TechTip: Designing PLC devices with configurable PLC connection points

This TechTip helps you with the creation of parts data and macros for PLC devices whose PLC connection points have multiple meanings.

Configurable PLC connection points (multi-function connection points)

In the field of PLC devices there are increasingly devices whose PLC connection points are configurable: PLC connection points can be either inputs or outputs.

In order to minimize the number of parts data and required macros in this case it is possible to define PLC connection points as a *PLC connection point, multi-function*.

For these PLC connection points the type of signal that is set then influences the behavior of the connection point.

You can set the actual behavior of the PLC connection point in the **Type of signal** property (can be accessed in the property dialog of the PLC connection point on the **Symbol / function data** tab via the **[Logic]** button):

- Digital input
- Digital output
- Analog input
- Analog output

A *PLC connection point, multi-function* is treated with its logic like the corresponding I/O connection. For example
PLC connection point, multi-function, type of signal digital input corresponds to *PLC connection point, DI*

Advantages:

- Reduction of the parts data and macros;
  only one part record without parts variants and one macro
- Correct overlapping of the function templates in the navigators

Deactivated I/O connection point

In Eplan only one connection point from the category *PLC connection point, I/O, 1 connection point* can be active within one channel in Eplan. If a channel has more than one PLC I/O connection point, all further connection points have to be designated as a **Deactivated I/O connection point**.

To allow the post-addressing of these connection points in Eplan, enter the same value in the **Channel designation** field for each of the combined connection points.

PLC I/O connection point or bus port

In the area of PLC devices there are devices whose PLC connection points can be either an input or output or bus port (for example I/O link devices).

In this case use the possibility to create variants in the parts management:

- In Variant 1 the affected PLC connection points are defined as bus ports
- In Variant 2 the affected PLC connection points are defined as *PLC connection point, multi-function* (see above)

A common macro can be used for both variants since the suitable variants for the affected PLC connection points can be created in the macro.

Disadvantage:

- In Eplan it is not possible to select the correct part variant during the PLC data import since both part variants have an identical PLC type designation.
  In this case Eplan always uses the first found variant.
  You are pointed to these circumstances with the check run 004057.
  If necessary, correct the part at the affected modules after the import.