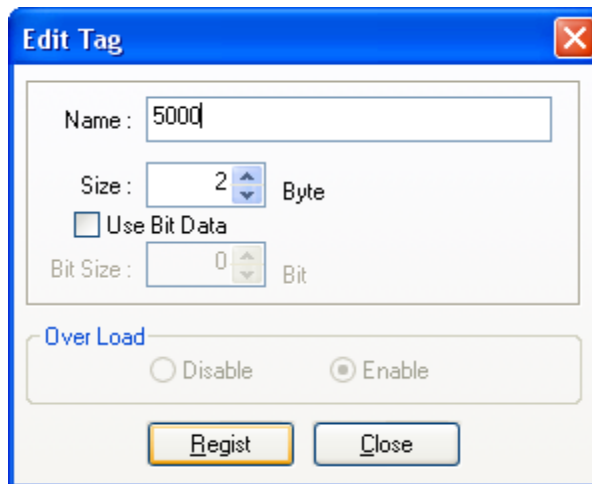
- Click on the **Edit Tags** button to display the **Edit Tags** dialog box.

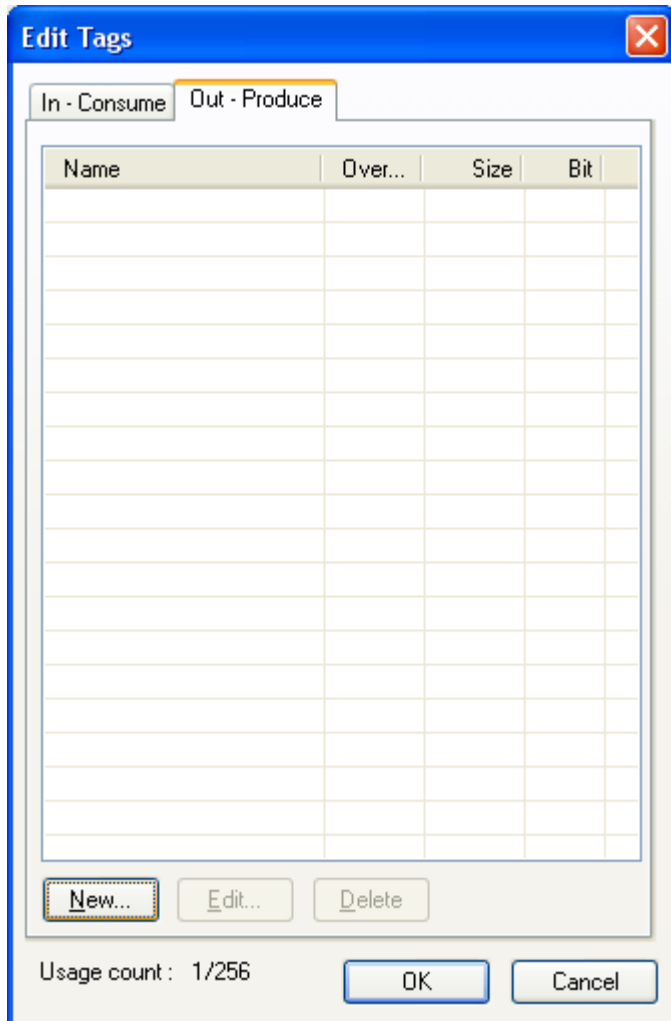


- Click on **In-Consume** tab and then the **New** button to create a tag.

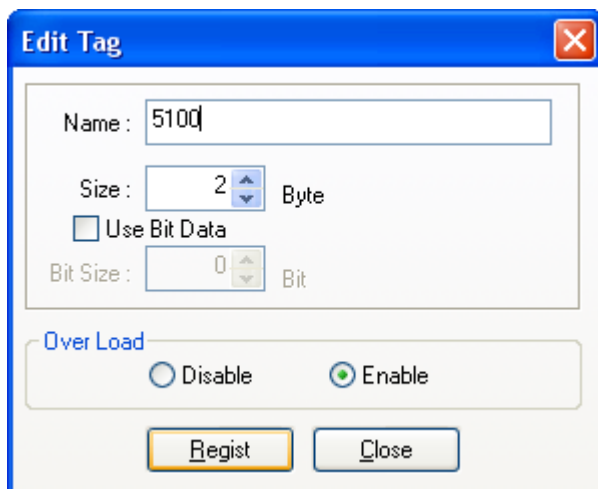


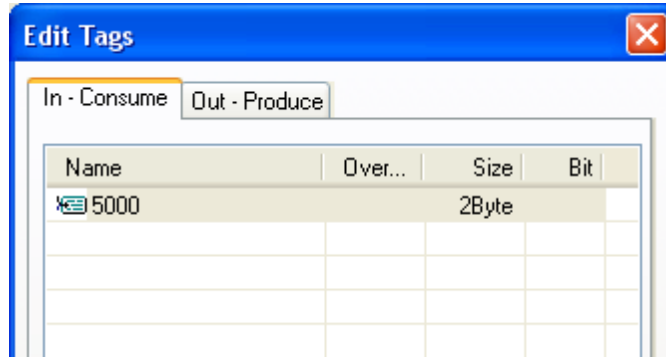
- Enter 5000 for the **Name**, adjust the **Size** according to the device and click the **Register** button and then the **Close** button. This is the Tag, name that the Acromag inputs will be identified with inside the PLC.



