TechTip: PLC data exchange with Rockwell Automation Studio 5000

Contents

1. Use

With the release of Version 32 of Rockwell Automation Studio 5000 it is possible to perform the exchange of PLC data in the new AML format - together with EPLAN Electric P8 as of Version 2.7.

The aim of this TechTip is to facilitate switching from the usage of the previous Rockwell interface to the new AML format and carry out the required adjustments.

This TechTip contains additional information on the data exchange with Rockwell Automation Studio 5000 as a supplement to the TechTip "**TechTip-PLC-data-exchange**".

> The data exchange takes place in the AutomationML AR APC format. You can find further information in the TechTip "**TechTip-PLC-data-exchange**", section "AutomationML AR APC".

2. Rockwell Automation Studio 5000

1. The **PLC type designation** is called "Catalog number" at Rockwell.

2. If both the **PLC type designation** as well as a device description file are specified, the **PLC type designation** is used for the data exchange.

3. The **Function text** (is called "Comment" for Rockwell) is transferred in multiple languages.

4. The **Symbolic address** may not contain any blank.

5. The **CPU** property must be activated at the controller.

6. Rockwell remembers the DT.

7. If a project has to support both exchange formats, the properties **Rack** and **PLC card name** must be filled identically.

3. Recommended procedure for the switchover

3.1. Modification of the rack structures

There are changes for the creation of the rack structure compared to the previous format:

- The numbering of the racks begins at "0" and is continued in ascending order for all racks in the configuration project
- The position of the PLC card on the rack is ascending, beginning with the value "0".
- For the configuration of field bus stations without own racks (switches, PC station or similar) see the TechTip "**TechTip-PLC-data-exchange**", keyword *Head station, PC station* or *Switches*

The function of editing in tables makes it is easily possible to carry out the required modifications.

To this purpose use the PLC navigator with the "Main functions" filter. Select the PLC boxes to be edited and start the editing in tables via the popup menu. Here you select the "Rack" scheme.

Properties at the PLC boxes which are not used in the AutomationML AR APC format anymore:

ID	Property
20259	**Number of positions in the rack**
20260	**Number of positions in the rack (to the left)**
20258	**Sort code (for position in rack)**

3.2.   Bus ports and network structure

To edit the bus ports and network structures use the PLC navigator with the "Bus port" filter.
Now select the bus ports to be edited and start the editing in tables via the popup menu.
Here you select the "PLC bus data" scheme.

ID	Property	Value
20026	**Function definition**	`Network / bus cable connection point, general` Please note that a bus port (port / plug) has only **one** function definition.
20406	**Plug designation**	If no designation is printed on the device, count the bus ports here.
20447	**Bus interface: Name**	Not empty at bus systems that are Ethernet-compatible
20448	**Bus interface: Main bus port**	Activated at the first bus port within an Ethernet-compatible bus interface.
20308	**Bus system**	Depending on the use, e.g. `Ethernet/IP, ControlNet, Device Net`
20413	**Physical network: Name**	Not empty
20414	**Logical network: Name**	Not empty
20310	**Logical network: Bus port is master**	Activated at the first bus port of the bus bundle