

instruction
bulletin

July
04

**Presenting Zelio Logic Soft
for Beginners**

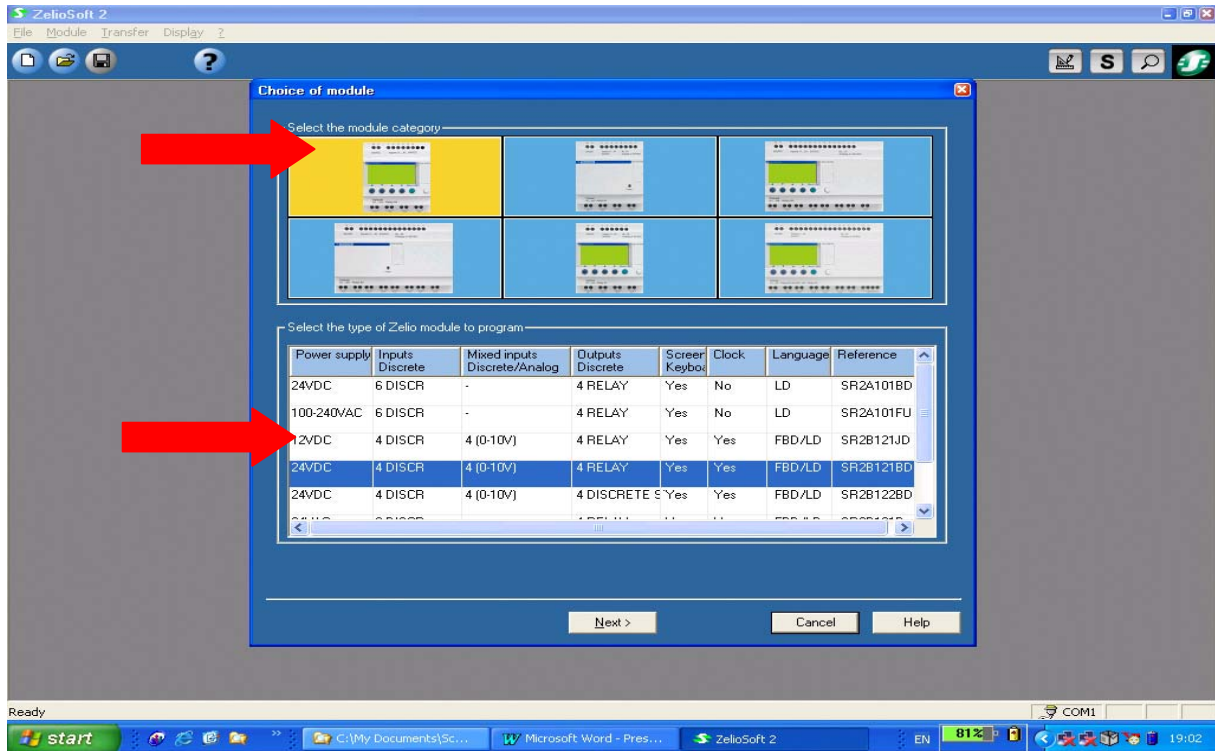
Here is a presentation which shows you the power and simplicity of Zelio Logic.

It's easy to use : Just follow this presentation step by step

We will first go through the LADDER program then move on to the even more powerful FBD program.