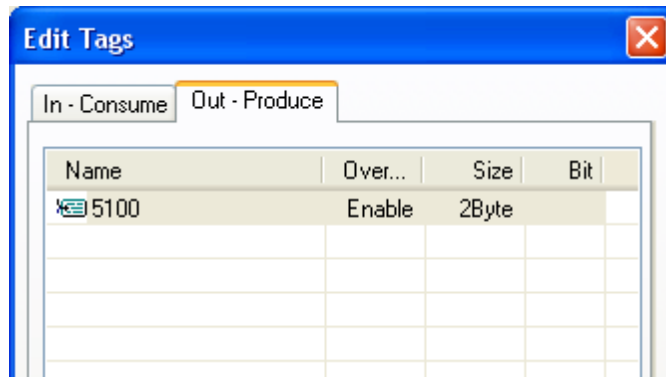


- Now click on the **Out-Produce** tab and repeat steps 11 and 12 to create the output tag using the **Name** 5100 as shown below..

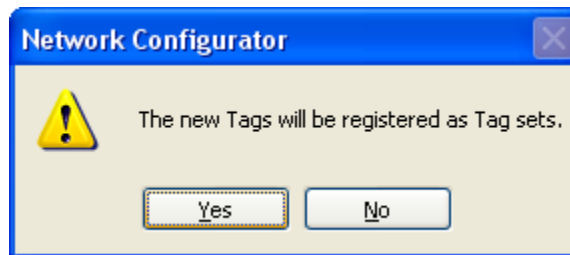
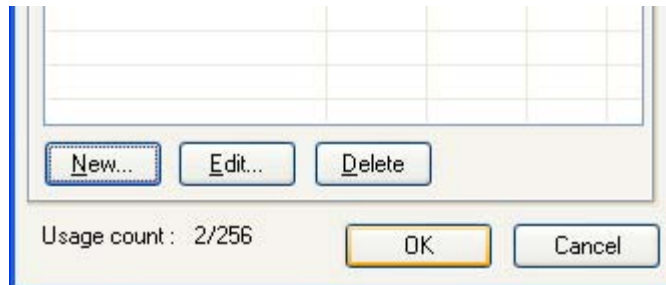


