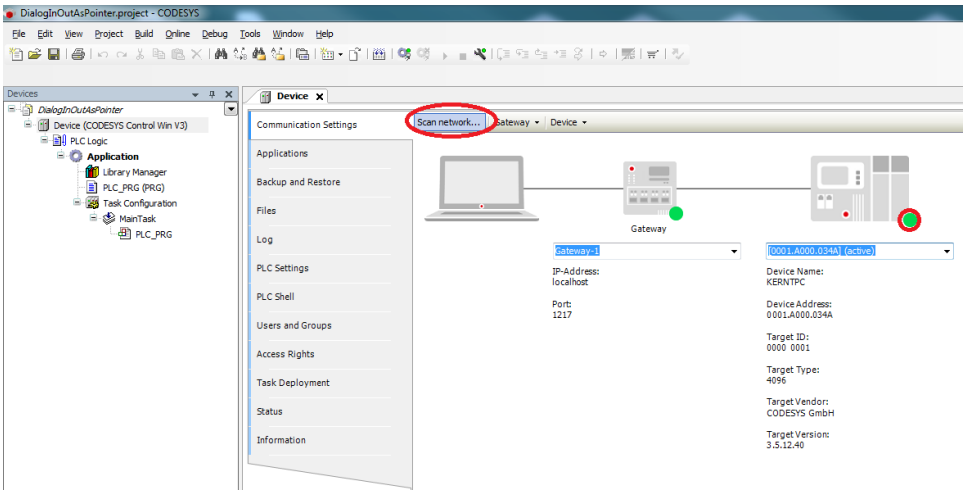
Visu: Dialogs with and without directly passing variables ({attribute 'VAR_IN_OUT_AS_POINTER'})

- Create a "Standard project" and select *CODESYS Control Win V3* as the device.
- Define the target system by means of the *Network scan*.



- Create and edit an FB named *FB_Sample* as follows:

Declaration

```
FUNCTION_BLOCK FB_Sample
VAR_INPUT
    byInstanz    : BYTE;
END_VAR
VAR
    udiCount     : UDINT;
    xReset       : BOOL;
    udiValue     : UDINT;
    sText        : STRING := 'Input something';
END_VAR
VAR CONSTANT
    c_udiOffset  : UDINT := 10000;
END_VAR
```

Implementation

```
udiCount := udiCount+1;

udiValue := byInstanz * c_udiOffset + udiCount;

IF udiValue >= (byInstanz+1) * c_udiOffset THEN
    udiValue := byInstanz * c_udiOffset;
END_IF

IF xReset THEN
    udiCount := 0;
END_IF
```

- Edit the *PLC_PRG* POU as follows:

Declaration

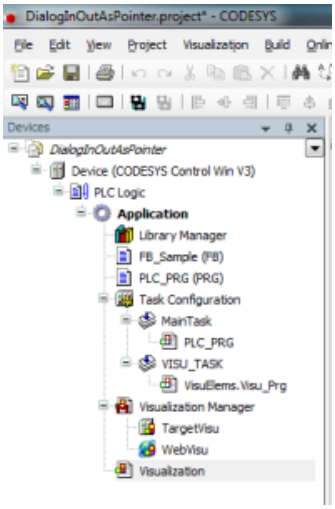
```
PROGRAM PLC_PRG
VAR
    fbSample1 : FB_Sample := (byInstanz := 1);
END_VAR
```

Implementation

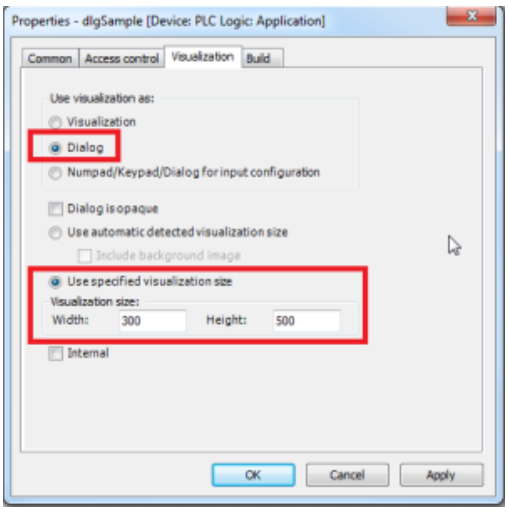
```
fbSample1();
```

- Insert a visualization in the device tree.

