



ThinkTopV20_nPORT_IOL Add-On Instruction Guide for Allen Bradley Compact/ControlLogix PLC's

ThinkTop V20



Version 1.0 2/2024



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1 Preliminary notes

This document demonstrates:

1. Ethernet/IP communication between an ifm AL1x2x IO-Link Master and an Allen Bradley controller.
2. Integrating the ThinkTop Add-On Instruction into a PLC project

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2 Intended Use

The ThinkTopV20_nPORT_IOL Add-On Instruction provides a logical user interface to ThinkTop Valves.

The Add-On Instruction is to be integrated in a PLC program to:

1. Parse the valve's Process Data Input
2. Allow the user to control the valve's Process Data Output
3. Provide the IO-Link master's port communication status
4. Feedback incorrect user input settings
5. Produce the status of IO-Link Data Storage features

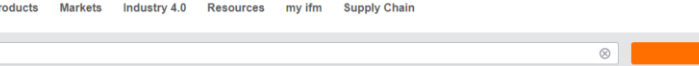
3 Prerequisites

The user has:

1. RS Logix 5000 or Studio 5000 software.
2. An ifm IO-Link master AL112x, AL122x, AL132x, AL142x, AL192x.
3. A ThinkTop Valve version 20 is connected to a sensor port on the IO-Link master.



1. Go to the [ifm website](#) and select your country.
2. Text search **netsetter**
3. Click **Show Downloads for this search term...**



The screenshot shows the Siemens website's search results for the query 'netsetter'. The top navigation bar includes links for Company, Contact, Events, Sustainability, Careers, Service Center, and a phone number. Below the navigation bar is a search bar with the text 'netsetter' and a search button. The search results section displays 'Search result for netsetter' and a link to 'Downloads (1)'. Under this link, there is a card for the 'Configuration Tool' with the text 'Version: Version' and a red 'Download' button highlighted by a green box.

Figure 2

Note: A “my ifm” account must be created and logged into before downloading. Follow the prompts to create a “my ifm” account.





6. Navigate to the downloaded Ethernet_Configuration_Tool_ifm_netsetter.zip location on the PC.
Right click on the zip file and select **Extract All**.

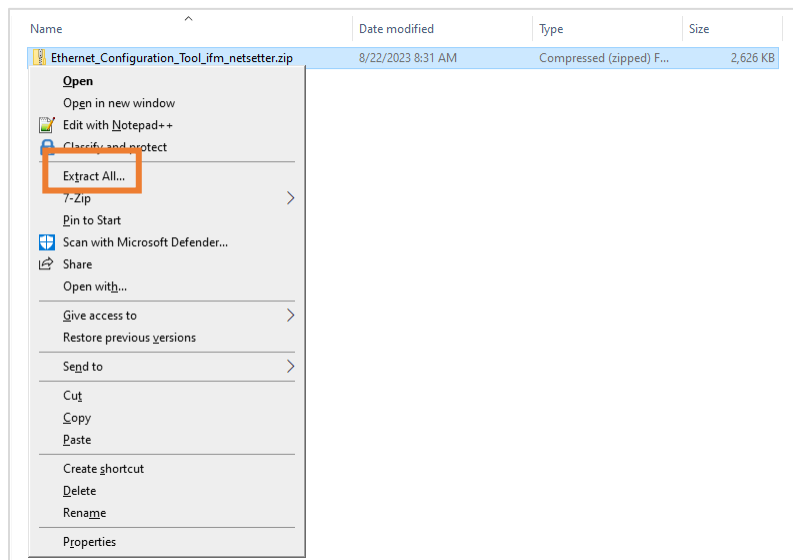


Figure 4

7. Open the extracted folder called **Ethernet_Configuration_Tool_ifm_netsetter**.

Name	Date modified	Type	Size
Ethernet_Configuration_Tool_ifm_netsetter	3/14/2024 11:17 AM	File folder	
Ethernet_Configuration_Tool_ifm_netsetter.zip	8/22/2023 8:31 AM	Compressed (zipped) F...	2,626 KB

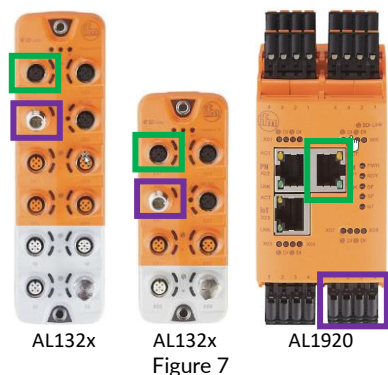
Figure 5

8. Double click **Ethernet_Configuration_Tool_ifm_netsetter_1.0.0.exe** to run the netsetter software (no installation required).

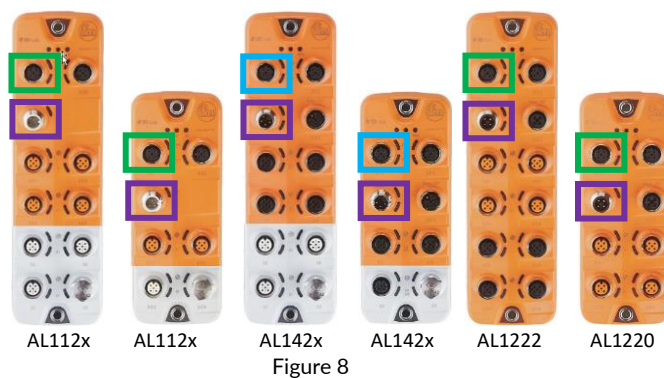
Name	Date modified	Type	Size
ifm_netsetter_1.0.0.exe	3/14/2024 11:17 AM	Application	3,411 KB
Release_notes_netsetter_1.0.0.pdf	3/14/2024 11:17 AM	Adobe Acrobat Docum...	80 KB

Figure 6

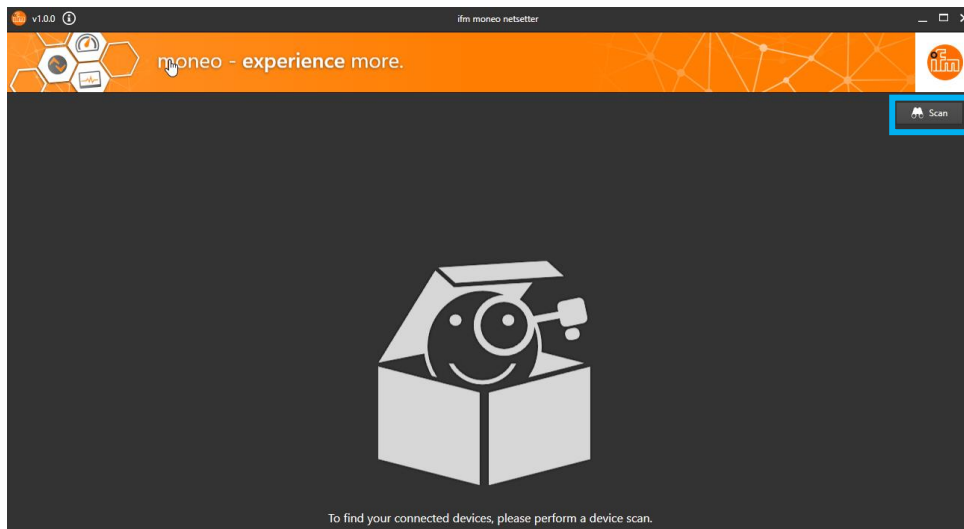
9. For DataLine IO-Link masters (AL132x or AL192x) connect an Ethernet cable to the port labeled **X21** (Ethernet/IP). Apply 24 VDC to port **X31**.



For StandardLine and PowerLine (AL11xx and AL12xx) IO-Link masters connect an Ethernet cable to the port labeled **X21**. For PerformanceLine (AL142x) IO-Link masters connect to the port labeled **XF1**. Apply 24 VDC to port **X31**.



10. In the ifm netsetter tool click [scan](#).





11. The **Ethernet/IP address** of the X21 or XF1 port is found.

Note: Default IP address of all ifm Ethernet/IP IO-Link masters ports is 192.168.1.250.

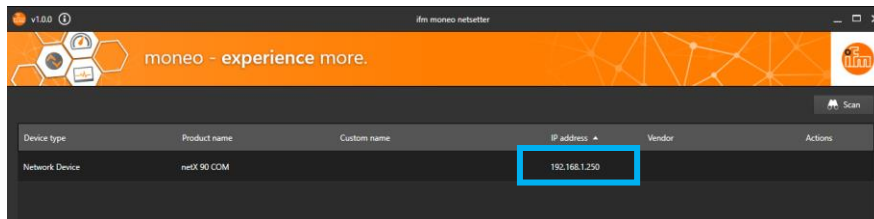


Figure 10

12. Click on the **IP address**, **Subnet Mask** and/or **Default gateway** fields to set the network settings as needed for the application and click **write to device**.

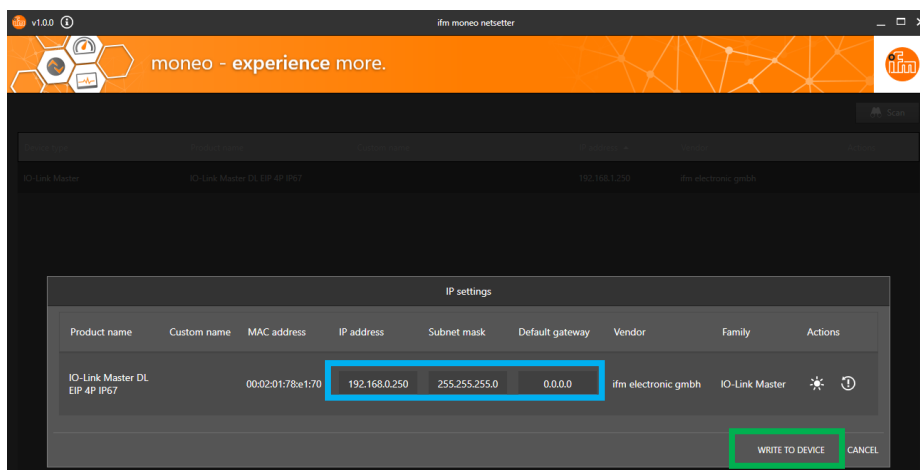


Figure 11

Note: If the network setting fields are **greyed out**, then the network settings of the PC must be set the same as the ifm IO-Link master. See [Appendix A](#) for setting the IP address of the PC.