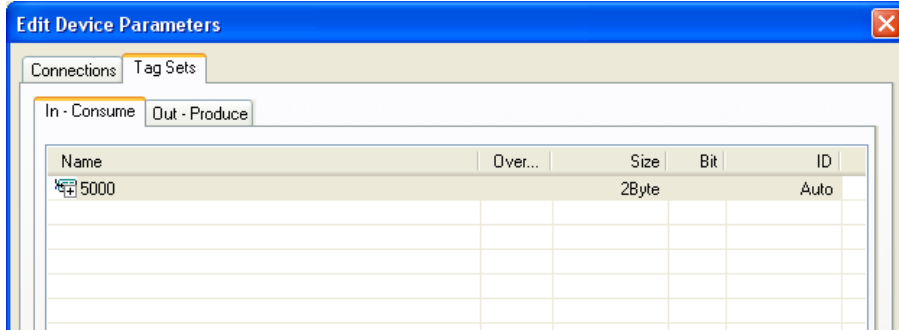


13. The **In-Consume** and **Out-Produce** tabs of the **Edit Tags** dialog box should now look like those at the right.

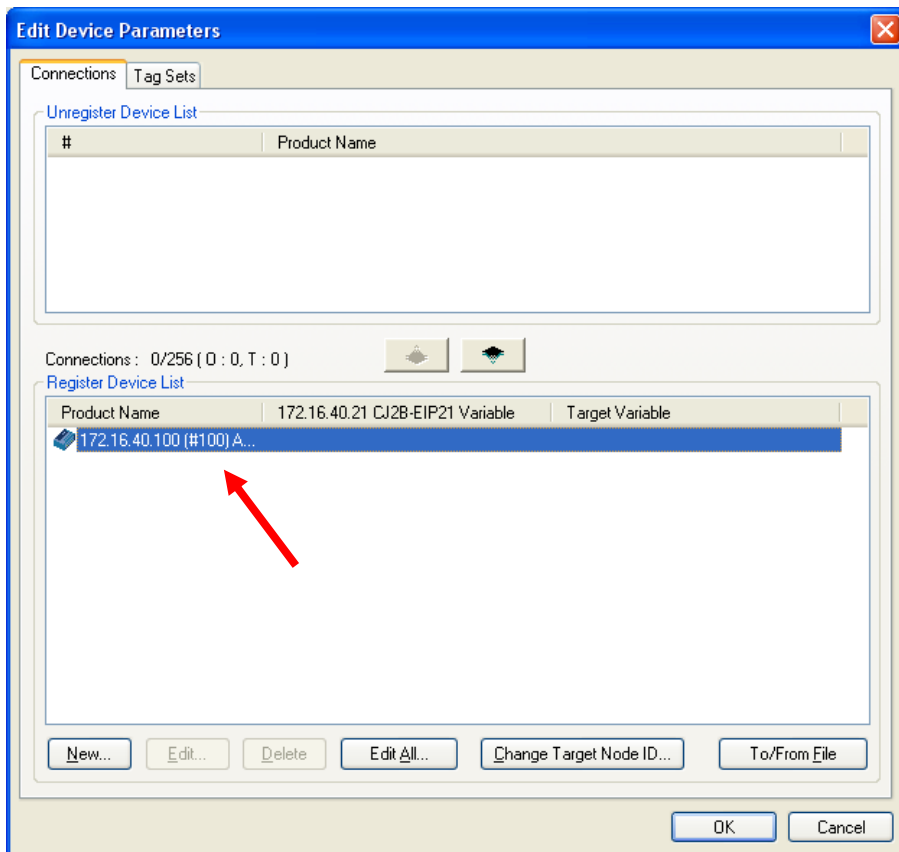
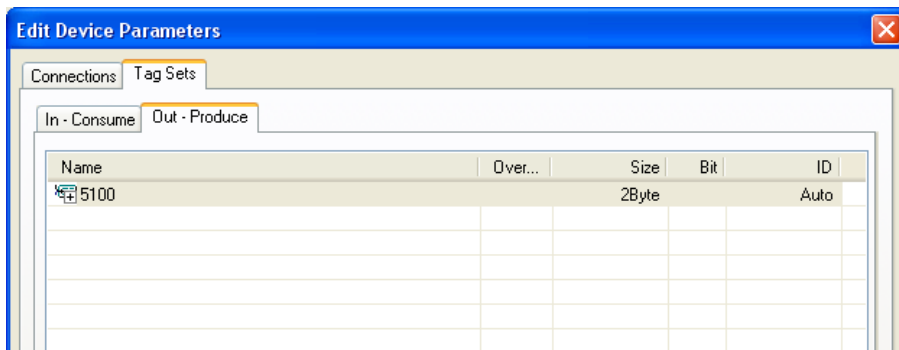


14. Click the **OK** button of the **Edit Tags** box to accept the created tags and then click **Yes** on the box below





15. Click on the **In-Consume** and **Out-Produce** tabs to verify that the tags have been correctly entered as seen here.



16. Click on the **Connections** tab and then Double click on the **Acromag Node** in the **Register Device List** to bring up the **Edit Connection** window.

17. Enter a **Connection Name**. The **Connection I/O Type**, the **Input from Target Device Produce Variable**, the **Output to Target Device Consume Variable** and the **Connection Type** fields will all be pre-populated from the EDS file. Set the **RPI** and **Timeout Value** as needed, a minimum of 200mS and a RPIx16 is recommended as a starting point for Acromag Devices. For the **Input From Target Device Consume Variable** and the **Output to Target Device Produce Variable**, select the tags you created earlier. Click **Register** and then **Close** when finished.

172.16.40.100 Acromag 983EN-6012 Edit Connection

Connection Name : 983EN_6012

Connection I/O Type : 983EN

Packet Interval (RPI) : 200.0 ms (0.5 - 10000.0 ms)

Timeout Value : Packet Interval (RPI) x 16

Input from Target Device

Consume Variable : 5000 - [2Byte]

Produce Variable : Input_100 - [2Byte]

Connection Type : Multi-cast connection

Output to Target Device

Produce Variable : 5100 - [2Byte]

Consume Variable : Output_112 - [2Byte]

