

TT200204 – FUP - Latch and Momentary Output

Note

This Support Knowledge Base article KB is the result of a support request.

It is not part of the official documentation of DEOS AG and does not claim to be complete.

The article is intended to support the solution of a similar problem.

If you have any questions, comments or additions, please contact DEOS AG Support.

Title

Latch and Momentary Output (TT200204)

Object

FUP

Reference version

2

Date

02.2020

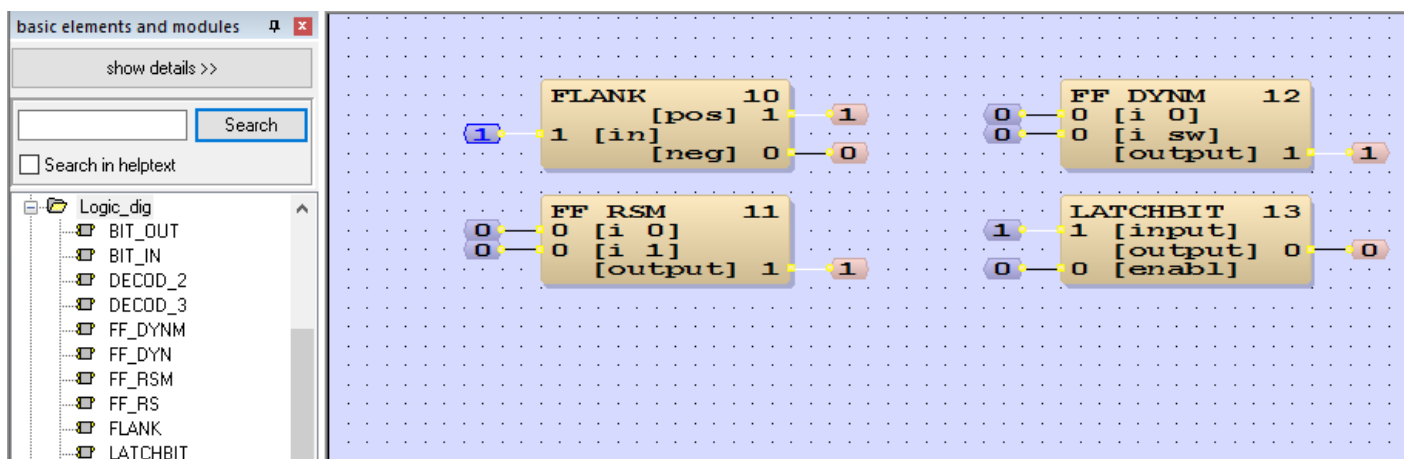
Author

EK

Goal

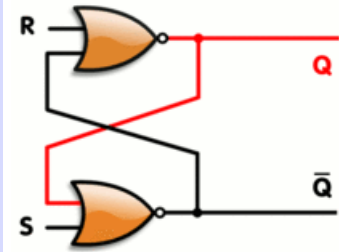
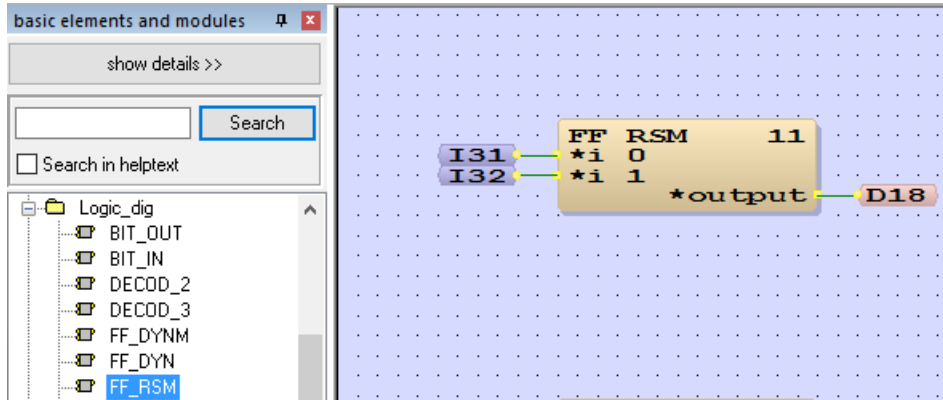
To explain the usage of the Latch and Momentary Output Function Blocks