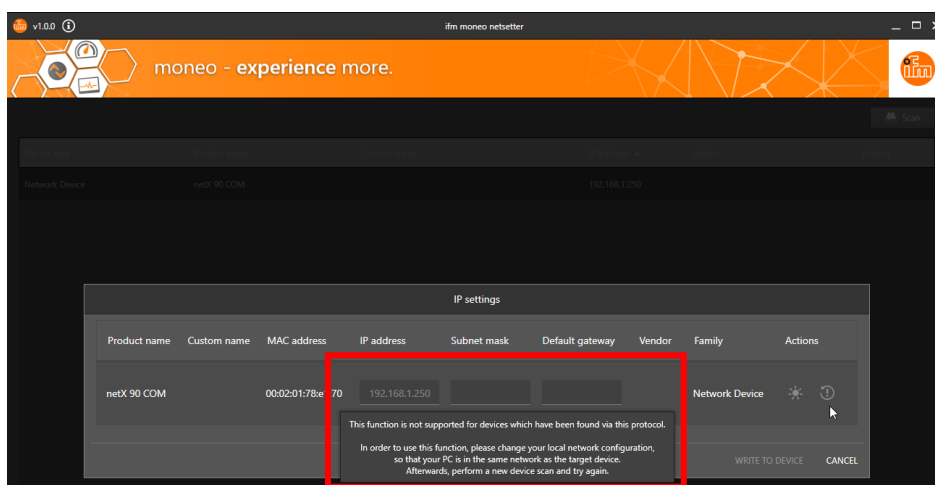


Figure 12



13. The new IP address is displayed and is active on the IO-Link masters.

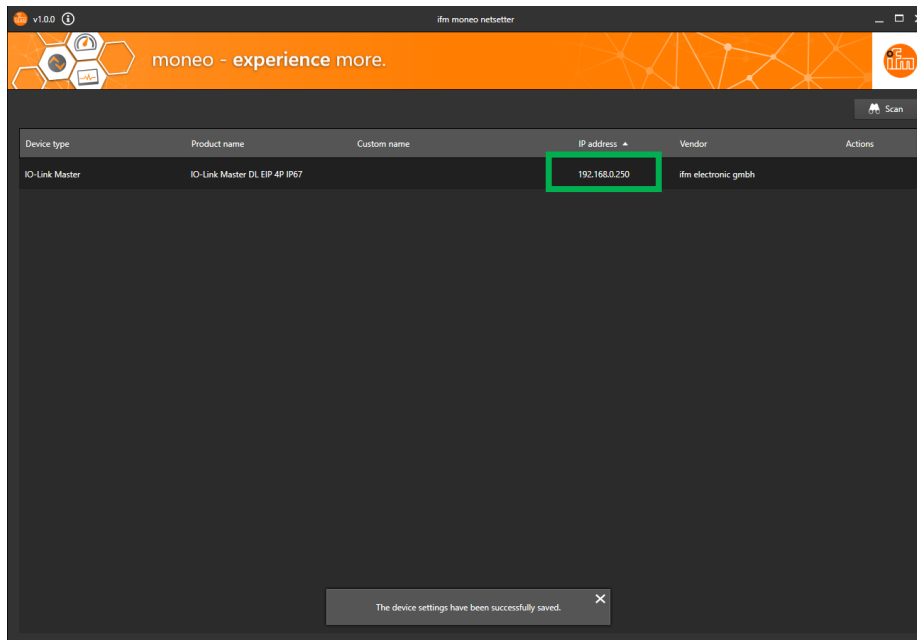


Figure 13

5 PLC setup

5.1 EDS File installation

1. Add the EDS file to RS Linc by navigating to Tools->EDS Hardware Installation Tool.
2. Follow the prompts to add the EDS.

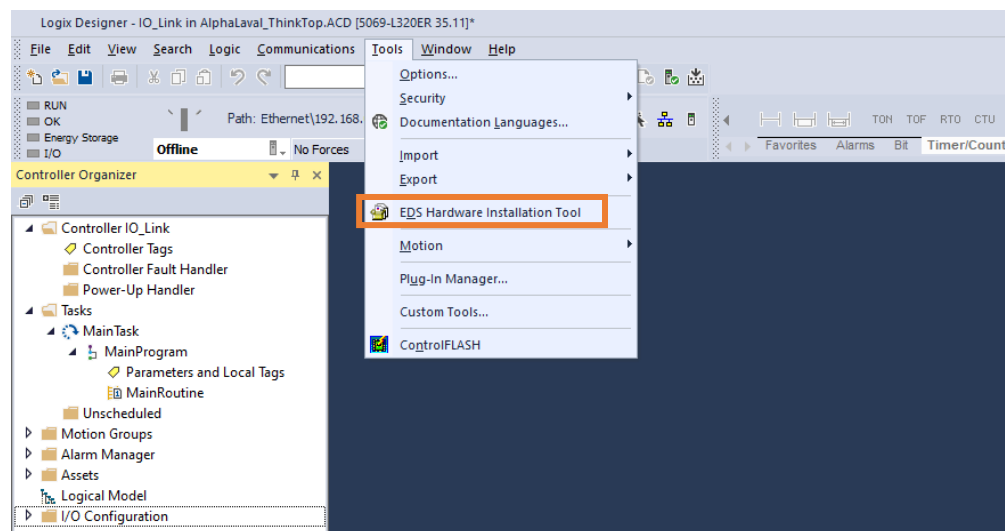


Figure 14

3. When prompted to add the EDS file of the IO-Link masters, add the appropriate EDS file from the folder named **1. EDS** in the ThinkTop Startup Package.

Name	Status	Date modified	Type	Size
1. EDS	✓	2/28/2024 3:42 PM	File folder	
2. Add_On Instruction	✓	2/29/2024 8:55 AM	File folder	
3. IO-Link Device Descriptions	✓	3/11/2024 3:32 PM	File folder	
4. Sample Project	✓	2/28/2024 3:40 PM	File folder	
Change Log.txt	✓	11/15/2023 11:47 AM	Text Document	1 KB

Figure 15

ifm_IOL_Master_AL1120.eds	✓	9/8/2023 1:54 PM	EDS File	62 KB
ifm_IOL_Master_AL1121.eds	✓	9/8/2023 1:54 PM	EDS File	62 KB
ifm_IOL_Master_AL1122.eds	✓	9/8/2023 1:55 PM	EDS File	101 KB
ifm_IOL_Master_AL1123.eds	✓	9/8/2023 1:55 PM	EDS File	101 KB
ifm_IOL_Master_AL1220.eds	✓	9/8/2023 1:55 PM	EDS File	62 KB
ifm_IOL_Master_AL1221.eds	✓	9/8/2023 1:55 PM	EDS File	62 KB
ifm_IOL_Master_AL1222.eds	✓	9/8/2023 1:55 PM	EDS File	101 KB
ifm_IOL_Master_AL1223.eds	✓	9/8/2023 1:55 PM	EDS File	101 KB
ifm_IOL_Master_AL1320.eds	✓	9/8/2023 1:55 PM	EDS File	63 KB
ifm_IOL_Master_AL1321.eds	✓	9/8/2023 1:55 PM	EDS File	63 KB
ifm_IOL_Master_AL1322.eds	✓	9/8/2023 1:56 PM	EDS File	102 KB
ifm_IOL_Master_AL1323.eds	✓	9/8/2023 1:56 PM	EDS File	102 KB
ifm_IOL_Master_AL1324.eds	✓	9/8/2023 1:56 PM	EDS File	62 KB
ifm_IOL_Master_AL1325.eds	✓	9/8/2023 1:56 PM	EDS File	62 KB
ifm_IOL_Master_AL1326.eds	✓	9/8/2023 1:56 PM	EDS File	101 KB
ifm_IOL_Master_AL1327.eds	✓	9/8/2023 1:56 PM	EDS File	101 KB
ifm_IOL_Master_AL1328.eds	✓	9/8/2023 1:57 PM	EDS File	74 KB

Figure 16

5.2 Add an ifm IO-Link master Ethernet module to the PLC project

1. Right click on Ethernet in the I/O configuration folder and choose **New Module**.

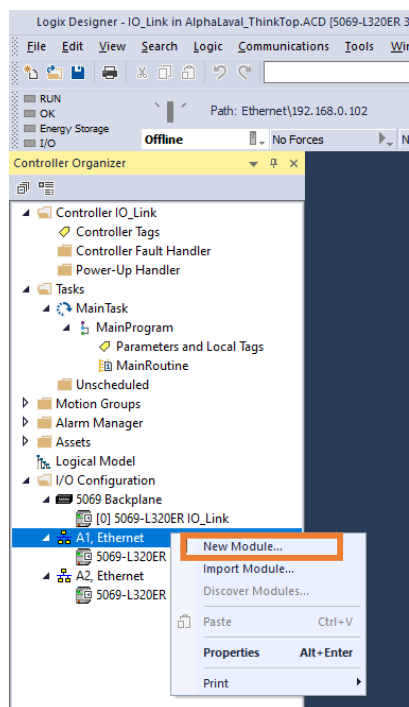


Figure 17

2. Search the article number for the IO-Link master, i.e., **AL1326**. Select the Catalog Number named **AL1x2x** and click **Create** button.