Connection Type : Point to Point connection

Originator Device

Node Address : 172.16.40.21

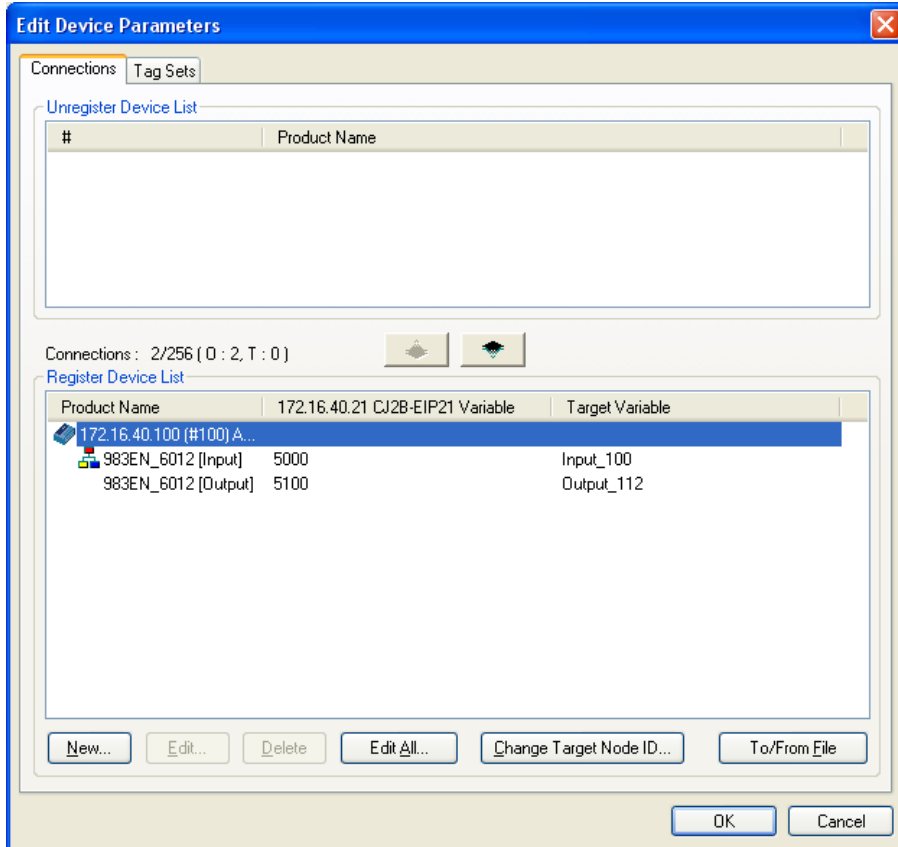
Comment : CJ2B-EIP21

Target Device

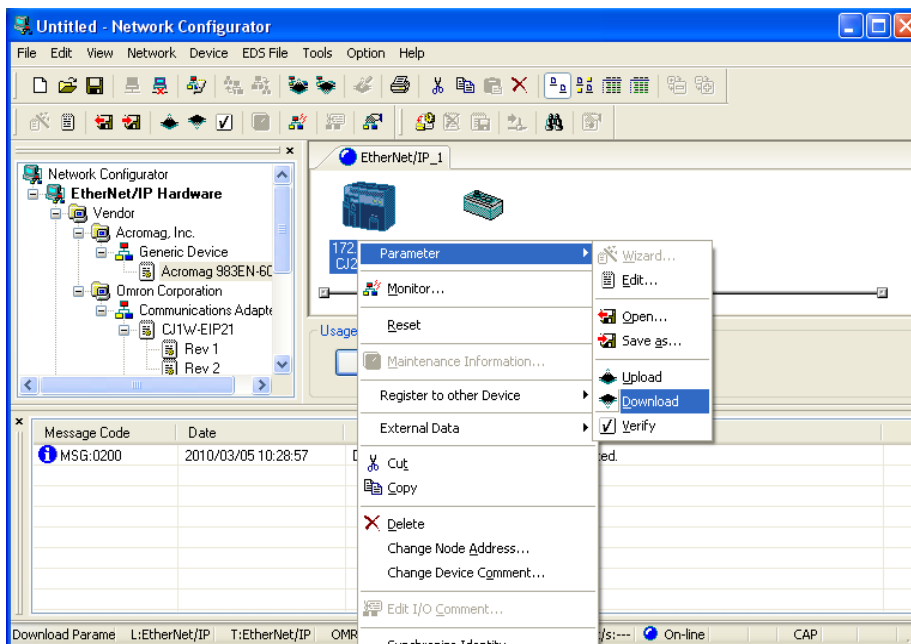
Node Address : 172.16.40.100

Comment : Acromag 983EN-6012

Register Close

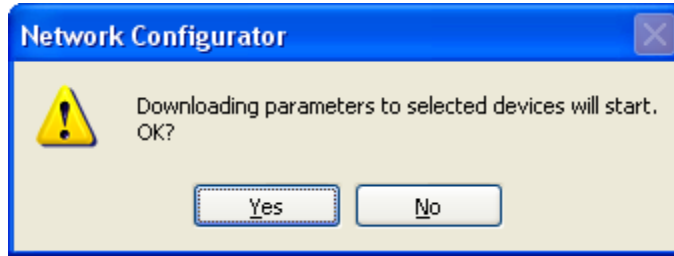


18. The **Edit Device Parameters** window should now appear as seen here. Click **OK**.

