SensorLab Steel: PLC Setup for Generic EIP Module Integration

Link to Video Demonstration

CONTROL/COMPACTLOGIX COMMS

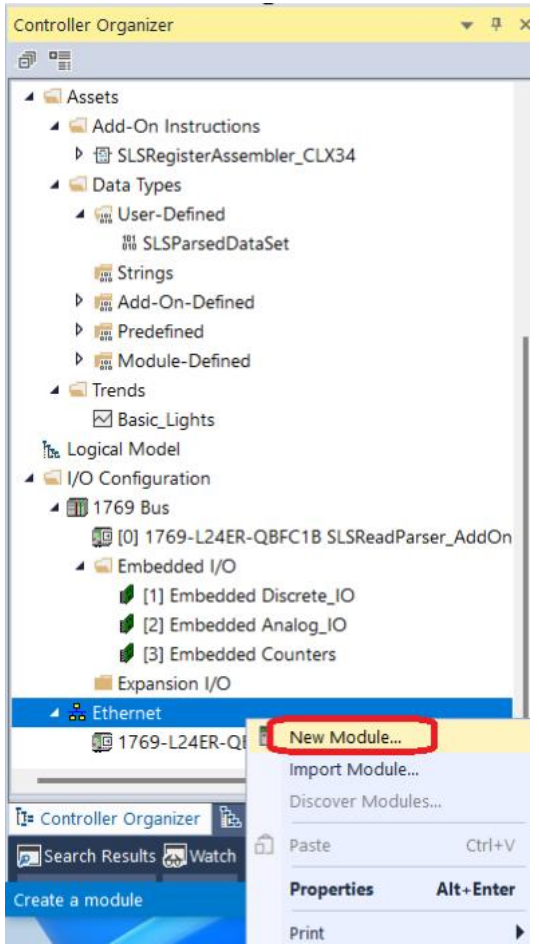
GMCCUTCHEON NOTES 9/11/2024

Add Generic Ethernet Module

- This example uses a CompactLogix 1769-L24ER-QBFC1B v36 PLC and Studio5000 Logix Designer Mini Edition to demonstrate connecting the SLS instrument to an Allen Bradley PLC via EIP.
- The SLS instrument EIP settings for this example:
- IP address: 10.10.10.55
- Subnet Mask: 255.255.255.0
- *NOTE: Some AB PLC controller models/configurations require this module addition to be completed ‘OFFLINE’ then downloaded to the PLC.