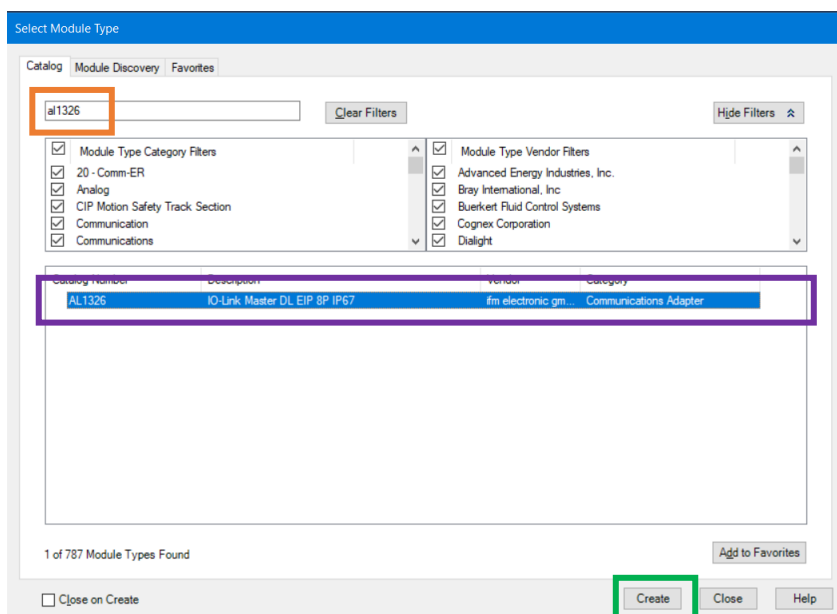
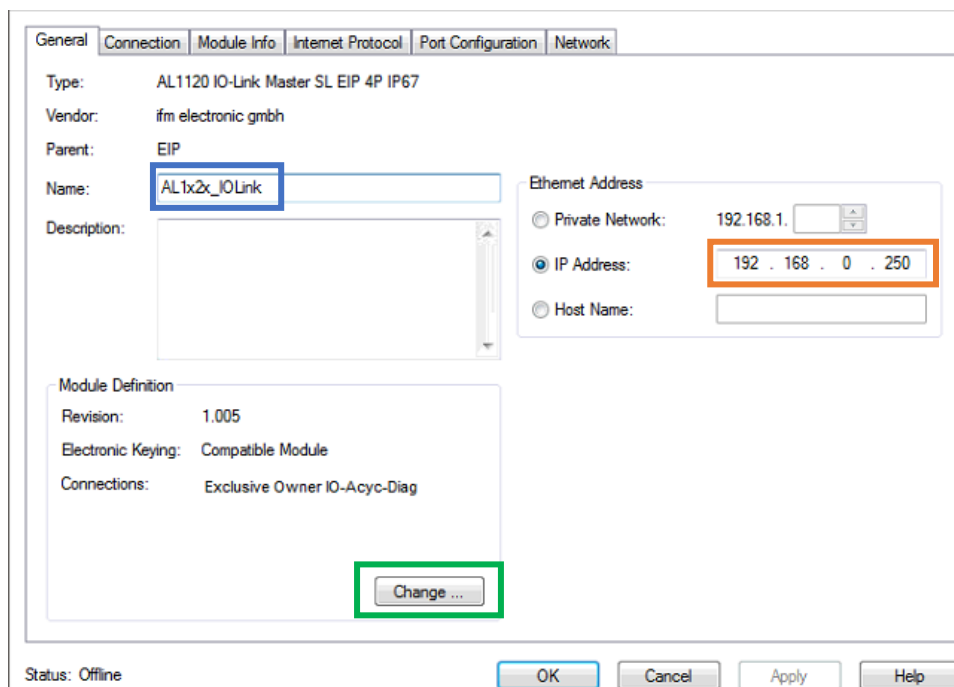


Figure 18

3. Provide a unique **Name** and **IP address** for the Ethernet module.
4. Click **Change** button to open the Module Definition Window.



General | Connection | Module Info | Internet Protocol | Port Configuration | Network

Type: AL1120 IO-Link Master SL EIP 4P IP67
 Vendor: ifm electronic gmbh
 Parent: EIP
 Name: **AL1x2x_IOLink**
 Description:

Ethernet Address
☐ Private Network: 192.168.1.
☒ IP Address: **192 . 168 . 0 . 250**
☐ Host Name:

Module Definition
 Revision: 1.005
 Electronic Keying: Compatible Module
 Connections: Exclusive Owner IO-Acyc-Diag

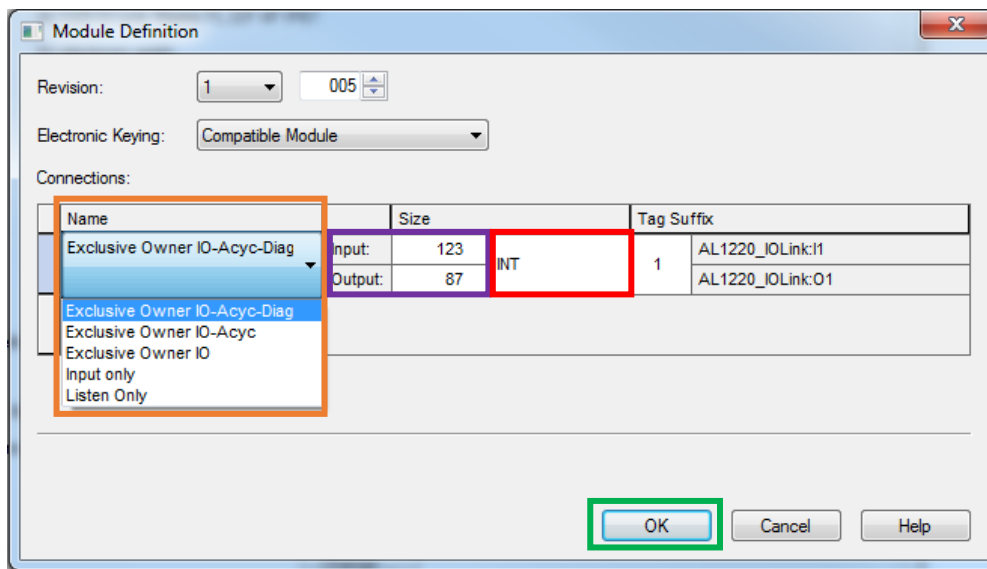
Change ...

Status: Offline

OK Cancel Apply Help

Figure 19

5. In the Module Definition window, select **Exclusive Owner IO-Acyc-Diag** in the name field.
6. Change the Size type from **SINT** to **INT**.
7. Verify the default size settings.
 - a. 4 port IO-Link masters **Input =123 Output =87**
 - b. 8 port IO-Link masters **Input =223 Output =151**
8. Click **OK** to complete the Module Setup



Module Definition

Revision: 1 005

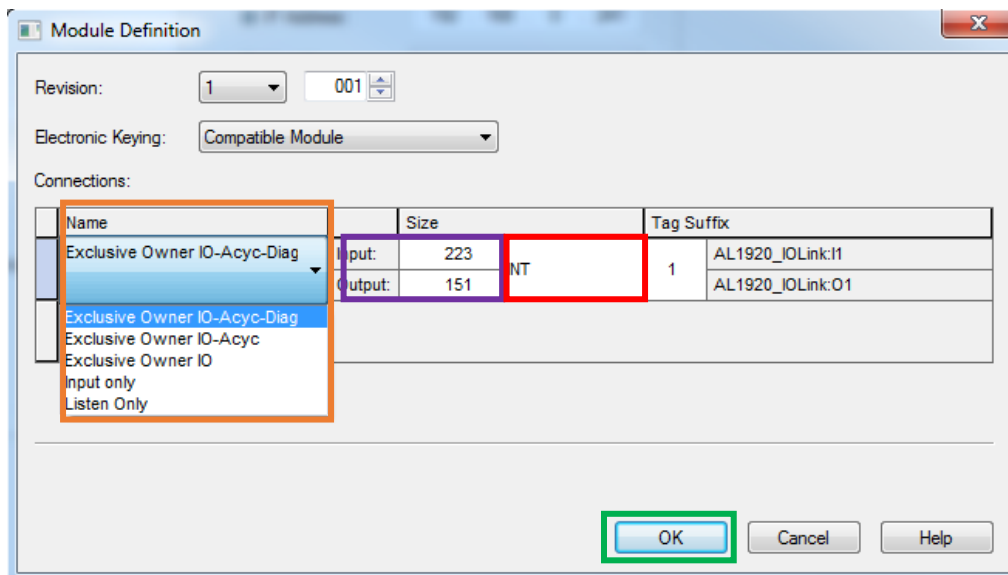
Electronic Keying: Compatible Module

Connections:

Name	Size	Tag Suffix
Exclusive Owner IO-Acyc-Diag	Input: 123 Output: 87	1 AL1220_IOLink:I1 AL1220_IOLink:O1

OK Cancel Help

Figure 20: Four port IO-Link Masters



Module Definition

Revision: 1 001

Electronic Keying: Compatible Module

Connections:

Name	Size	Tag Suffix
Exclusive Owner IO-Acyc-Diag	Input: 223 Output: 151	1 AL1920_IOLink:I1 AL1920_IOLink:O1

OK Cancel Help

Figure 21: Eight Port IO-Link Masters



9. Verify the configuration of the AL1x2x IO-Link master in the PLC project by navigating to the Controller Organizer. Double click on **Controller Tags** to find the **Input Array** of size 223 INT (8 port) or 123 INT (4 port) and **Output Array** of size 151 INT (8 port) or 87 INT (4 port).
10. A **<IOLinkMasterName>:C** tag array is also assigned to the Controller tags. These are settings used to configure the IO-Link master. No changes to the settings are needed to send and receive process data to the ThinkTop valves.

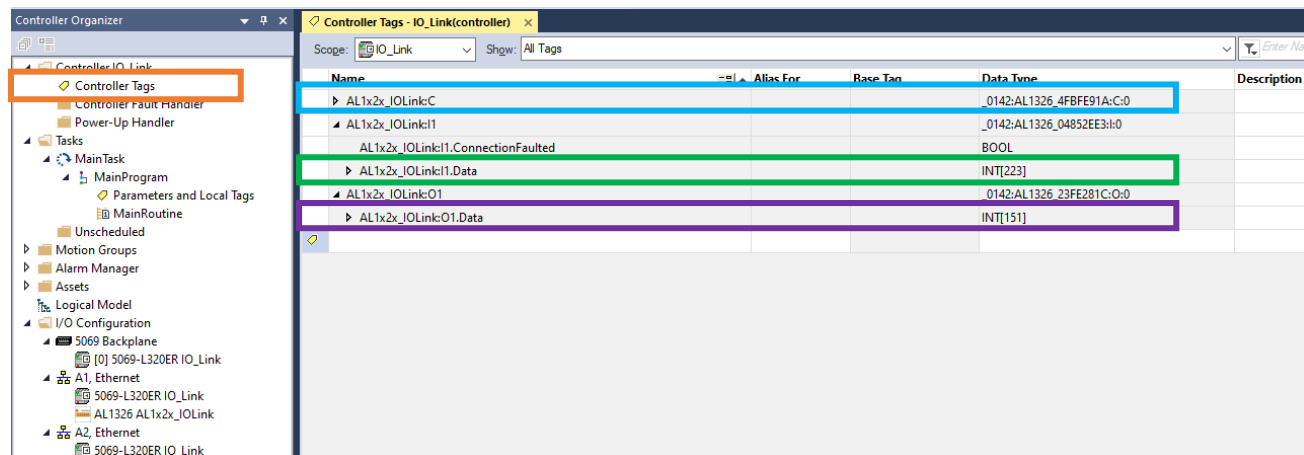


Figure 22



5.3 Requested Packet Interval (RPI) of the ifm IO-Link Ethernet module

The RPI time of the IO-Link master Ethernet/IP module is the polling rate in which the PLC will update the input and output controller tags. The default setting is 10 ms. The possible setting range is 1.0-1000.0 ms.