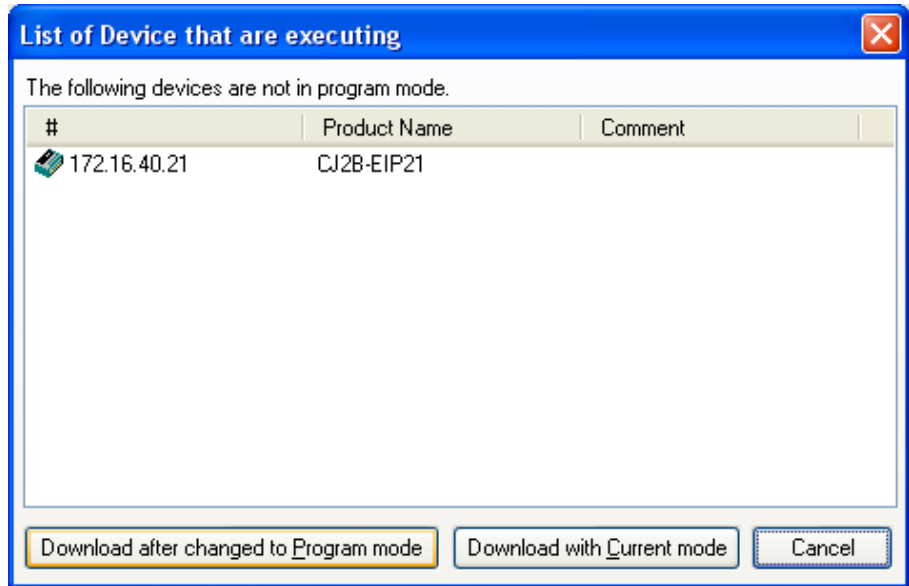


19. The configuration must now be downloaded to the PLC. Right click on the PLC image, select **Parameter->Download**.

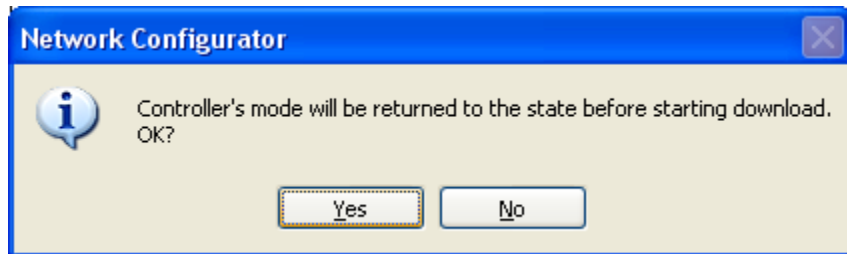
20. Click on **Yes**.



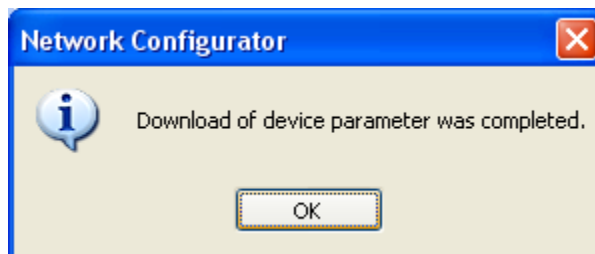
21. Click on **Download after changed to Program Mode**.



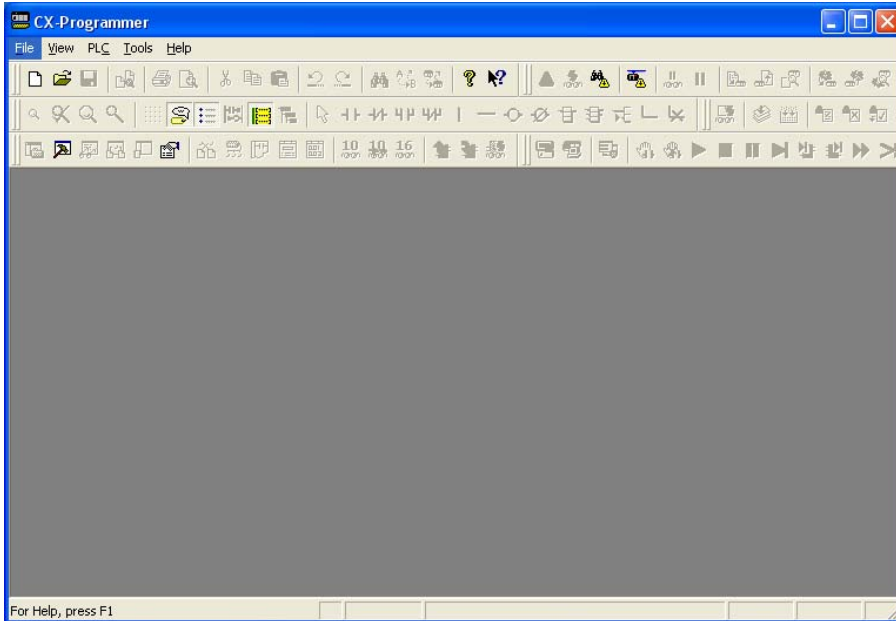
22. Click on **Yes**.



