Table of contents

Sequential control

Sequential control

Using sequential control, you can monitor the processing of the application program. The sequential control is available for the speech editors ST, FBD, LD and CFC.

With an activated sequential control, PLC Engineering displays the variable values and results from function calls and operations at the respective processing location and time. In this way, the exact lines of code and networks that run through the current cycle are marked in colors. Compare: In standard monitoring, PLC Engineering returns only the value that a variable has between two processing cycles.

The sequential control operates in all currently visible parts of the editor window. *“Sequential control enabled”* is displayed in the status line as long as the function is active and the sequential control positions (processed parts of code) are visible in an editor window.

You can write values in the declaration part and in the implementation part, forcing is not possible.

NOTICE!

The values are written at the end of the current cycle.

NOTICE!

When enabling the sequential control, the cycle time of the application is prolonged!

When *“Confirmed online mode”* is selected in the communication settings, a dialog prompt appears when switching on the sequential control to cancel the operation.

When sequential control is activated, it is not possible to use breakpoints or incrementatlly process the program.

Also refer to

- ↘ “Tab – Communication”
- ↘ “Command 'Flow Control'”

Display of the sequential control in different language editors:

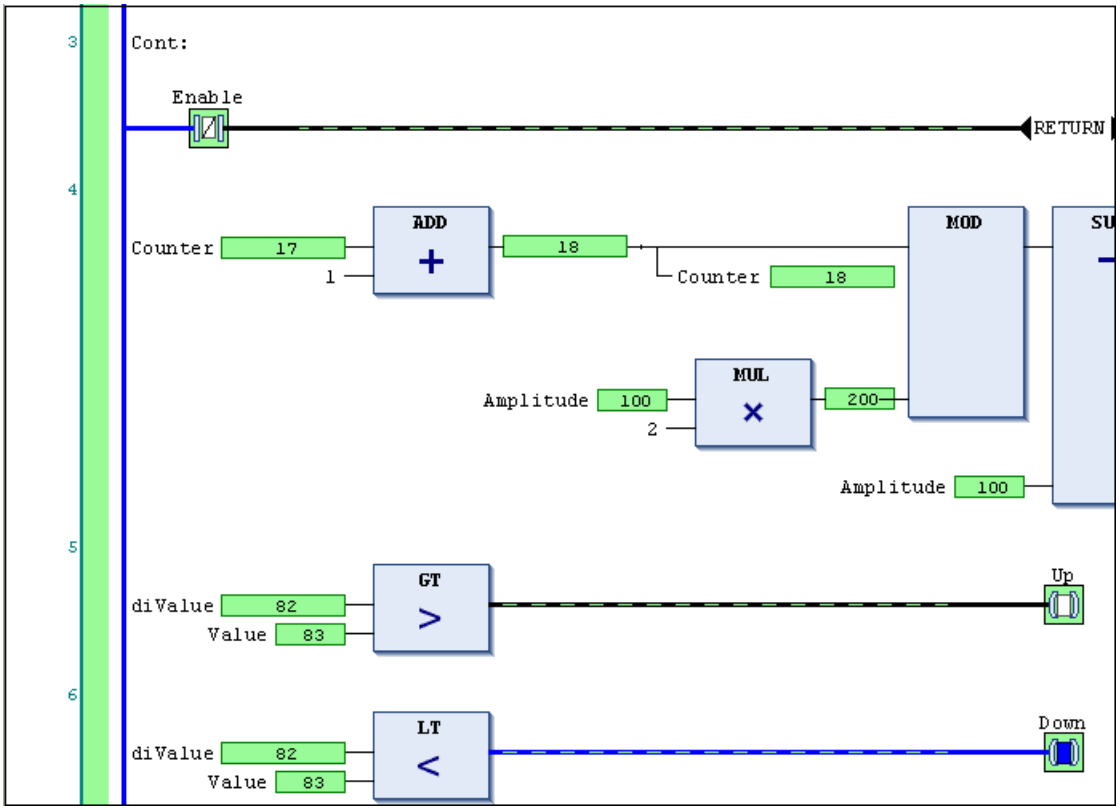
By default, PLC Engineering displays the flow control positions of the processed parts of code as green fields. Unprocessed parts of code are displayed in white.

Note that the displayed value of an unprocessed code position is an ordinary monitoring value. This is the value between two task cycles.

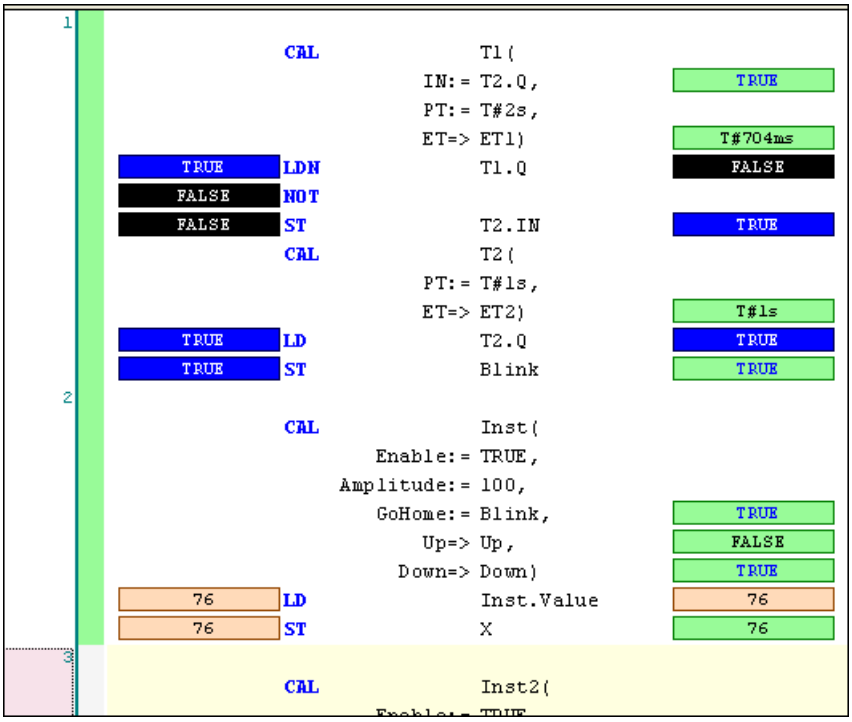
```
1  i 1619 := i 1619 + 1;
2  b 0 := NOT b 0;
3  IF str 'abcdefghij' = str1 '' THEN
4  fl2 1.5 := fl 1.23;
5  ELSE
6  fl2 1.5 :=1.5;
7  D 6.5E+04 :=B255*B255;
8  END_IF;
9  IF D 6.5E+04 <0.0 THEN
```

In network editors, PLC Engineering marks the processed networks with bars on the left edge in the flow control color.

In LD, PLC Engineering displays the currently processed connecting lines in green and all others in gray. The actual value of the connection is also displayed: TRUE by a bold blue line, FALSE by a bold black line, and unknown or analog values by thin black lines. Due to the combination of the relevant information, this might lead to dashed lines.



In IL, PLC Engineering uses two fields for each instruction to display actual values. One to the left of the operator with the current accumulator and one to the right of the operands with the operand value.


1
CAL T1(
IN:= T2.Q, TRUE
PT:= T#2s,
ET=> ET1) T#704ms
TRUE LDN T1.Q FALSE
FALSE NOT
FALSE ST T2.IN TRUE
CAL T2(
PT:= T#1s,
ET=> ET2) T#1s
TRUE LD T2.Q TRUE
TRUE ST Blink TRUE
2
CAL Inst(
Enable:= TRUE,
Amplitude:= 100,
GoHome:= Blink, TRUE
Up=> Up, FALSE
Down=> Down) TRUE
76 LD Inst.Value 76
76 ST X 76
3
CAL Inst2(