1. To adjust the RPI time, right click on the **Ethernet/IP module** and select **Properties**.

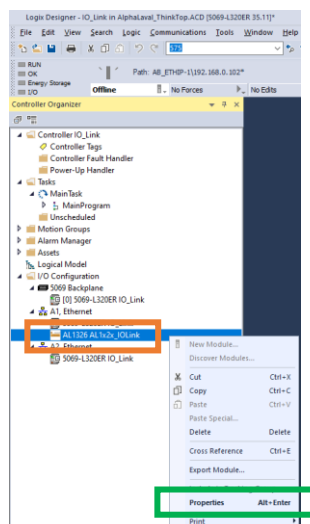


Figure 23

2. In the **Module Properties** window, select **Connection** and adjust the **RPI** field within the 1.0-1000.0 range. Click **OK** to accept the change.

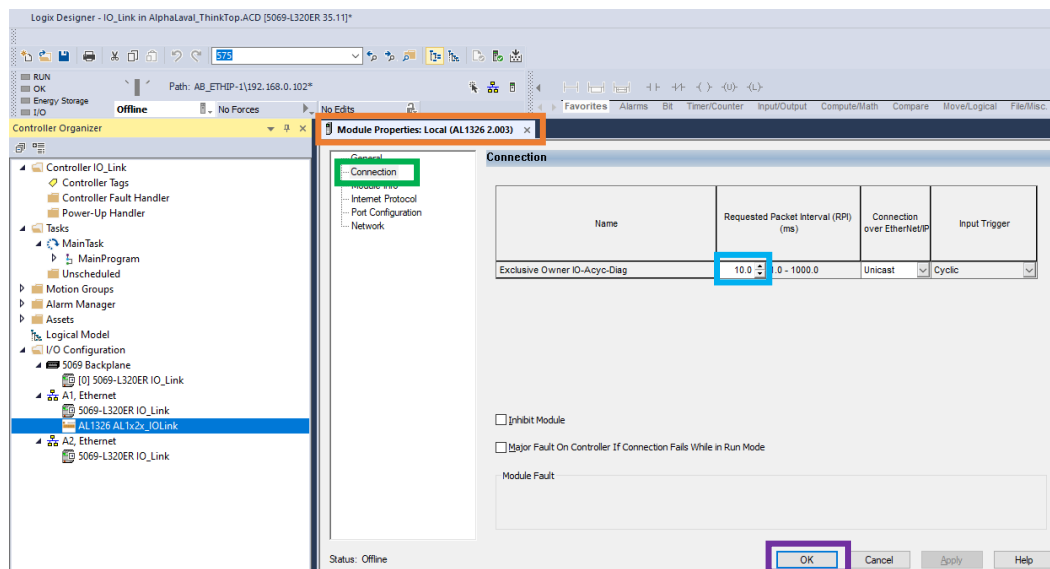


Figure 24



6 Integrate the ThinkTopV20_nPORT_IOL to the PLC project's logic

Section 6.1 and 6.2 show the integration steps while offline with the PLC. It is also possible to perform the integration methods while online.

6.1 Import the Add-On Instruction

1. In the Controller Organizer, expand the **Assets** folder. Right click Add-On Instruction and select **Import Add-On Instruction...**

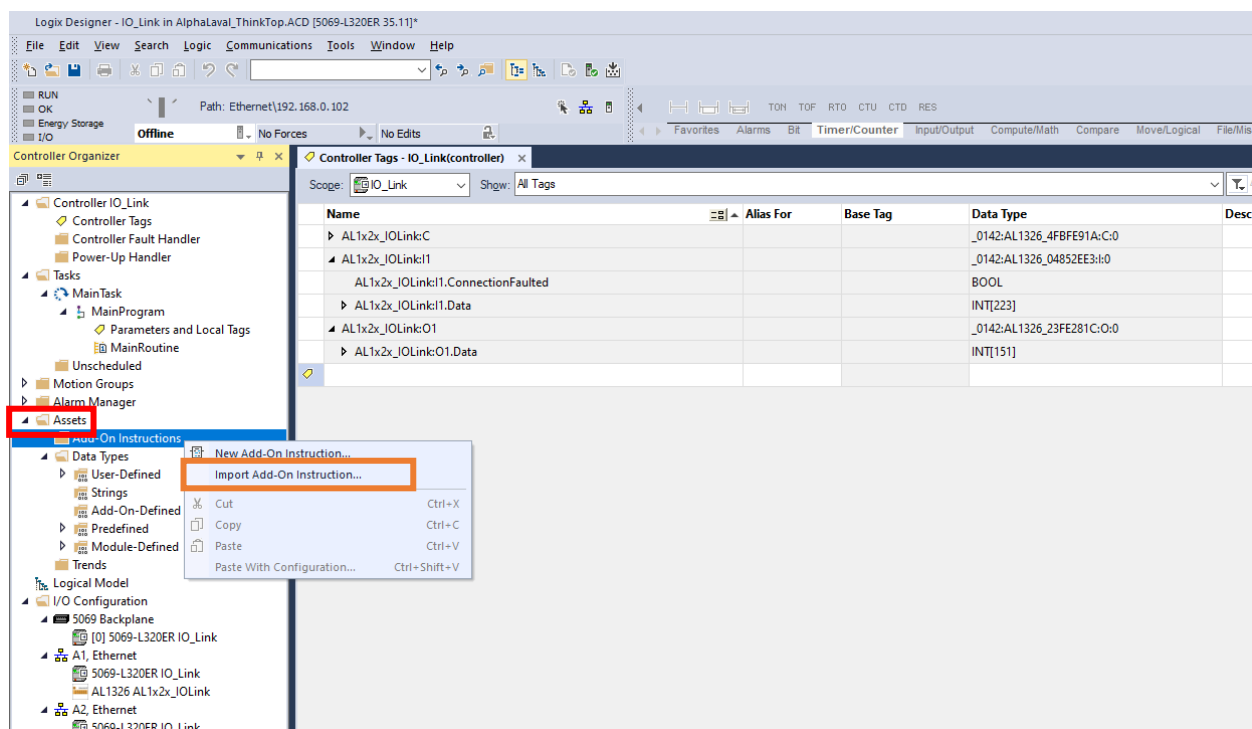


Figure 25



2. Select **ThinkTopV20_nPORT_IOL.L5X** from the folder named **2. Add_On Instruction** in the ThinkTop_EIP_AllenBradley_StartupPackage and click **Open**.