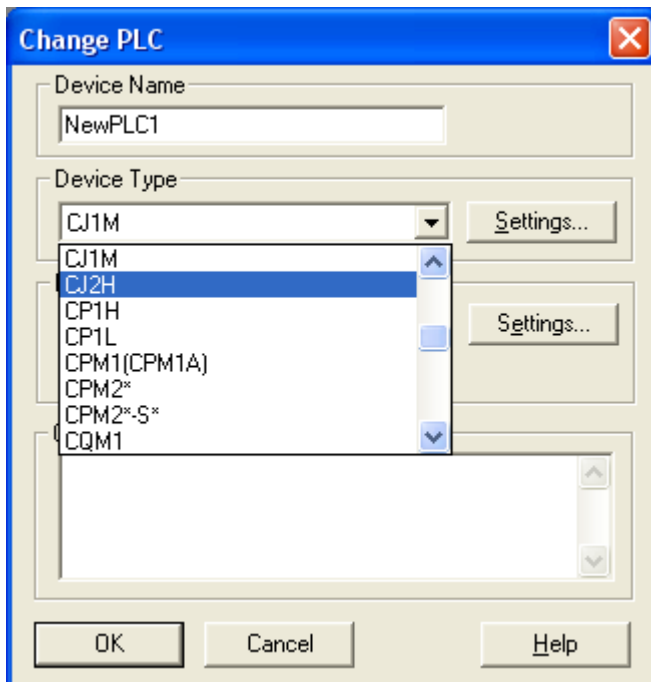
23. Click on **OK**.



Testing The Configuration

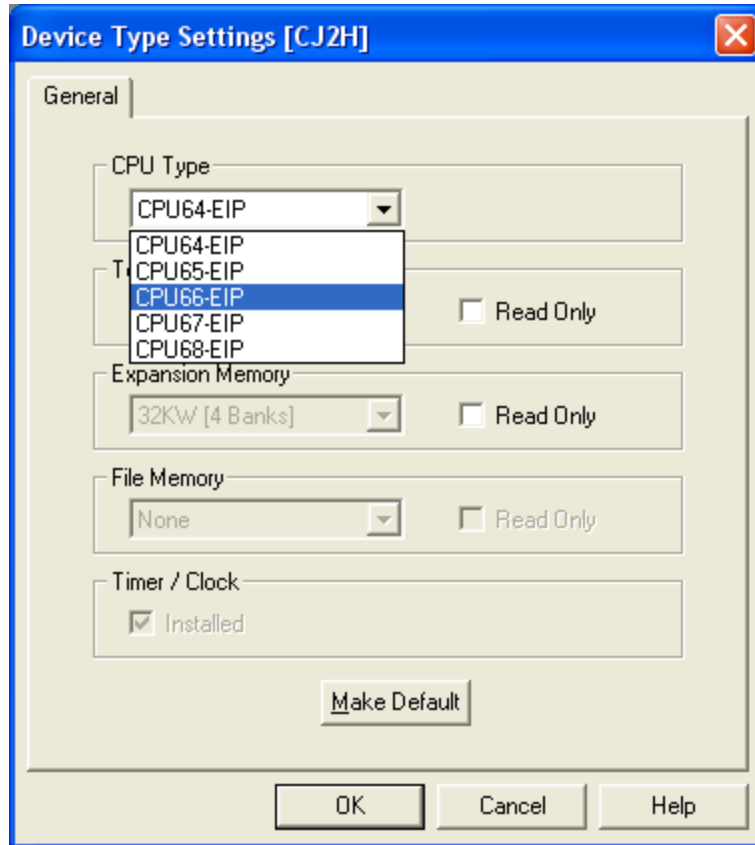


1. You can test your configuration by using the **CX-Programmer**. Start it by selecting **Start->All Programs->Omron->Cx-One->Cx-Programmer**. Click on **File->New**.