Content:

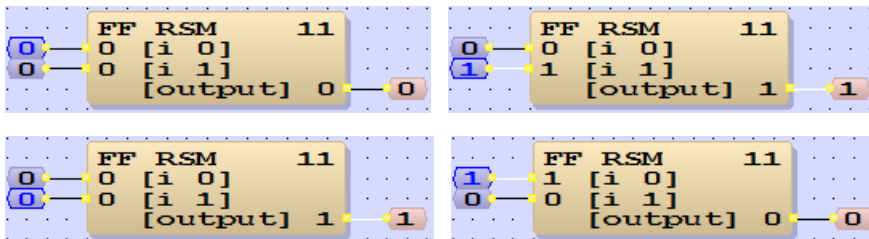


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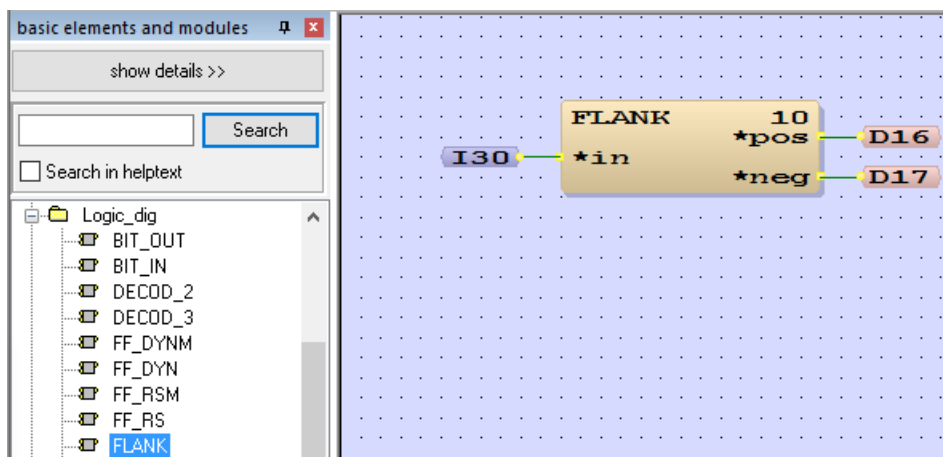
1. In this tip we will talk about some digital logic function blocks. The first one is “FF_RSM” under the “Logic_dig” section. This is the SR flip-flop, where S (i_1) and R (i_0) stand for set and reset. It can be constructed from a pair of cross-coupled NOR or NAND logic gates. The stored bit is present on the output marked Q (output)



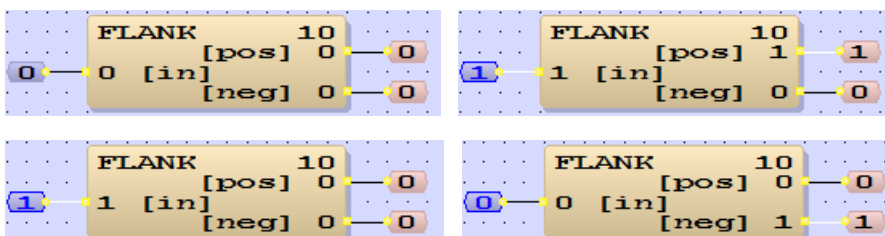
2. This module converts 2 pulse inputs (set and reset) to a latched output. When the set input (i_1) change from 0 to 1, the output is set to 1, and remain at 1 when i_1 return to 0. When the reset input (i_0) change from 0 to 1, the output is set to 0, and remain at 0 when i_0 return to 0.