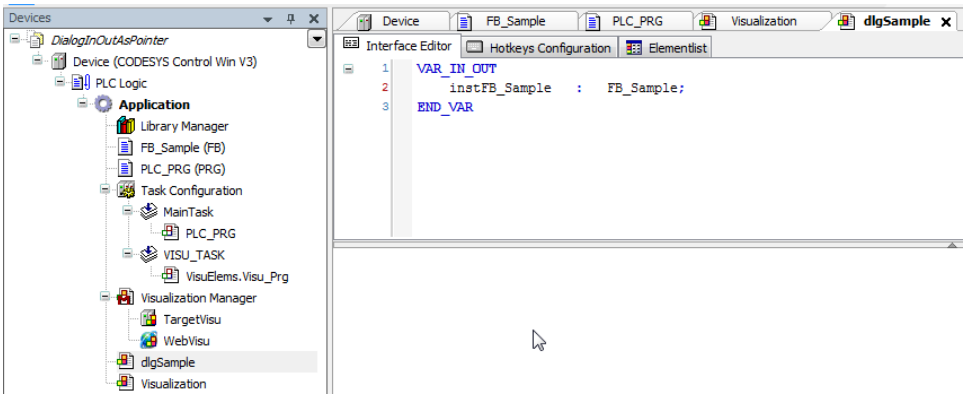
  Then the *Visualization Manager* is inserted automatically with the visu types *TargetVisu* and *WebVisu*.
  In addition, a *VISU_TASK* is also created automatically.



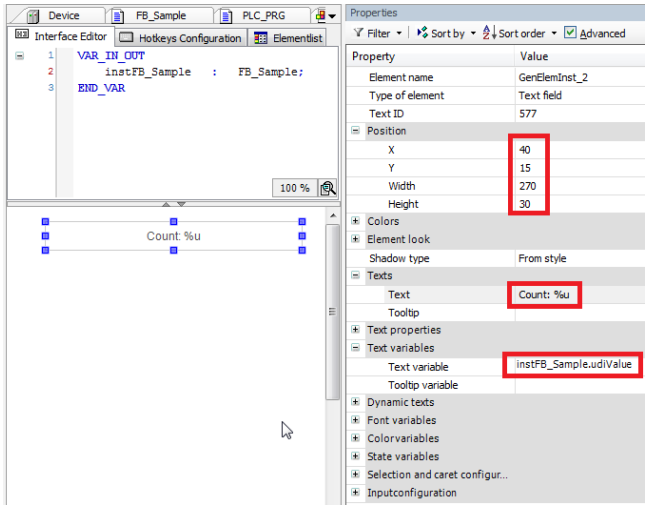
- Create an additional visualization named *dlgSample*.
  From the context menu, open and set the properties dialog of the page as follows:



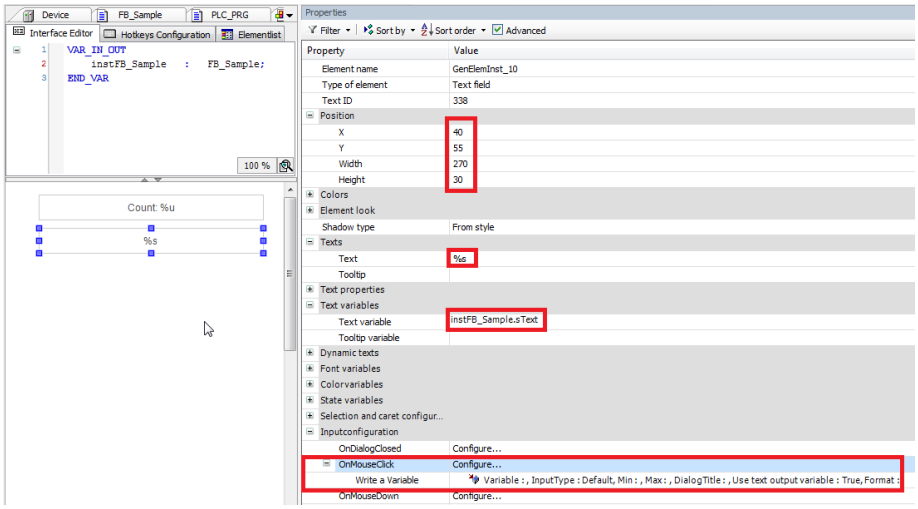
- From the *Visualization/Interface Editor*, open and edit the interface editor as follows:



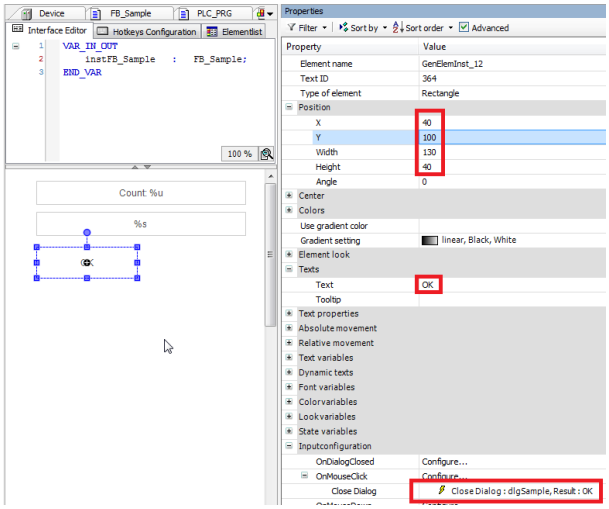
Set a rectangle on the page for displaying the counter value and edit the properties as follows:



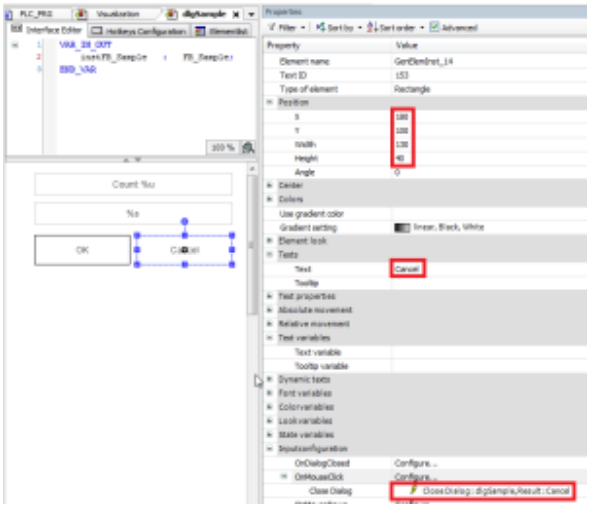
Copy the element and edit the properties as follows:



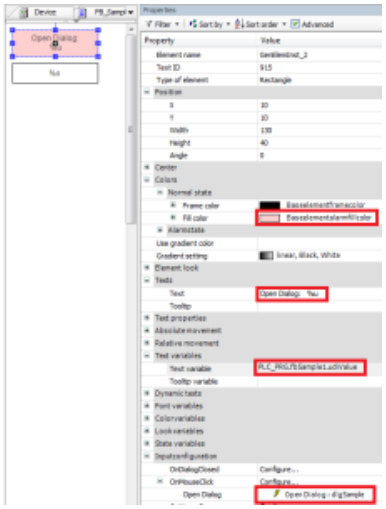
Set an additional rectangle element and edit the properties as follows:



Copy the rectangle and edit the properties as follows:

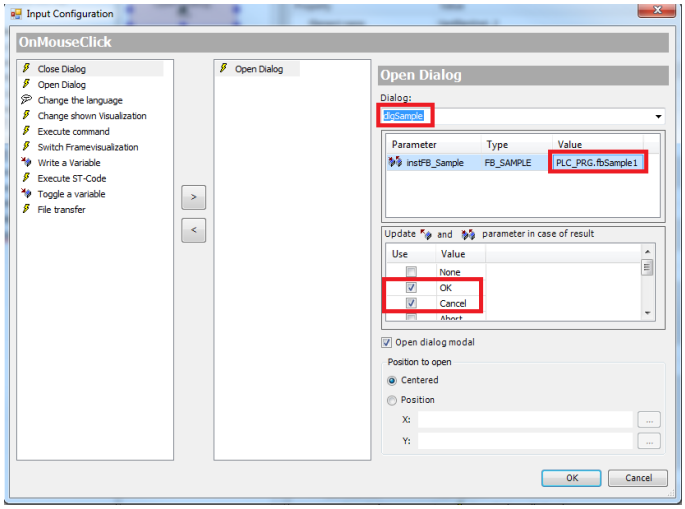


- In order to display the current value of the FB and call the dialog, we edit the *Visualization* page.
  Set a rectangle and edit the properties as follows:

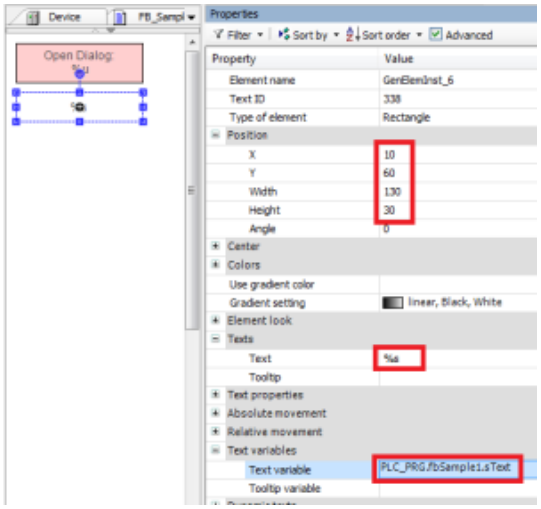


> ⚠ The line break between the *Open Dialog* text and the variable formatting *%u* is made with the key combination *[Ctrl] + [Return]*.

When assigning the input configuration, you also have to set the following properties in the dialog:

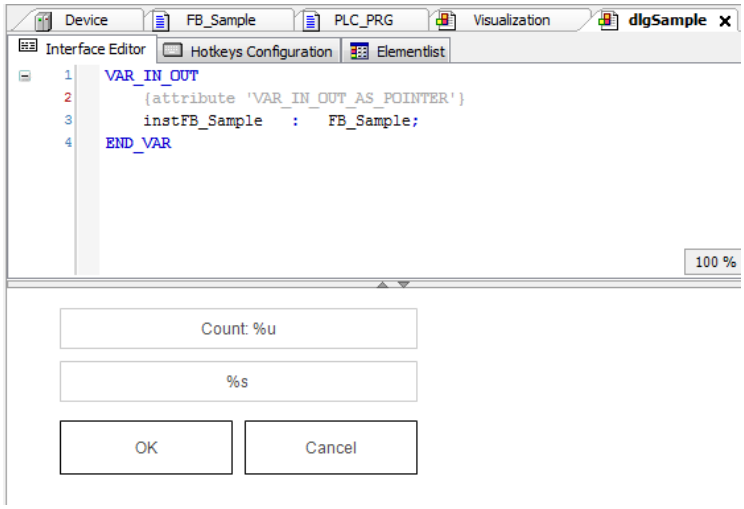


Set an additional rectangle on the page and edit the properties as follows:



- Load the project to the controller and start it.
  Now when you open the dialog, you notice that the values in the dialog do not change, or an adjustment of the text is not passed to the variable until the dialog is closed:

- In order for changes between variables and dialog elements to be passed directly, the attribute *VAR_IN_OUT_AS_POINTER* must be added to the interface of the dialog, where by uppercase/lowercase must be taken into account:



> After adding the attribute, you must execute *Build/Clean all* again and then download the program to the controller again.

Now the values should be updated "Online":