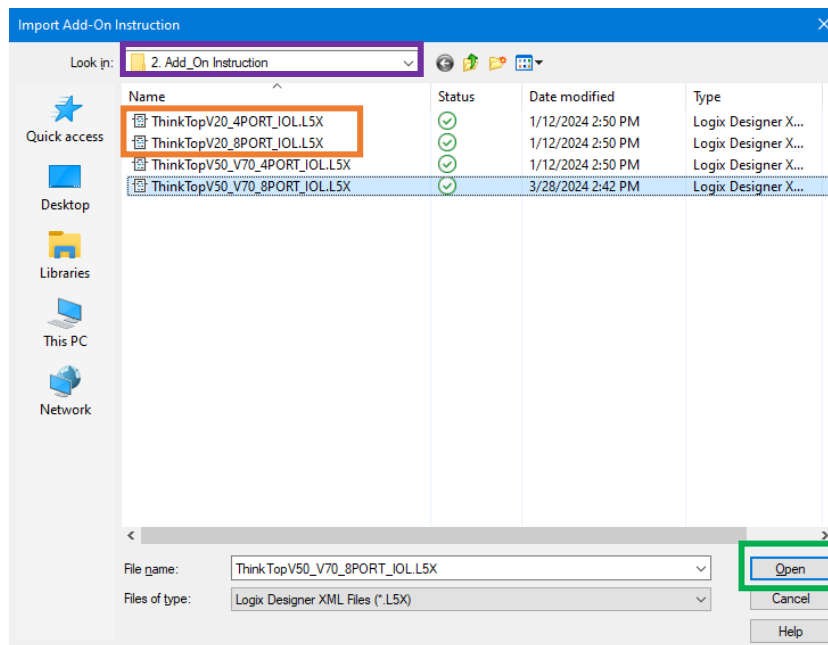


Figure 26

3. Click **OK** to Import.

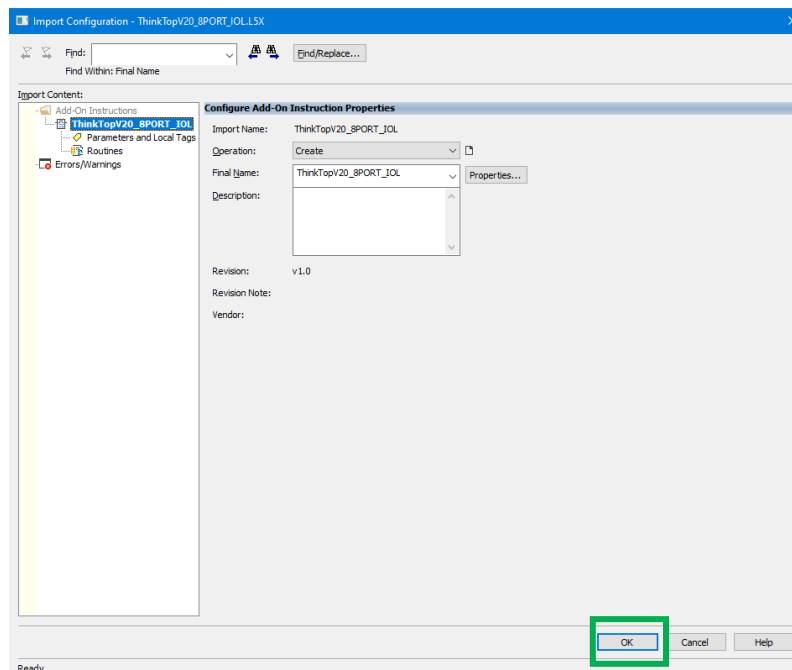


Figure 27



4. The **ThinkTopV20_nPORT_IOL** Add-On Instruction is displayed in the Add-On Instructions folder.

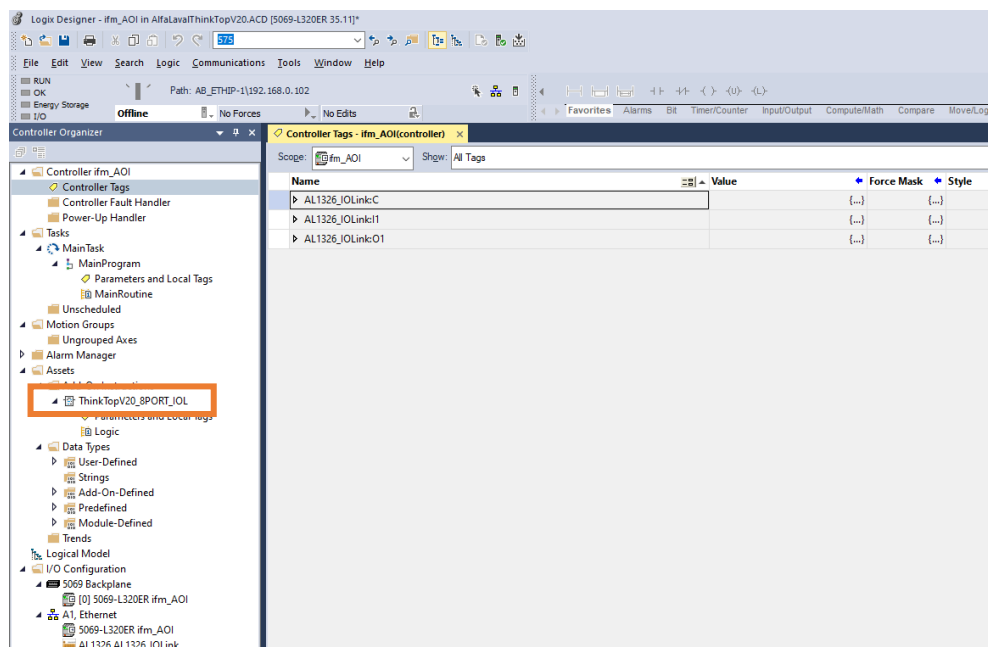


Figure 28

6.2 Integrate the ThinkTopV20_nPORT_IOL Add-On Instruction in a routine

1. Click and drag the **ThinkTopV20_nPORT_IOL** Add-On Instruction onto a rung of logic.

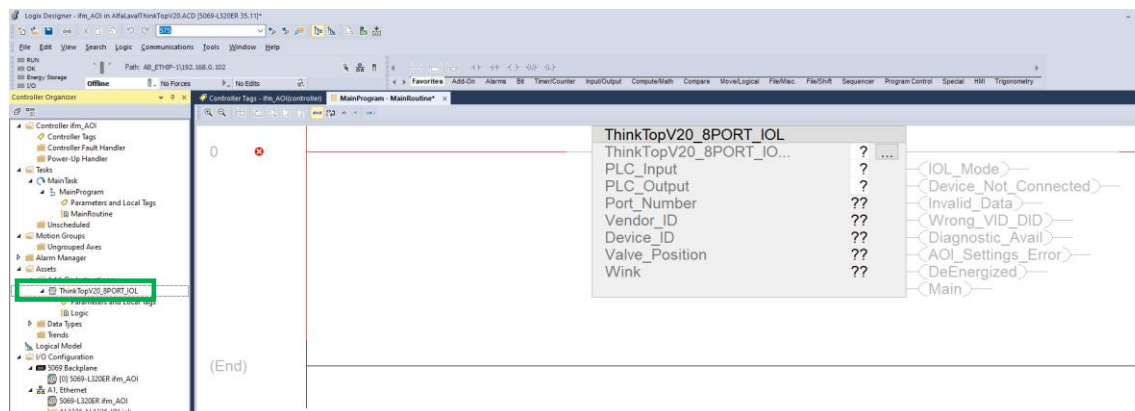


Figure 29

2. Define the Add-On Instruction tag name. Right click **?** and click **New Tag**.

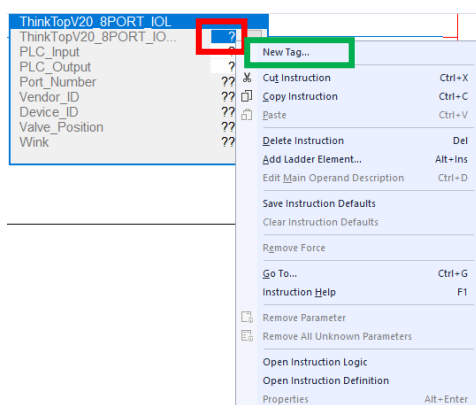


Figure 30

3. Create a **user defined name** and click **Create**.

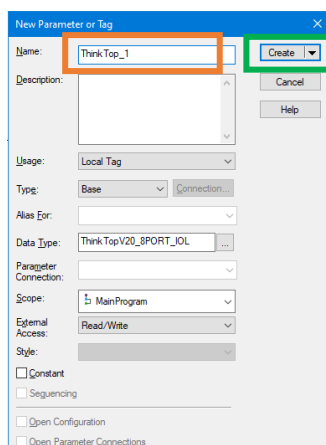


Figure 31



- Assign the PLC_Input and PLC_Output tags using the ifm IO-Link master's producing **input data array** and consuming **output data array** from the Controller Tags.

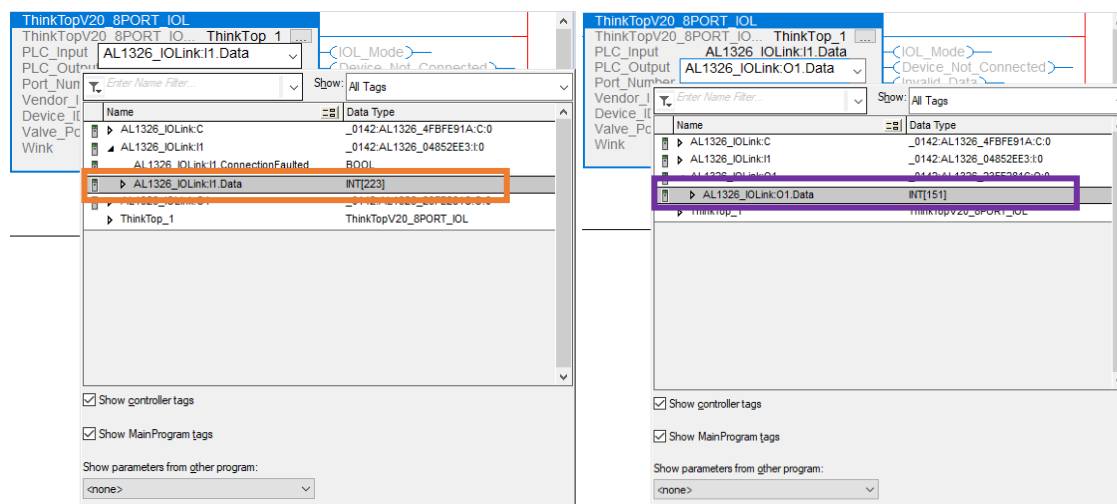


Figure 32

- Enter the port number of the IO-Link master where the ThinkTop valve is connected.
Value = 1..4 (four port masters) or Value = 1..8 (eight port masters)

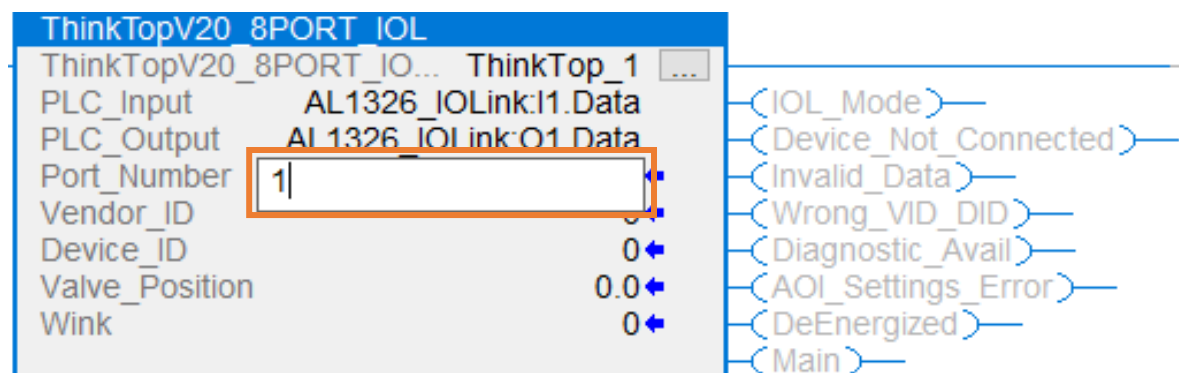


Figure 33



6. The rung is complete with no errors.

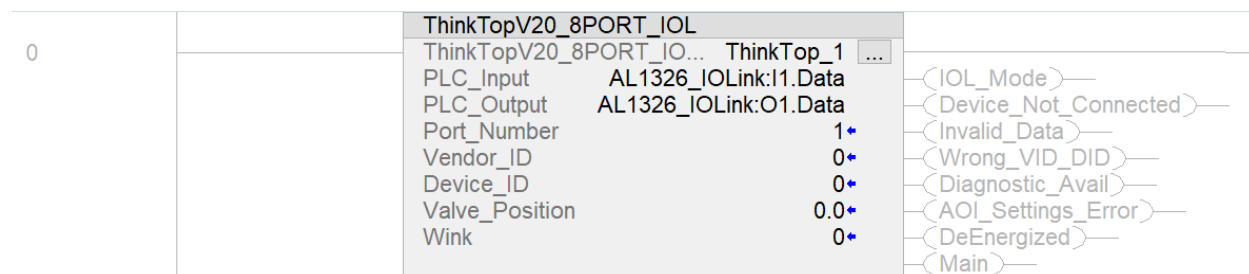


Figure 34

7. If the previous steps were made offline, the Add-On Instruction is ready to be downloaded to the PLC. If the previous steps were made online, the pending edits are ready to be finalized.