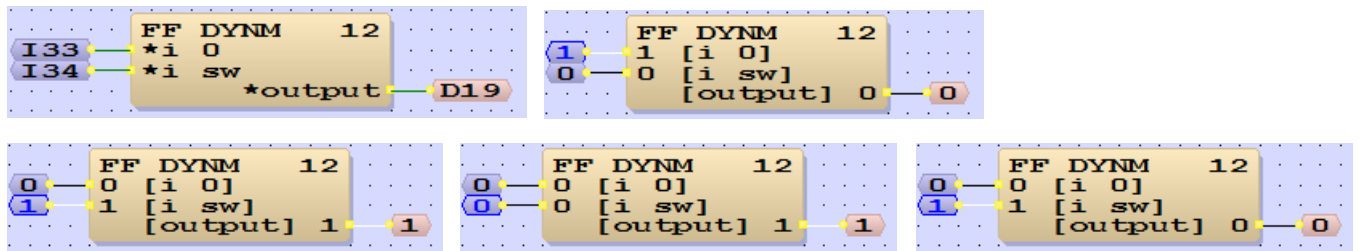
3. The second module is “FLANK”, which is the opposite of the flip-flop. This converts a latched input to 2 pulse outputs. This is mainly used to detect the change of a digital input point.



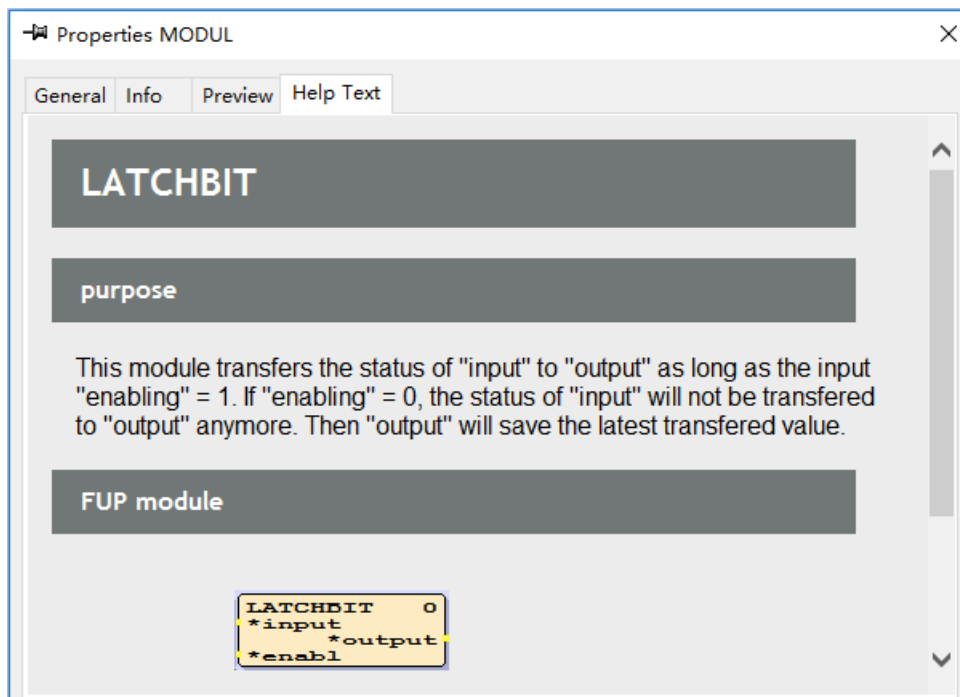
4. When input change from 0 to 1, a pulse will set at output “pos”. When input change from 1 to 0, a pulse will be set at output “neg”. When the input does not change, the output remains at 0



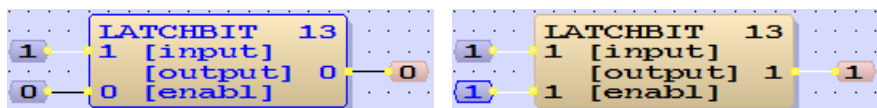
5. The third module is “FF_DYNM”, which change the output from 0 to 1, and from 1 to 0, when a pulse is detect at “i_sw”. The output is always 0 when the reset input “i_0” is 1



6. The last module is “LATCHBIT” which use a lot in our program.



7. This module will block the input to the output when “enable” is 0, and the output will keep at the last value. When “enabl” is 1, the input is transfer to the output



8. Other modules for integer, floating point and signed long integer are available for the point types

