TechTip: Creation of configuration data for the PLC data exchange

A step-by-step procedure is advisable for the creation of the configuration data for the PLC data exchange.

You are supported here by:

- PLC navigator
  with filter options

- Edit in table
  with suitable schemes

- Check runs
  with suitable schemes (Step 1 to 3)
  The scheme "PLC data exchange (Siemens)" or "PLC data exchange (Mitsubishi)" is used for the complete data exchange.

The following TechTips also provide help:

- TechTip-PLC-data-exchange
- TechTip-Overview-of-the-PLC-properties
- TechTip-Recommendation-for-PLC-items-with-base-and-pluggable-logic
- TechTip-AS-i-piercing-technology
- TechTip-Preparation-of-master-data-for-PLC-data-exchange

Step 1: Rack structure

PLC navigator

View: Rack-oriented

Filter: Main functions

Selection: Per station

Editing in tables

Popup menu: **Edit in table**

Scheme: Rack

- Enter data:
  - **Configuration project**
  - **PLC station: ID**
  - **PLC station: Type**
  - **Rack**
  - **PLC card is placed on rack ID**
  - **Position (slot / module)**
  - **PLC type designation** or
  - **Device description: File name** and **Device description: Index in file**
  - **PLC card name** or
  - **Object description**

- Designation of the CPU:
  - Activate **CPU** check box
  - **CPU: Name [1]**

- Further properties:
  - **Bus coupler / head station**
  - **Start address of PLC card**

Error checking

Tab **Tools** > Command group **Review** > **Check**

In the **Settings** field, click **[…]**.

Scheme: "PLC-Step1 (Racks)", import from the file "ISve.PLC-Step1_(Racks).xml"

004007	Rack '<x>' is mounted on itself
004009	Slot (module) '<x>' of a rack '<y>' assigned several times
004010	Rack '<x>' is unknown.
004013	Rack '<x>': Ring connection
004016	Rack '<x>' is not unique
004025	Slot / module is missing
004080	Missing configuration project
004081	Missing station ID
004082	Configuration project '<x>' does not contain a CPU
004083	The CPU class '<x>' entered at the PLC box does not exist in the project
004086	Missing PLC type designation or device description file
004087	Missing start address
004088	The PLC card name '<x>' is already being used at a rack, at a CPU or as a station ID
004089	PLC card name '< x>' assigned several times within a rack
004094	CPU name '< x>' assigned several times

Step 2: PLC connection points (inputs and outputs)

PLC navigator

View: Rack-oriented

Filter: "PLC connection points" scheme, import from the file "PCfiP.PLC-ConnectionPoints.xml" (filter for PLC connection point I/O or variable or power supply)

Selection: Per card

Editing in tables

Popup menu: **Edit in table**

Scheme: PLC connection point

- Enter data:
    - **PLC address** (can also be changed via addressing)
    - **Channel designation**
    - **Data type**

- Further properties (optional):
    - **Symbolic address**
    - **Function text**
    - **Signal range**

Error checking

Tab **Tools** > Command group **Review** > **Check**

In the **Settings** field, click **[…]**.

Scheme: "PLC-Step2 (PLC-connection points)", import from the file "ISve.PLC-Step2_(PLC-ConnectionPoints).xml"

004020	More than one I/O connection point at a channel
004021	Address has been assigned more than once within a CPU
004023	Address is missing
004027	Missing or incorrect channel designation
004030	Missing symbolic address (automatic)
004031	Symbolic address has been assigned more than once within a CPU
004085	Missing data type

Step 3: Bus port

PLC navigator

View: Rack-oriented

Filter: Bus port

Selection: Configuration project

Editing in tables

Popup menu: **Edit in table**

Scheme: PLC bus data

- Enter data:
    - **Configuration project (automatic, at bus ports)**
    - **Plug designation**
    - **Bus interface: Name**
    - **Physical network: Name**
    - **Logical network: Name**
    - **Logical network: Bus port is master**
    - **Bus system**
    - **Physical network: Bus ID / item number**

Error checking

Tab **Tools** > Command group **Review** > **Check**

In the **Settings** field, click **[…]**.

Scheme: "PLC-Step3 (Bus-connection points)", import from file "ISve.PLC-Step3_(Bus-ConnectionPoints).xml"

004035	Bus ID '<x>' within a logical network '<y>' assigned several times (bus port in the bus system: '<z>')
004036	Unknown logical network '<x>' (bus port in the bus system: '<y>')
004037	Missing bus ID (bus port '<x>' in the bus system: '<y>')
004039	Connection between different bus systems ('<x>', '<y>')
004040	Contradictory specifications at the associated bus port were found for the bus port at '<x>'
004071	Bus interface '<x>': 'Bus interface: Main bus port' property activated more than once or not activated
004072	Bus ID '<x>' of a physical network '<y>' assigned several times
004080	Missing configuration project

004084	The MasterSystemID is faulty
004091	Missing plug designation
004092	Missing bus interface name