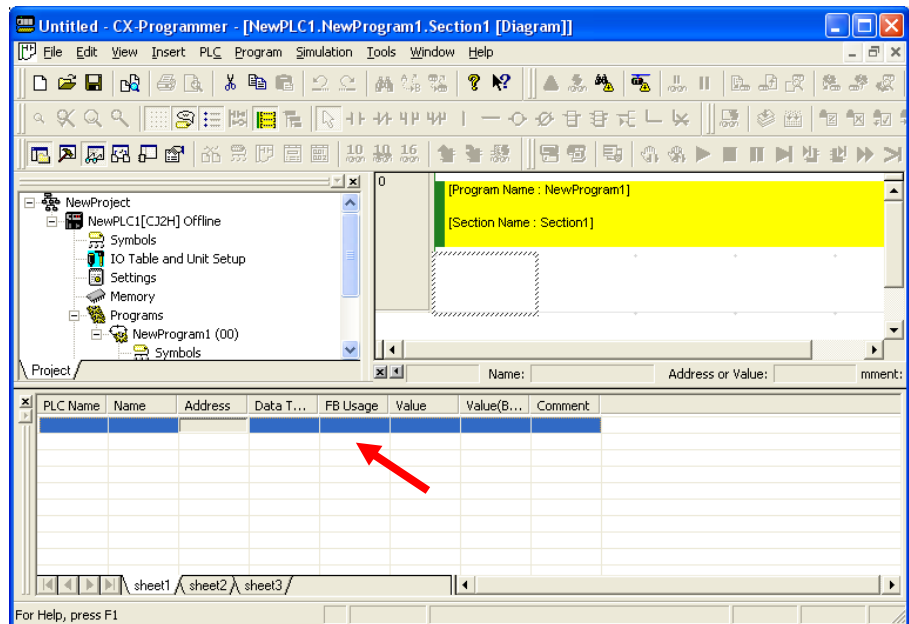


2. Select **CJ2H** for the **Device Type** and then click its **Settings** button.

3. Select **CPU66-EIP** for the **CPU Type**, this may differ depending on which PLC you have. Click **OK**.

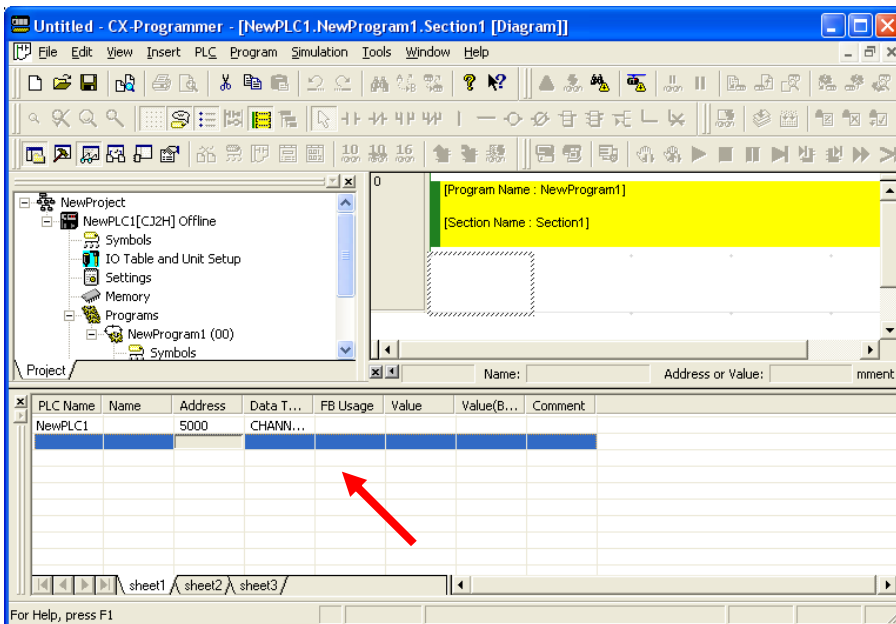


4. Select **View->Windows->Watch** to bring up the **Watch** window. Double click on the first row to bring up the **Edit Dialog** box.