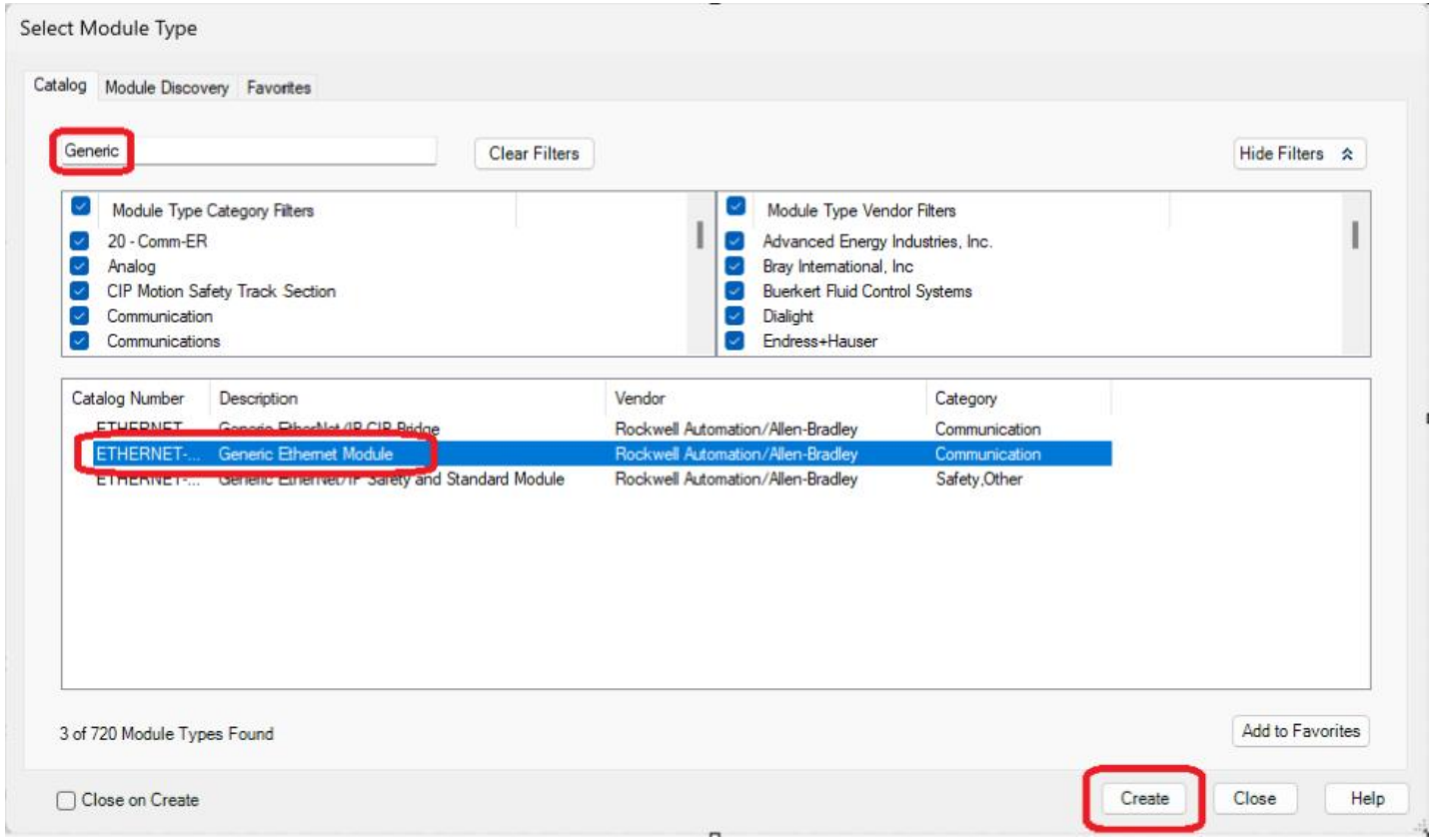
Add Generic Ethernet Module (cont.)

- Right-click ‘Ethernet’ in the Studio5000 Controller Organizer and select the ‘New Module’ menu item.



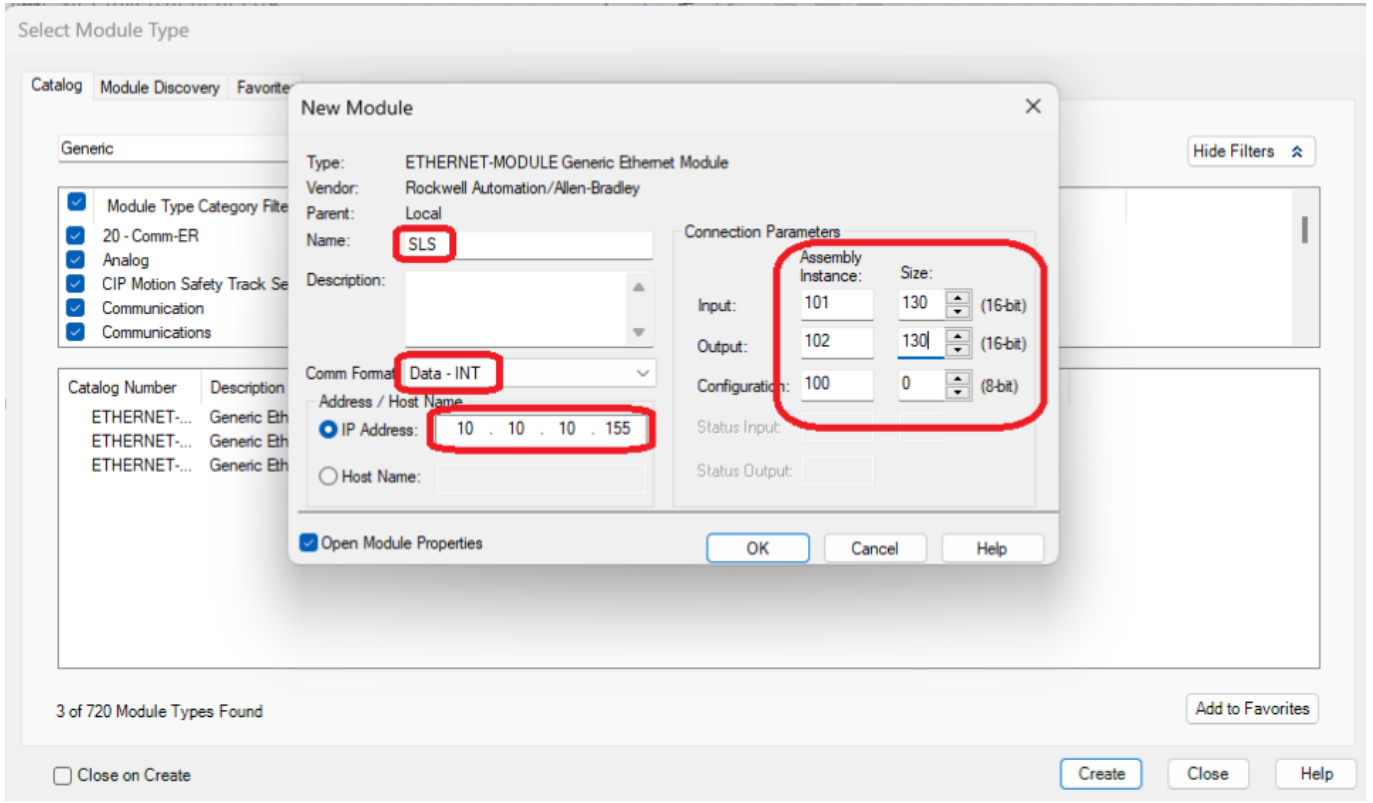
Add Generic Ethernet Module (cont.)

- Type “Generic” into the search textbox and select “Generic Ethernet Module”.
- Click <Create>.



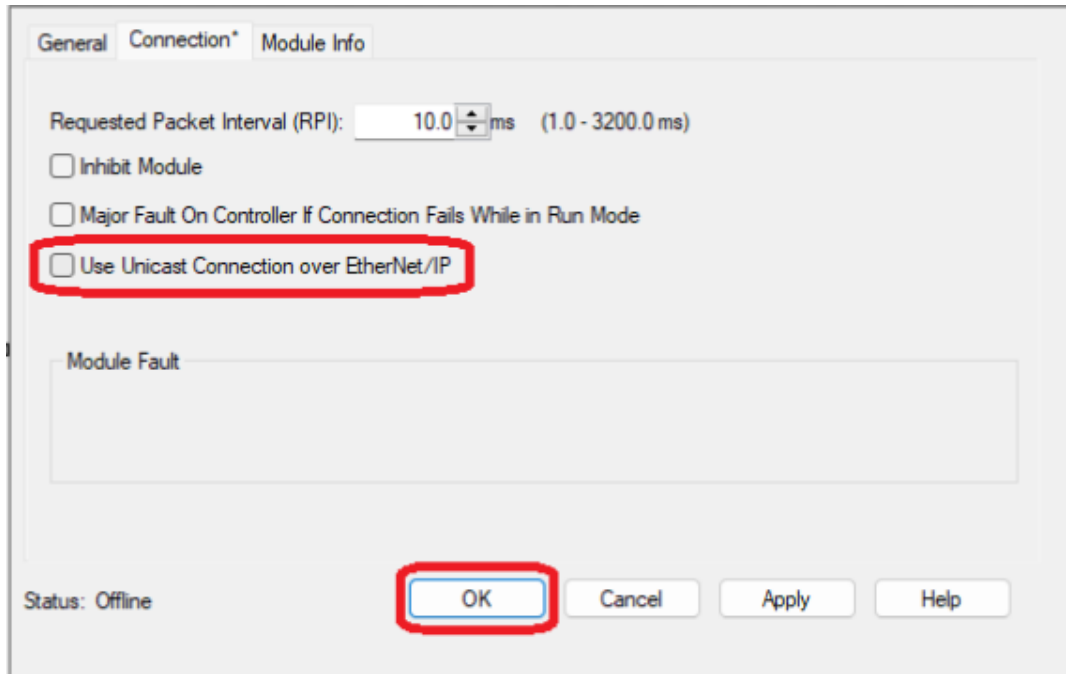
Add Generic Ethernet Module (cont.)

- Name the module. In this example ‘SLS’. The controller tags automatically created to manage the data from this module will use this name (ie SLS:I.Data).
- Change the Comm Format to INT.
- Add the EIP IP address for the SLS instrument. In this example ‘10.10.10.155’.
- Enter the Connection Parameters as shown on the screenshot.
- Click <OK>.



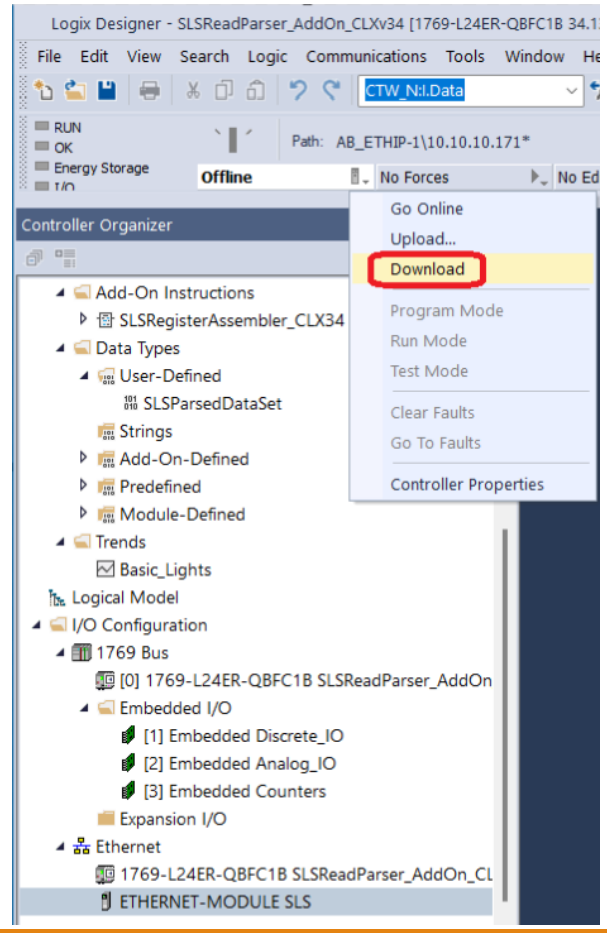
Add Generic Ethernet Module (cont.)

- The Module Properties window will open.
- Insure that ‘Use Unicast Connection over EtherNet/IP’ is NOT CHECKED.
- Click <OK>.



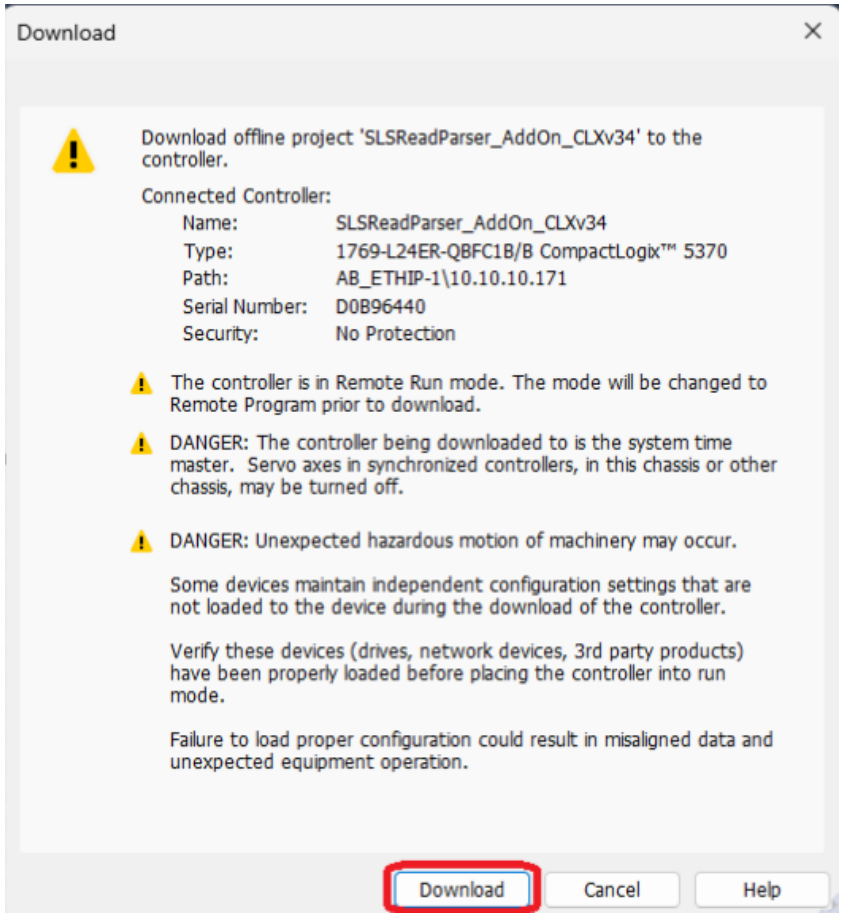
Download to PLC If Required

- The module has been configured.
- Download the changes to the PLC by clicking the arrow on the ‘Controller Status’ dropdown menu and selecting the ‘Download’ menu item.



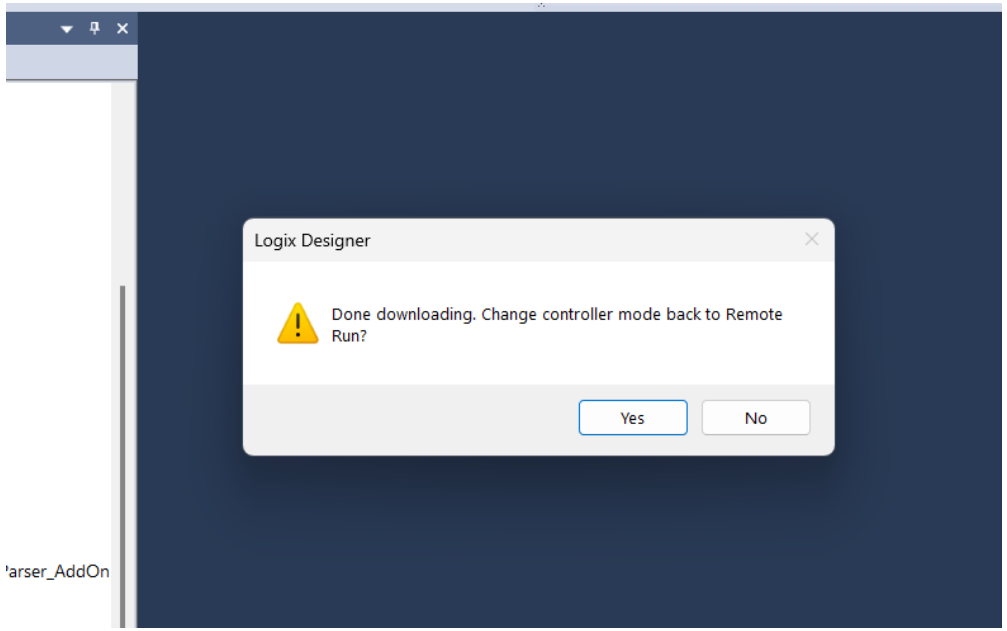
Download to PLC If Required (cont.)

- A window will come up asking you to confirm the download.
- Click <Download>.



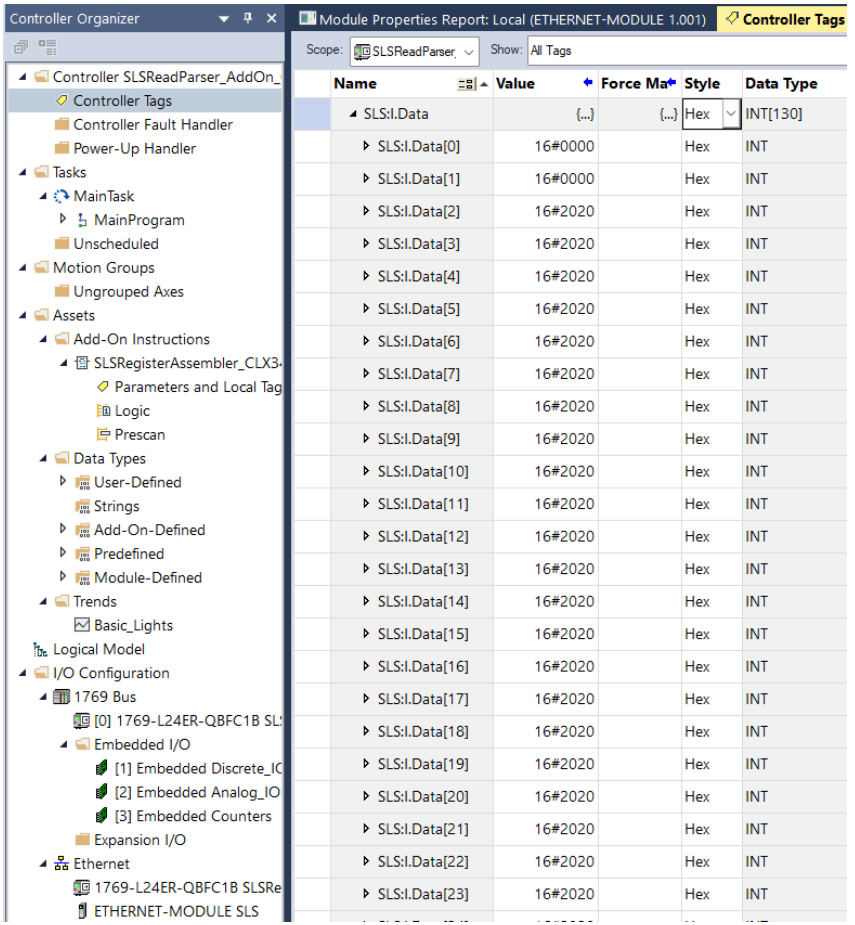
Download to PLC If Required (cont.)

- When the download is complete a window will come up asking you if you want to put the controller back in run mode.
- Click <Yes>.



Viewing Raw Data From SLS

- Once the PLC is in Run Mode, open the 'Controller Tags' window. Expand the module input tags. Change the display style of the 'Data' array (SLS:I.Data in this case) to 'Hex'. If this list is expanded, the 130 received bytes are displayed.



Viewing Raw Data From SLS (cont.)

- Scroll down to element 30 (SLS:I.Data[30] in this example).
- This is the element that the raw data for the station 1 resistance is mapped to.
- That value will be continuously updating if the connection is intact.