7 ThinkTopV20_nPORT_IOL Parameter Data Types and Descriptions

ThinkTopV20_8PORT_IOL			
ThinkTopV20_8PORT_IO...	ThinkTop_1	...	
PLC_Input	AL1326_IOLink:I1.Data		(IOL_Mode)
PLC_Output	AL1326_IOLink:O1.Data		(Device_Not_Connected)
Port_Number	1	*	(Invalid_Data)
Vendor_ID	0	*	(Wrong_VID_DID)
Device_ID	0	*	(Diagnostic_Avail)
Valve_Position	0.0	*	(AOI_Settings_Error)
Wink	0	*	(DeEnergized)
			(Main)

Figure 35

7.1 Add-On Instruction Output Parameter tags: Values produced to the PLC

Vendor_ID: Static integer (INT) value produced by IO-Link device while connected to the IO-Link master.

For Alfa Laval products value =1292 decimal / 0x050C hex

Device_ID: Static double integer (DINT) value produced while IO-Link device is connected to the IO-Link master.

Note: The vendor and device ID values are documented in the IO-Link Device Description pdf.

See folder 3. IO-Link Device Descriptions of the ThinkTop Startup package.

Valve_Position: Current valve position of data type REAL. Represents the actual distance between the top of the valve actuator and the top of the valve stem.

Value range will change depending on valve used. See IO-Link Device Description pdf. Units in millimeters. If no data the value will =3276.4

IOL_Mode: Binary (BOOL) state of the operating mode of the IO-Link master port.

Value range – TRUE (IO-Link mode) .. FALSE (port has been set to disabled, digital input or digital output mode

Note: The eds file installation defaults all ports to IO-Link mode. The port mode may be changed in the configuration controller tags.



- Device_Not_Connected:** Binary (BOOL) state of the connection status to IO-Link device on the port.
Value range – FALSE (an IO-Link device is connected) .. TRUE (an IO-Link device is not connected)
- Invalid_Data:** Binary (BOOL) state of the IO-Link device's process data.
Value range – FALSE (valid) .. TRUE (invalid)
- Wrong_VID_DID:** Binary (BOOL) state of the match between configured and currently produced Vendor ID and Device ID values.
Value range – FALSE (both Vendor ID and Device ID match the configuration set in the Validation Data Storage settings in the configuration controller tag of the IO-Link master) .. TRUE (either the vendor ID and/or device ID do not match the Validation Data Storage settings). See [section 8](#) for configuring Validation Data Storage.
- Diagnostic_Avail:** Binary (BOOL) state of the presence of IO-Link Event data.
Value range – FALSE (no event data present) .. TRUE (event data present)
- Note: Most commonly used to provide feedback when validation data storage settings are active.
See Section 8 step 8.
- AOI_Settings_Error:** Binary (BOOL) state of at least one, Add-On Instruction user input error.
Value Range – FALSE (No error present) .. TRUE (at least one error present)
- DeEnergized:** Binary (BOOL) state of the De-energized valve position.
Value Range – FALSE (inactive) .. TRUE (active)
- Main:** Binary (BOOL) state of the main energized valve position.
Value Range – FALSE (inactive) .. TRUE (active)

7.2 Add-On Instruction Input Parameter tags: Values consumed by the PLC

- Wink:** User controlled binary setting (BOOL) to trigger a Visual indication for locating the unit (Purple flashing as default)
Value range – FALSE (Disable) .. TRUE (Enable)



8 Data Storage of IO-Link device information (optional)

The Data Storage feature can be used to:

- Check currently connected Vendor ID and Device ID to configured Vendor ID and Device ID.
- Automatically download an IO-Link device's configuration when it is connected to the IO-Link master.

- Configure the ThinkTop for the application as needed using the onboard push buttons or IO-Link parameter configuration software (ifm moneo configure).
- In the Controller Organizer, double click **Controller Tags**.
- Expand the **Configuration Controller tag** of the IO-Link master's Ethernet Module

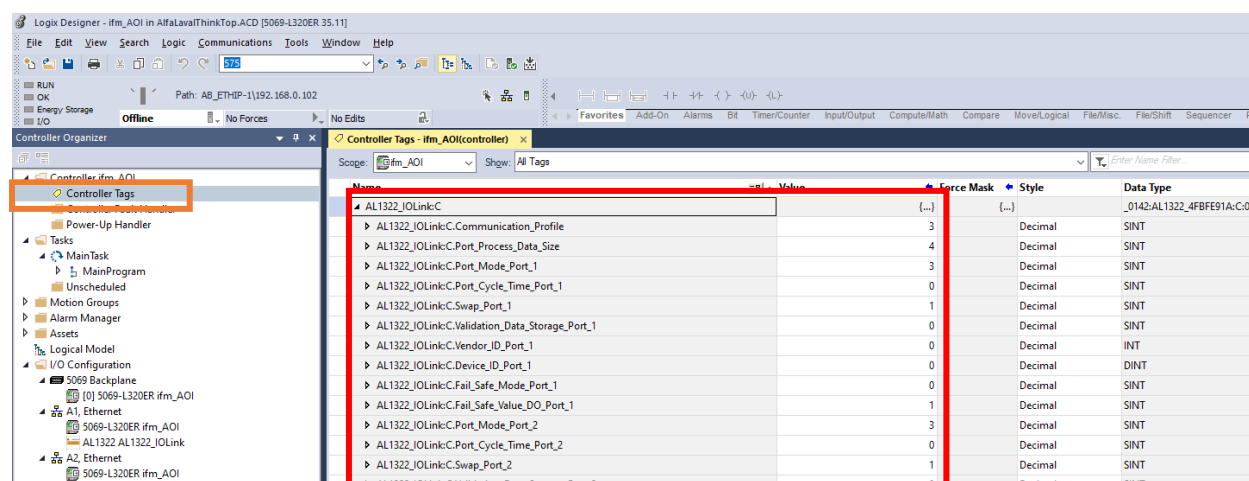


Figure 36



- Find the **Validation Data Storage** setting for the port number to be configured and enter a **value** to set the type of data storage needed for the application.

Controller Tags - ifm_AOI(controller)					
Scope: ifm_AOI		Show: All Tags		Enter Name Filter...	
Name	Value	Force Mask	Style	Data Type	
AL1322_IOLinkC		{...}	{...}	_0142:AL1322_4FBFE91A:C:0	
AL1322_IOLinkC.Communication_Profile		3	Decimal	SINT	
AL1322_IOLinkC.Port_Process_Data_Size		4	Decimal	SINT	
AL1322_IOLinkC.Port_Mode_Port_1		3	Decimal	SINT	
AL1322_IOLinkC.Port_Cycle_Time_Port_1		0	Decimal	SINT	
AL1322_IOLinkC.Swap_Port_1		1	Decimal	SINT	
AL1322_IOLinkC.Validation_Data_Storage_Port_1		4	Decimal	SINT	
AL1322_IOLinkC.Vendor_ID_Port_1		0	Decimal	INT	
AL1322_IOLinkC.Device_ID_Port_1		0	Decimal	DINT	
AL1322_IOLinkC.Fail_Safe_Mode_Port_1		0	Decimal	SINT	
AL1322_IOLinkC.Fail_Safe_Value_DO_Port_1		1	Decimal	SINT	
AL1322_IOLinkC.Port_Mode_Port_2		3	Decimal	SINT	
AL1322_IOLinkC.Port_Cycle_Time_Port_2		0	Decimal	SINT	
AL1322_IOLinkC.Swap_Port_2		1	Decimal	SINT	
AL1322_IOLinkC.Validation_Data_Storage_Port_2		0	Decimal	SINT	
AL1322_IOLinkC.Vendor_ID_Port_2		0	Decimal	INT	
AL1322_IOLinkC.Device_ID_Port_2		0	Decimal	DINT	
AL1322_IOLinkC.Fail_Safe_Mode_Port_2		0	Decimal	SINT	
AL1322_IOLinkC.Fail_Safe_Value_DO_Port_2		1	Decimal	SINT	
AL1322_IOLinkC.Port_Mode_Port_3		3	Decimal	SINT	
AL1322_IOLinkC.Port_Cycle_Time_Port_3		0	Decimal	SINT	
AL1322_IOLinkC.Swap_Port_3		1	Decimal	SINT	
AL1322_IOLinkC.Validation_Data_Storage_Port_3		0	Decimal	SINT	

Figure 37: port 1 is set to Verify Vendor ID and Device ID match and restore originally configured parameters

- Value Range – 0: **No check and clear.** No parameter restoration is enabled and the IO-Link master memory area for the port's parameters is empty.
- 2: Verify Vendor ID and Device ID match only.** No restoration of parameters is enabled.
 - 3: Verify Vendor ID and Device ID match and restore last set parameters.**
The IO-Link device's onboard methods (push buttons, displays, IO-Link software, etc...) for setup and configuration is allowed.
Any changes made are uploaded and stored in the IO-Link master.
If the IO-Link device is disconnected and reconnected the last uploaded parameters will be downloaded to the device.
 - 4: Verify Vendor ID and Device ID match and restore original parameters.**
The IO-Link device's parameters will be uploaded one time. No adjustments to the parameters (push buttons, displays, IO-Link software, etc...) are allowed while the device is connected to the IO-Link master.
If the IO-Link device is disconnected and reconnected, the originally uploaded parameters will be downloaded to the IO-Link device.
Changes to the IO-Link device's parameters are only allowed by the PLC using acyclic commands. The changes are not saved in the IO-Link master and if the IO-Link device is disconnected and reconnected the IO-Link device's originally configured parameters set will be restored.