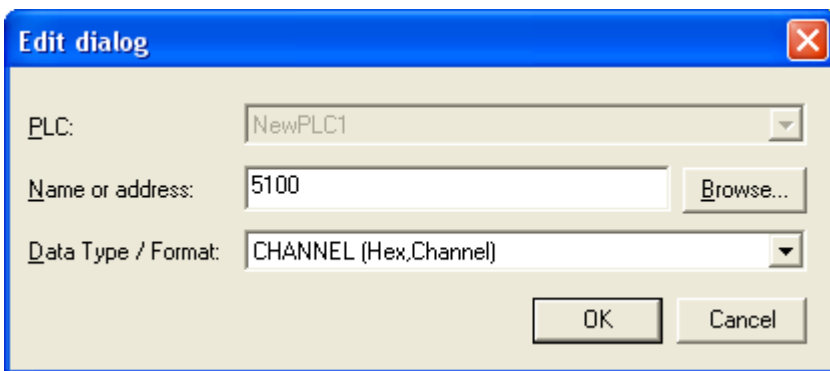




5. Enter 5000, address of the inputs, in the **Name or Address** field. Click **OK**.

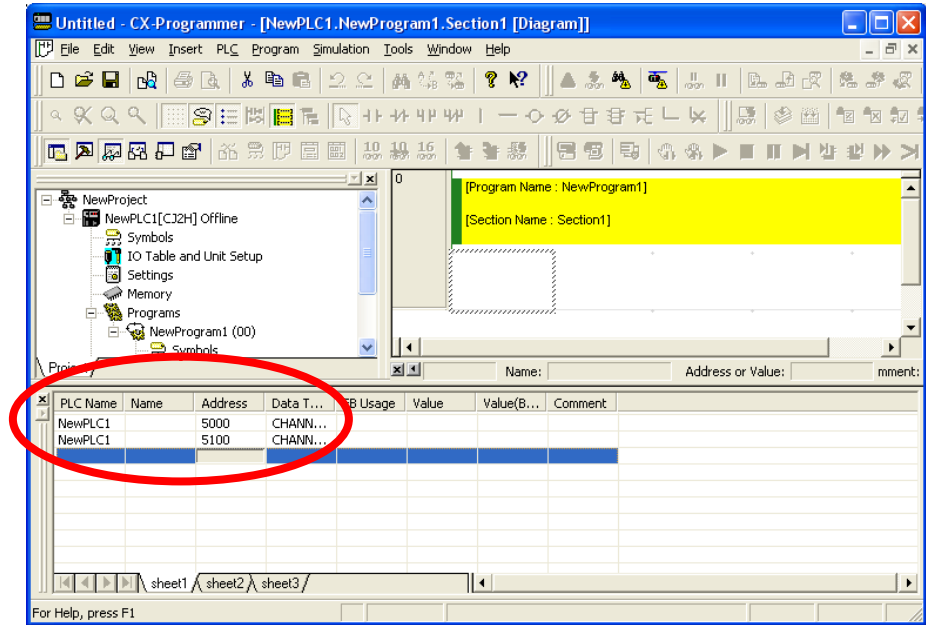


6. Double click on the second row now.

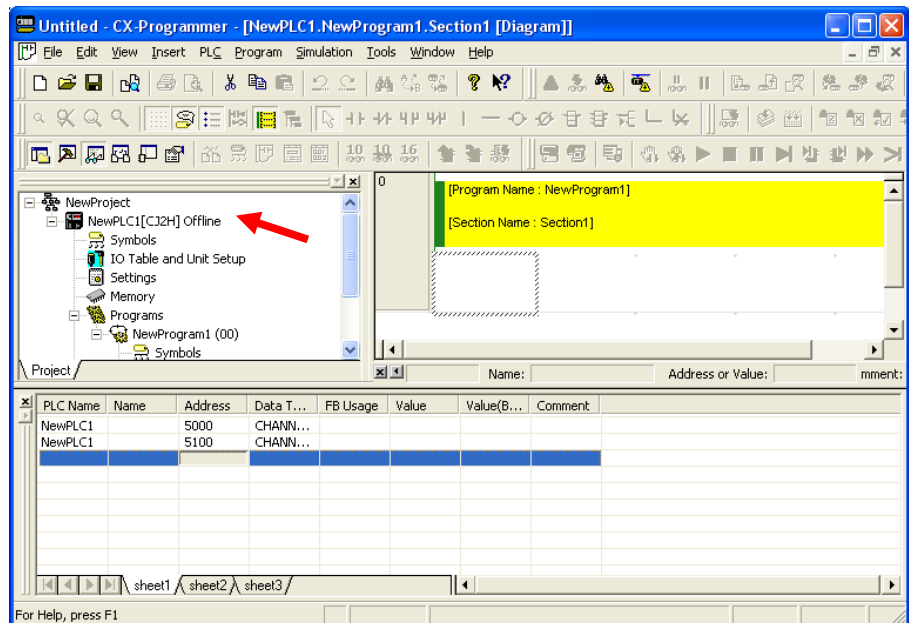


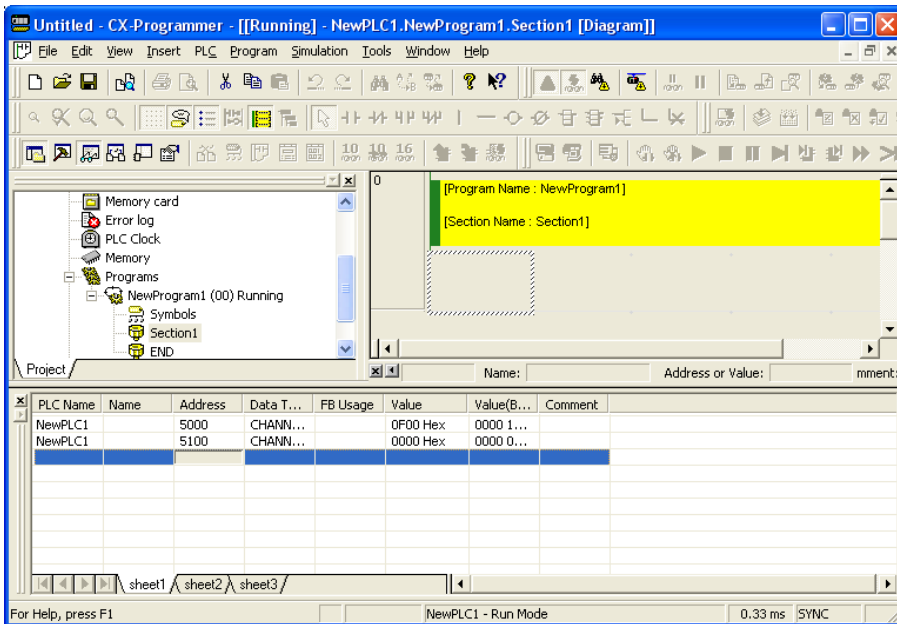
7. Enter 5100, address of the outputs, in the **Name or Address** field. Click **OK**.

- You should now see both the input and output tags in the Watch window.



- You must now bring the PLC online, do this by right clicking on the PLC entry in the tree and selecting **Work Online**. If the PLC is not in monitoring mode, select **PLC->Monitor->Monitoring** from the main menu.





10. If your configuration is correct, the watch window will display data being read and sent to the Acromag device. In this case, all 4 discrete I/O channels on port 3 of a 983EN-6012 are active so the input is reading 0x0F00 Hex.

NOTES: