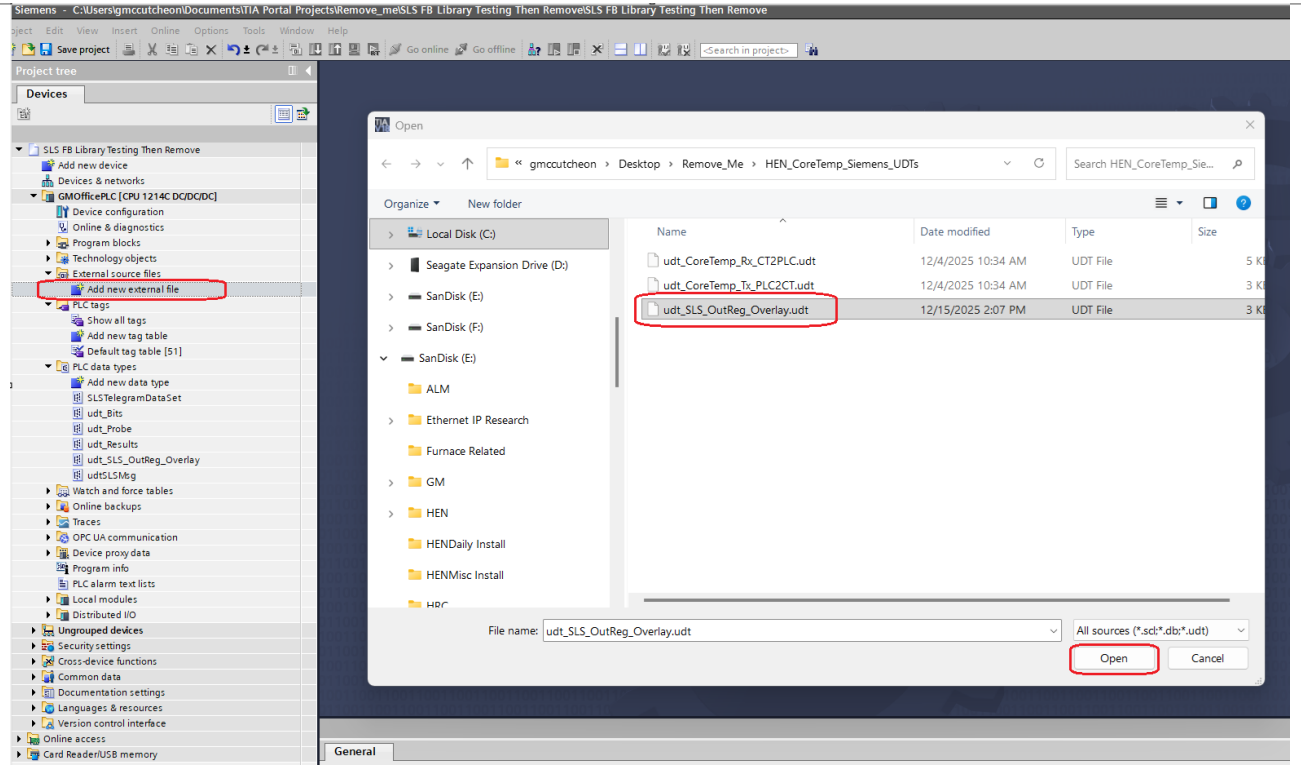
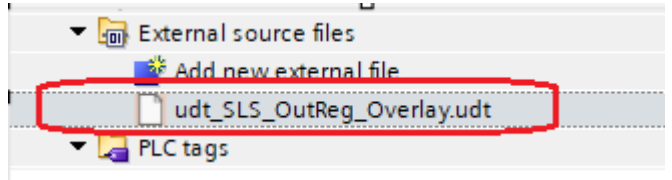
IM2/SensorLab Output Register Direct Overlay UDT

Import UDT

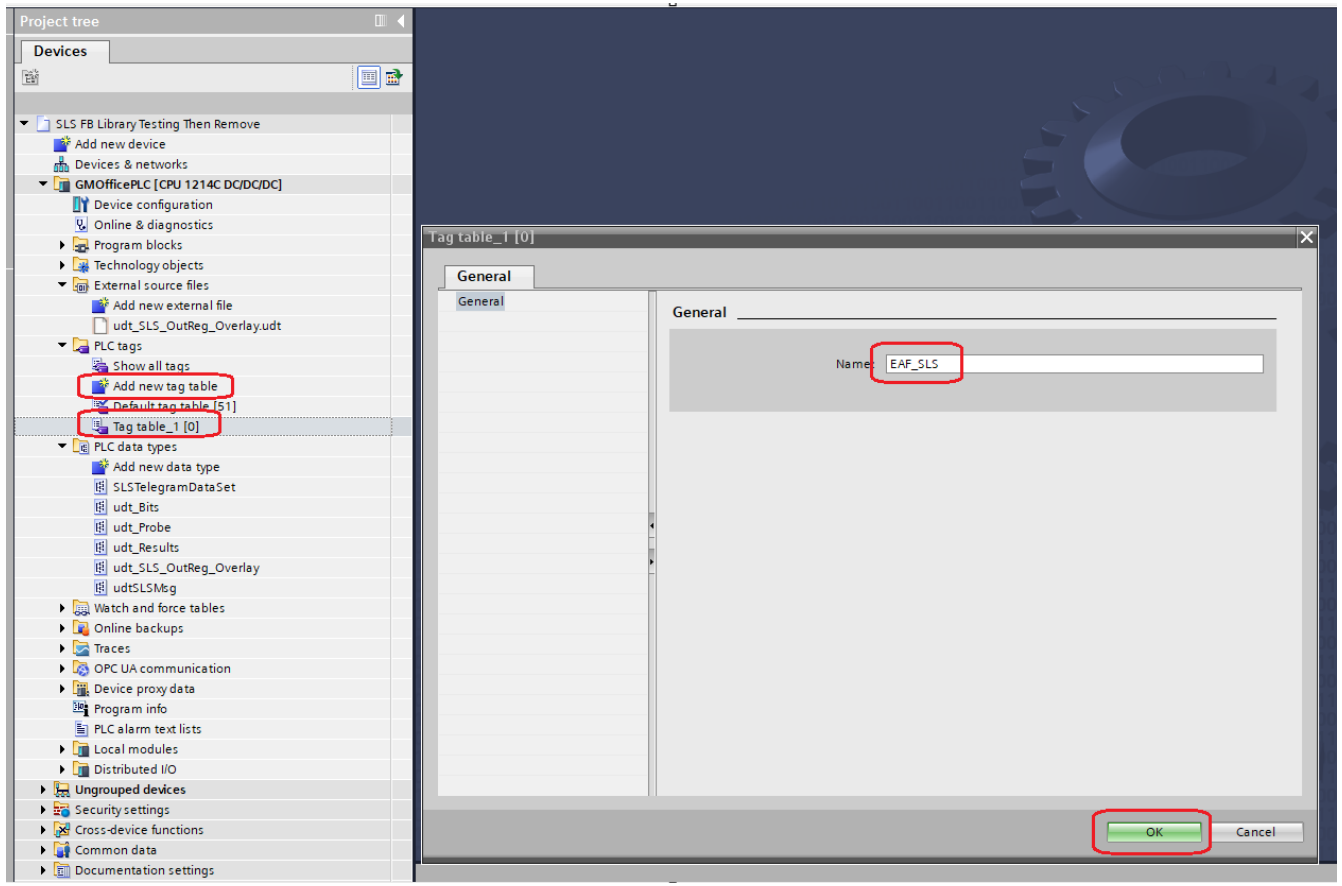
- In TIA Portal, go to Project tree.
- Expand External source files.
- Click Add new external file.
- Browse to the SensorLab overlay UDT file (e.g., udt_SLS_OutReg_Overlay.udt).
- Click Open to import it into your project.
- Confirm the file now appears under External source files.
- (Optional) Drag the file into PLC data types to keep UDTs organized with the rest of your data types.
- Compile the project so the imported UDT is available for use in tag tables and program blocks.





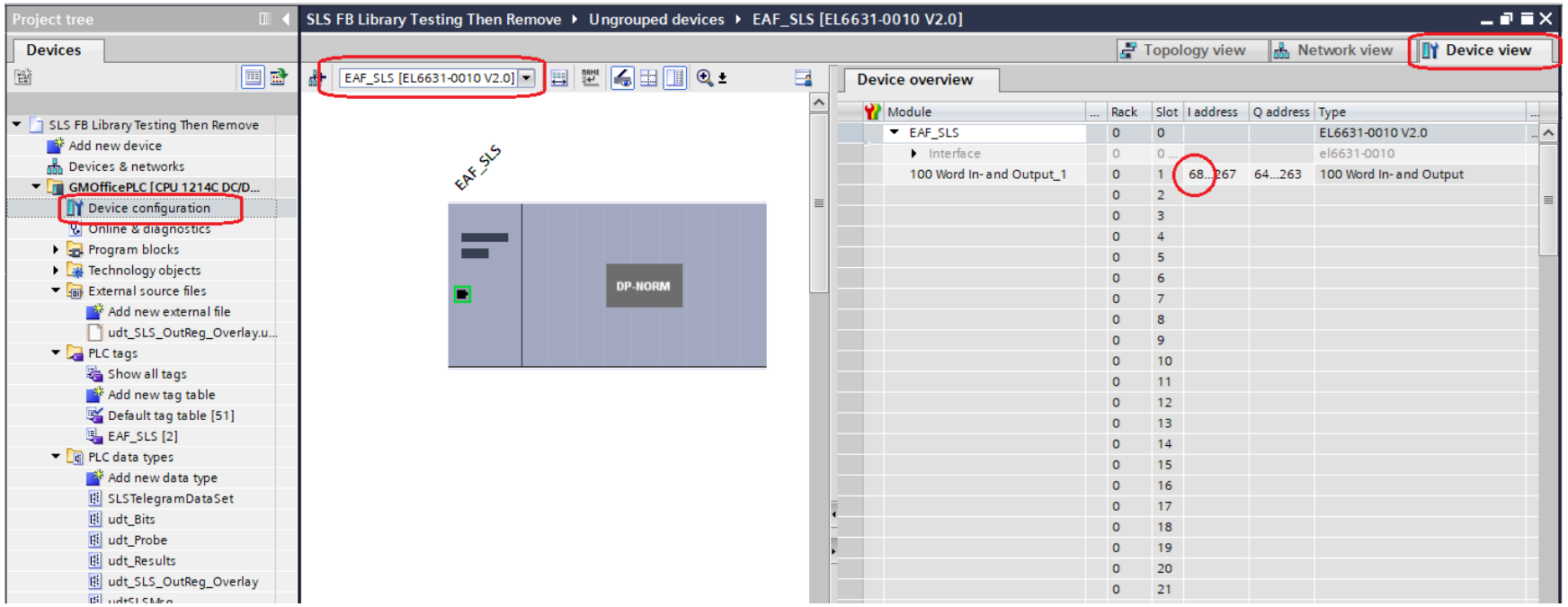
Create a PLC Tags Table

- In TIA Portal, open Project tree.
- Expand PLC tags.
- Click Add new tag table.
- Confirm the new tag table appears under the PLC tags folder.
- Right-click the new tag table and select Properties.
- In the Name field, enter a relevant name (e.g., EAF_SLS).
- Click OK.



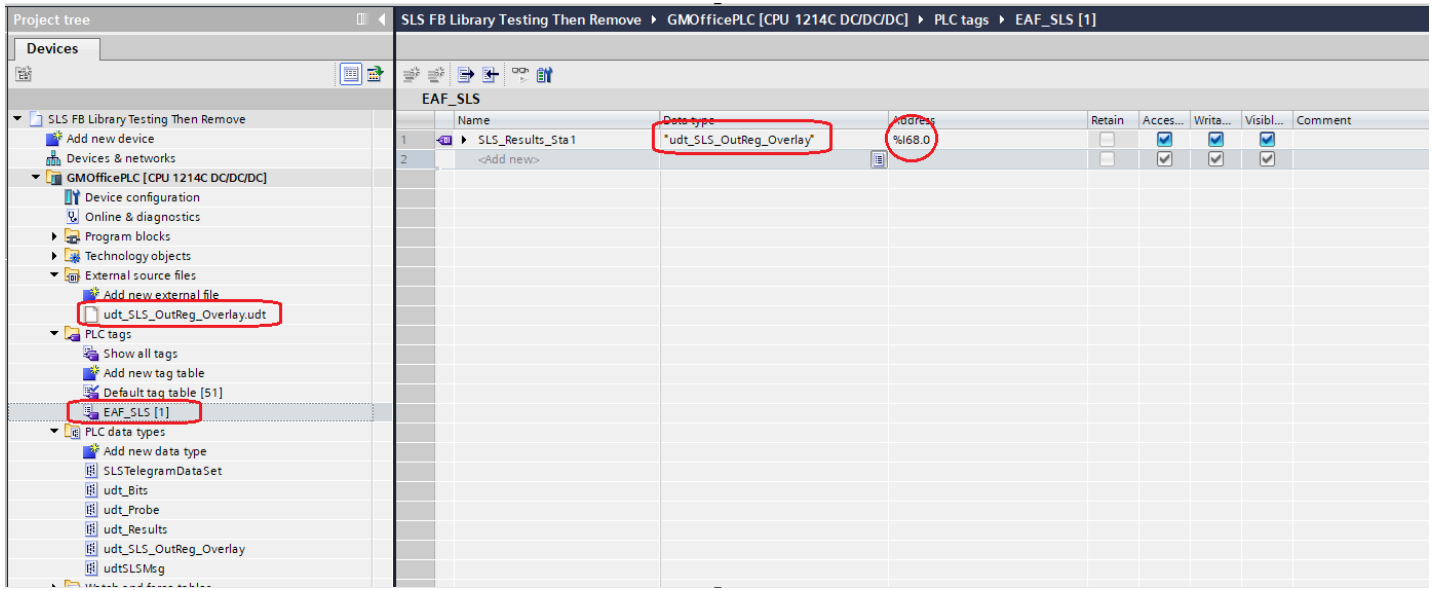
Record Starting SLS Input Address from Device Config

- In Project tree, expand Devices & networks.
- Click the PLC (CPU) node.
- Click Device configuration.
- In the workspace, select the target device/module (e.g., EAF_SLS) so its details load.
- In the right-hand pane, open Device overview tab.
- In the Device overview table, find the module row for the SLS I/O module (e.g., 100 Word In- and Output_1).
- Read the I address column on that row… the first value shown is the input start address (in this screenshot it's 68).
- Record that input start address for the tag/UDT mapping.



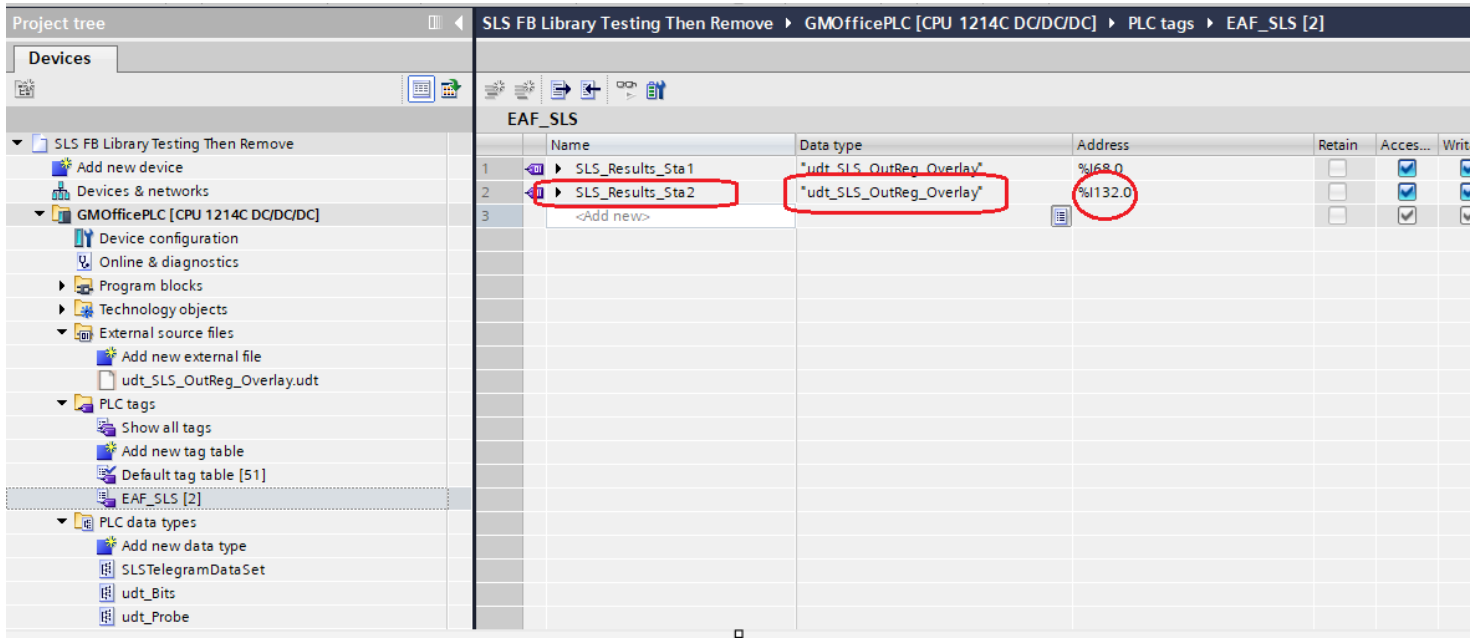
Add Station 1 Tags to New PLC Tag Table

- In Project tree, expand PLC tags.
- Click the tag table you just created (named EAF_SLS) to open it in the editor.
- In the first empty row, enter a tag Name (example from screenshot: SLS_Results_Sta1).
- In the Data type column, select the imported UDT:
  - udt_SLS_OutReg_Overlay.
- In the Address column, enter the input start address recorded from Device overview (example shown: %I68.0).
- Press Enter to accept the entry and save the row.



Add Station 2 Tags to New PLC Tag Table

- With the EAF_SLS tag table still open, click the next empty row (Row 2).
- In the Name column, enter:
  - SLS_Results_Sta2.
  - Use your preferred tag name.
- In the Data type column, select:
  - udt_SLS_OutReg_Overlay.
- In the Address column, enter the Station 2 start address.
  - By default, TIA Portal will auto-fill the next available input address after the previous tag… this is the correct behavior in this case. In this example, that value is %I132.0.
- Press Enter to accept the row.



Monitor Data in New PLC Tag Table

- Save the project.
- Compile and Download to device.
- Connect to the PLC, then click Go online.
- Open the tag table PLC tags\EAF_SLS.
- Expand the first tag (e.g., SLS_Results_Sta1) to show its UDT members.
- Monitor the values (enable monitoring/“glasses” in the tag table) and confirm the fields are updating as the device sends data.