5. Enter the Vendor ID in the **Vendor_ID_Port_n** field.

6. Enter the Device ID in the **Device_ID_Port_n** field.

Note: For Alfa Laval products Vendor_ID =1292 decimal

For ThinkTop V20 Device_ID =11 decimal

Values are documented in the IO-Link Device Description pdf in the folder named 3. IO-Link Device Descriptions of the ThinkTop Startup package.

Controller Tags - ifm_AOI(controller)					
Scope: ifm_AOI		Show: All Tags		Enter Name Filter	
Name	Value	Force Mask	Style	Data Type	
AL1326_IOLinkC		{...}	{...}	_0142:AL1326_4FBFE91A:C:0	
▶ AL1326_IOLinkC.Communication_Profile		3	Decimal	SINT	
▶ AL1326_IOLinkC.Port_Process_Data_Size		4	Decimal	SINT	
▶ AL1326_IOLinkC.Port_Mode_Port_1		3	Decimal	SINT	
▶ AL1326_IOLinkC.Port_Cycle_Time_Port_1		0	Decimal	SINT	
▶ AL1326_IOLinkC.Swap_Port_1		1	Decimal	SINT	
▶ AL1326_IOLinkC.Validation_Data_Storage_Port_1		4	Decimal	SINT	
▶ AL1326_IOLinkC.Vendor_ID_Port_1	1292		Decimal	INT	
▶ AL1326_IOLinkC.Device_ID_Port_1	11		Decimal	DINT	
▶ AL1326_IOLinkC.Fail_Safe_Mode_Port_1		0	Decimal	SINT	
▶ AL1326_IOLinkC.Fail_Safe_Value_DO_Port_1		1	Decimal	SINT	
▶ AL1326_IOLinkC.Port_Mode_Port_2		3	Decimal	SINT	
▶ AL1326_IOLinkC.Port_Cycle_Time_Port_2		0	Decimal	SINT	
▶ AL1326_IOLinkC.Swap_Port_2		1	Decimal	SINT	
▶ AL1326_IOLinkC.Validation_Data_Storage_Port_2		0	Decimal	SINT	
▶ AL1326_IOLinkC.Vendor_ID_Port_2		0	Decimal	INT	
▶ AL1326_IOLinkC.Device_ID_Port_2		0	Decimal	DINT	
▶ AL1326_IOLinkC.Fail_Safe_Mode_Port_2		0	Decimal	SINT	
▶ AL1326_IOLinkC.Fail_Safe_Value_DO_Port_2		1	Decimal	SINT	
▶ AL1326_IOLinkC.Port_Mode_Port_3		3	Decimal	SINT	
▶ AL1326_IOLinkC.Port_Cycle_Time_Port_3		0	Decimal	SINT	
▶ AL1326_IOLinkC.Swap_Port_3		1	Decimal	SINT	
▶ AL1326_IOLinkC.Validation_Data_Storage_Port_3		0	Decimal	SINT	

Figure 38

7. If the data storage adjustments were made while offline with the PLC, then the settings will take effect after the project is downloaded and the IO-Link master goes to a running state.

If the data storage adjustments were made while online with the PLC, then the settings will not take effect until the Ethernet/IP communication is cycled. Use one of the following to cycle the IO-Link master's Ethernet/IP communication:

- Cycle power on the IO-Link master
- Manually inhibit the Ethernet/IP module and uninhibit the Ethernet/Module. See [Appendix B](#)
- Use logic with an SSV instruction. See [Appendix C](#)

8. Check the validation storage functions by disconnecting the IO-Link device from the IO-Link master and then reconnect the same or other IO-Link device to the same IO-Link master port and the following Data Storage Validation process will be followed:

The Vendor_ID and Device_ID produced to the PLC is automatically compared to the Vendor_ID_Port_n and the Device_ID_port_n of the Configuration Controller Tags.

If the comparison is a match:

- The validation data storage setting performs the functions as configured in step 4 of section 8.
- The Add-On Instruction output Diagnostic_Avail =TRUE for 10 seconds and then is set FALSE.

If the comparison is not a match:

- The Add-On Instruction output Wrong_VID_DID =TRUE
- No attempt is made to restore parameters



9 Appendix

9.1 Appendix A: Setting a PC to a static IP address

1. Go to the PC's Control Panel
2. Click *Network and Sharing Center*
3. On the left side choose *Change adapter settings*
4. Right click on Ethernet port to be set and click *Properties* from the drop down menu.
5. Under *This connection uses the following items* menu scroll down and double click *Internet Protocol Version 4 (TCP/IPv4)*
6. In Internet Protocol Version 4 Properties window click to check *Use the following IP Address*
7. In the *IP address* field enter 192.168.1.n where n =1..254 and not =250.
8. In the *Subnet mask* field enter 255.255.255.0.
9. The *Default gateway* field is left empty and click OK.
10. Click OK to close the *Ethernet Properties* window
11. Verify the Ethernet connection that was changed now shows *Unidentified network*. The IP address of the PC is now set.

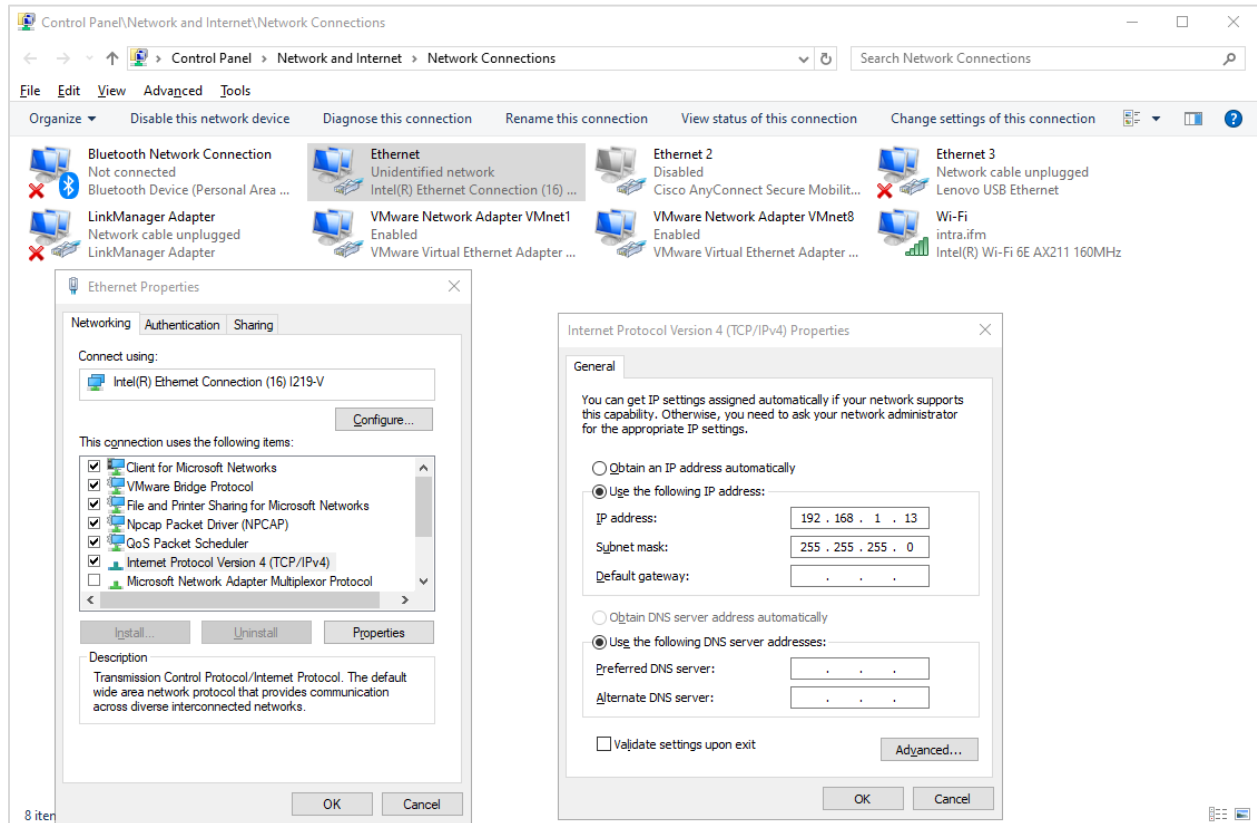


Figure 1A



9.2 Appendix B: Manually inhibiting an Ethernet/IP module

1. Manually inhibit the Ethernet/IP module by right clicking the Ethernet module and open **Properties**. Click **Connection** and check the **Inhibit Module** check box. Click **Apply**.

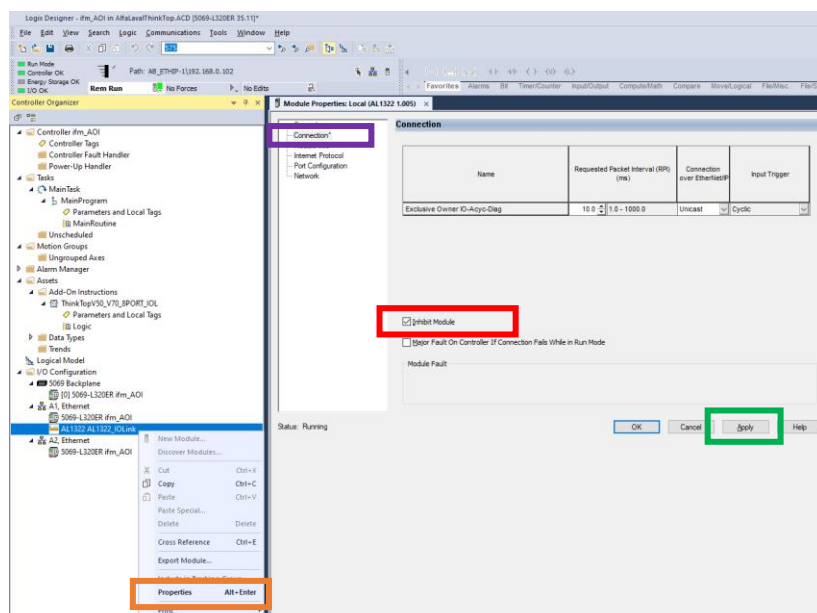


Figure 1B

2. The module will be inhibited as shown by the **error icon** on the Ethernet module and by the **Status text**.

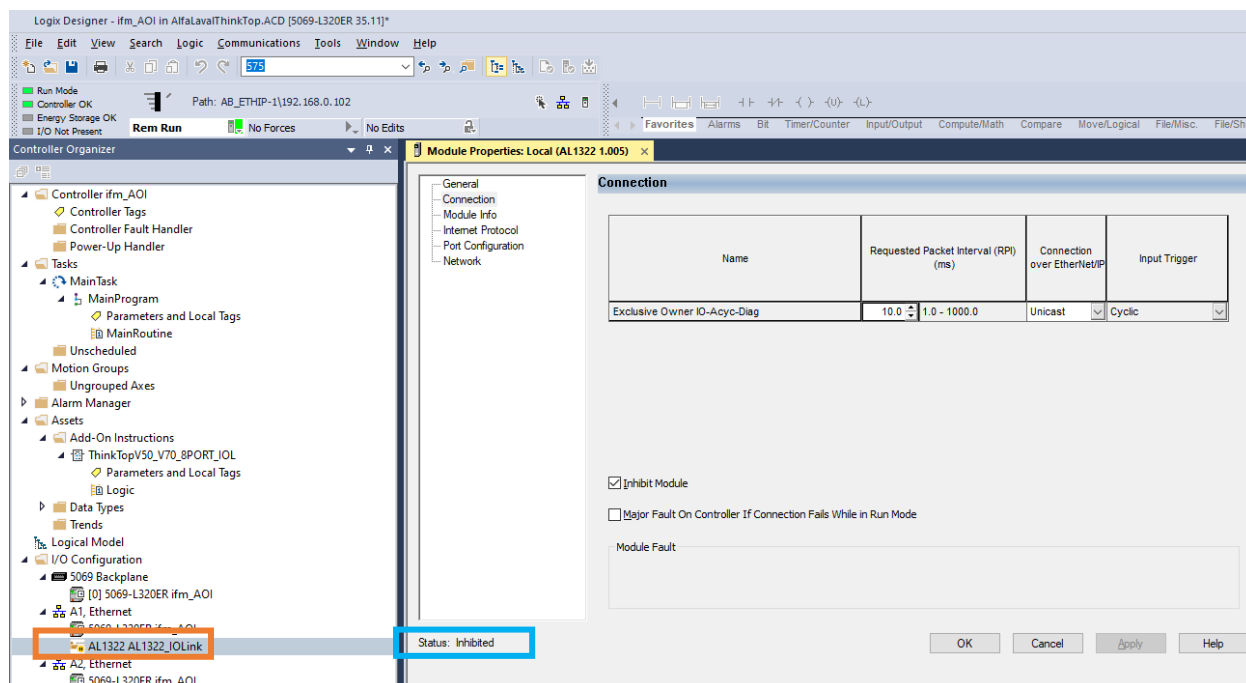


Figure 2B



3. Uninhibit the Ethernet/IP module by unchecking the **Inhibit Module** check box and click **Apply**.

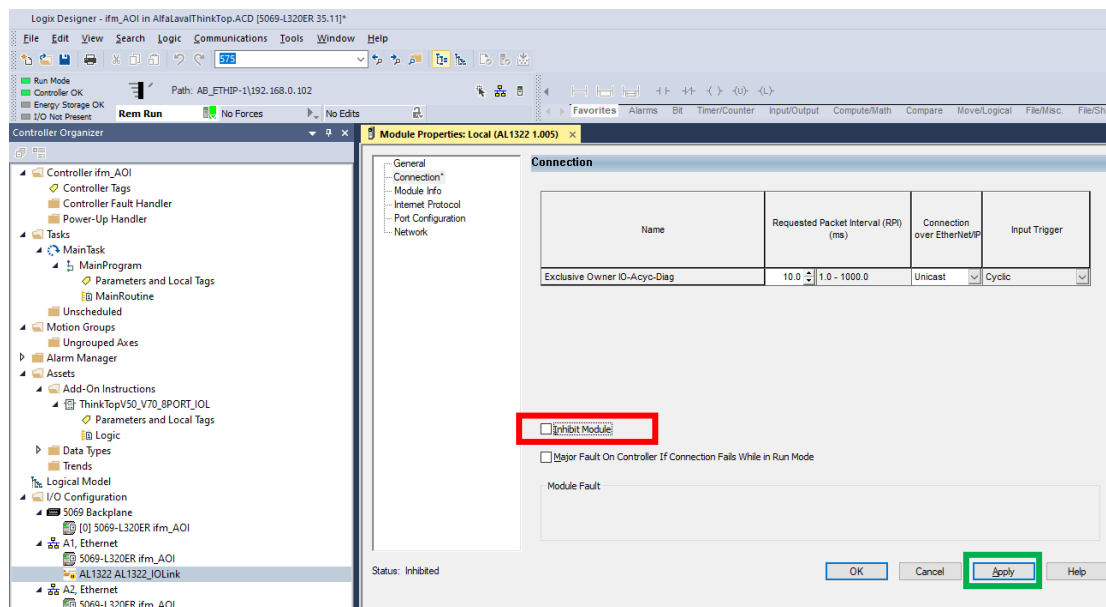


Figure 3B

4. The Ethernet/IP module will be uninhibited. No **error icon** will be shown on the Ethernet module and the **Status text** will show Running.

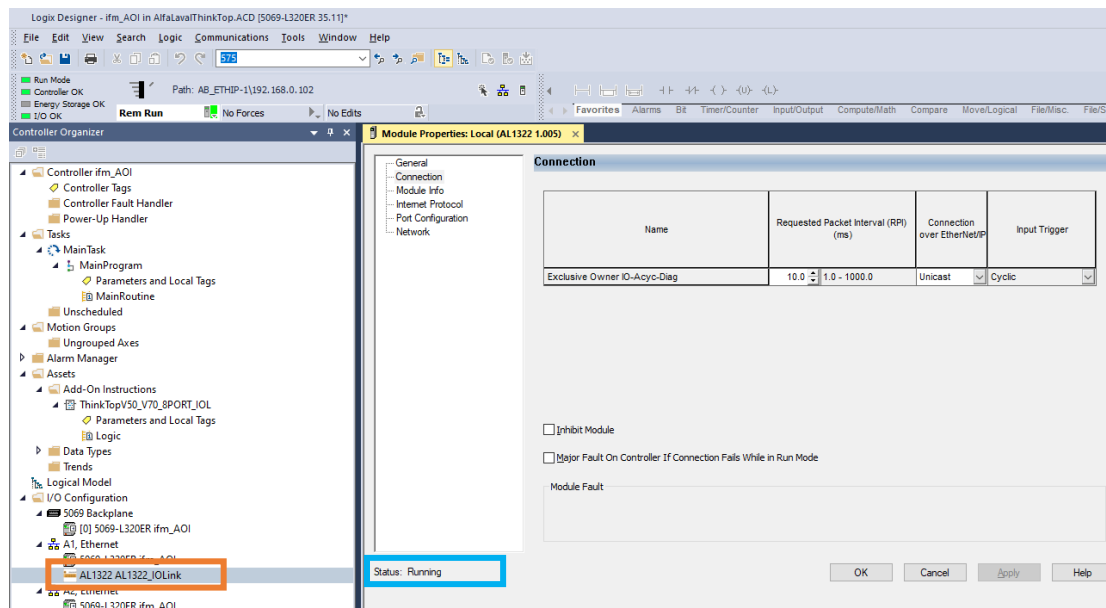


Figure 4B



9.3 Appendix C: Using an SSV instruction to inhibit an Ethernet/IP module

1. Create a rung of logic with a Set System Value function.
 - a. Class Name =select Module
 - b. Instance =Select Ethernet module name
 - c. Attribute Name =select Mode
 - d. Source =create a user defined tag as a DINT with default value =0



Figure 1C

The module status is running.

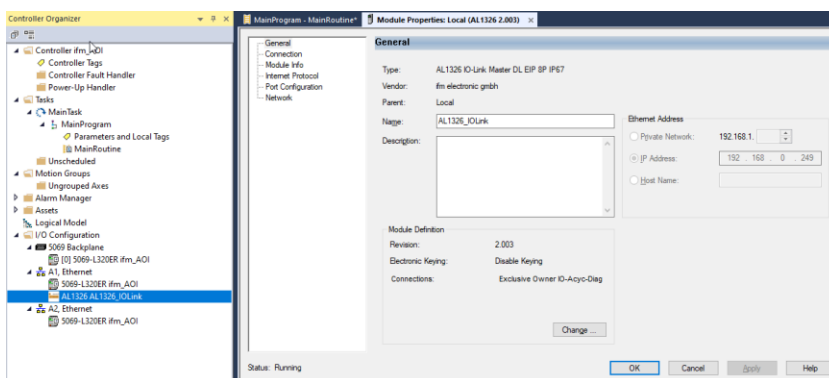


Figure 2C

2. Enter a value of 4 in the Source tag to inhibit the module.



Figure 3C

The module status is inhibited.

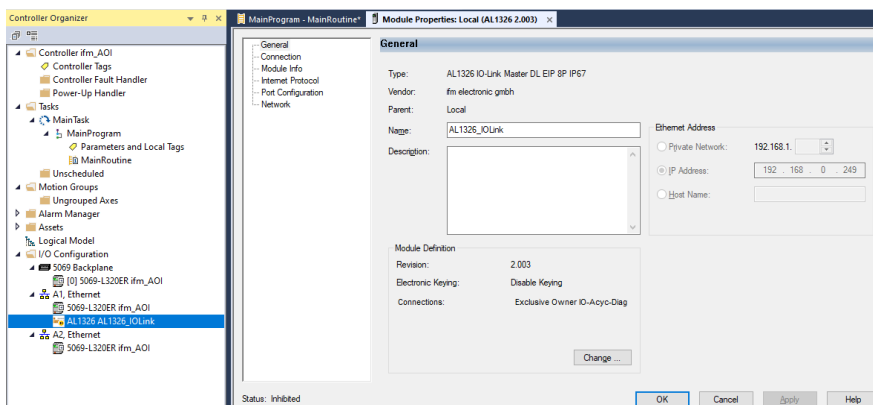


Figure 4C

3. Set the Source Value =0 as in step 1 to inhibit the module.