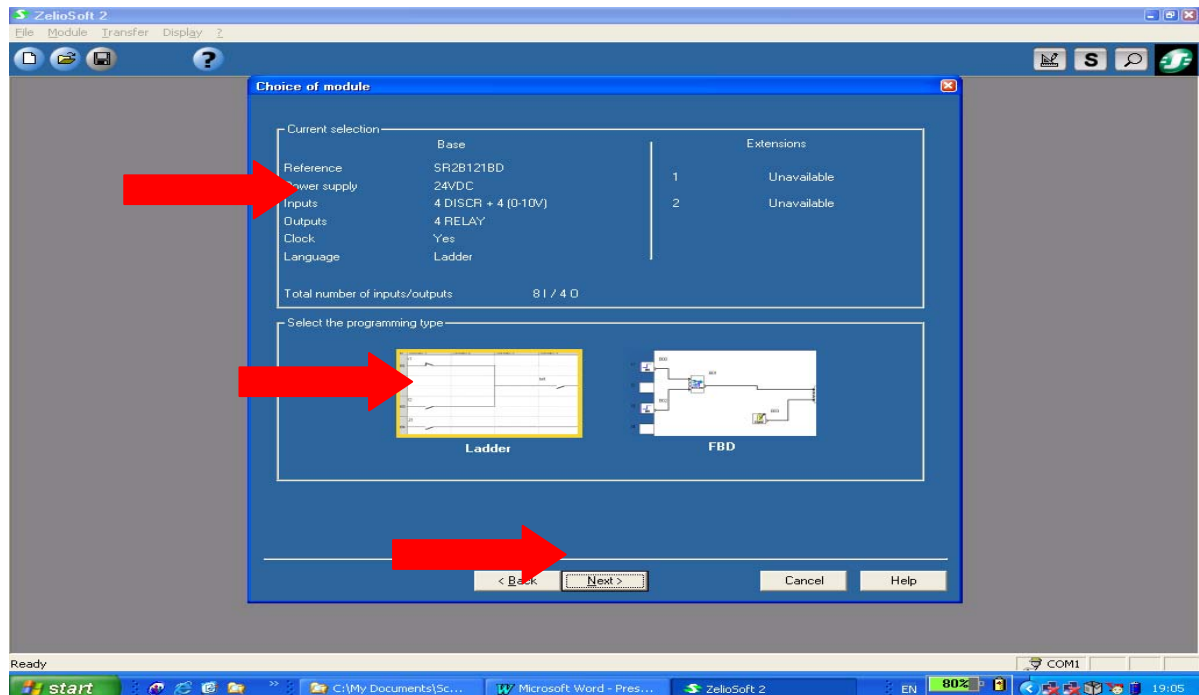
Let's go

1. Install the Zelio 2 Soft (you can find one in the Zelio Logic CD ROM).
2. Launch the Zelio Logic soft.
3. Click on [Create a new program]
4. Choose the first Zelio Logic, and then the 24VDC as shown below

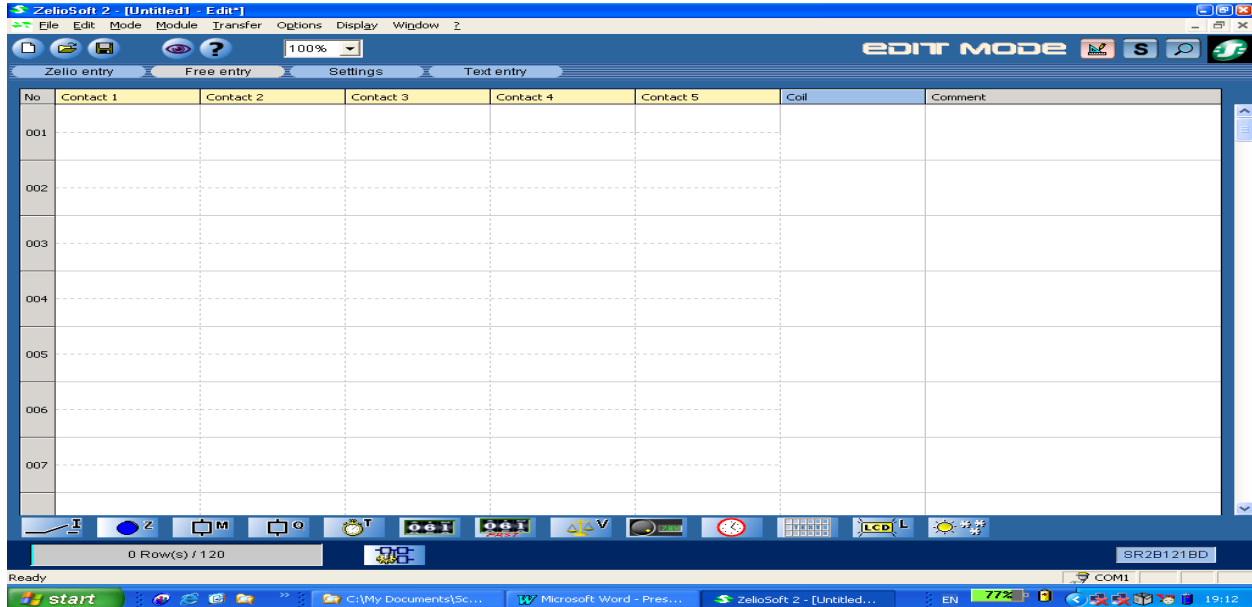


LADDER

5. The software offers a summary of your choices. Choose the LADDER program (If you use only FBD, you can go directly to the second part : FBD language)
Then click [Next]



6. Lets take a look at the most important points in LADDER. Hear is a brief description of each function you see on the screen.



7. With Zelio Logic 2 we have 120 programming lines (instead of 60 with zelio 1). Moreover, now we have 5 contacts (3 before) and one coil.

8. This menu represents the Inputs



9. This menu represents the buttons on the Zelio Logic Hardware. You can allocate them many

functions.



10. This menu represents the coils (up to 28, instead of 14):



11. Discrete outputs correspond to the Zelio module's output relay coils.



We can also choose the Latching functions (drag and drop a coil in the column COIL, in blue, and double-click on it). When you click this box, you ask the software to restore the state of the functions if the power is lost (turn off during activity, short-circuit...). Its that simple !

You can also go to HELP for each function by clicking [?]

12. The Timers.



(8 in the Zelio 1) 16 now.

The timers allow you to program the ON and the OFF.

Drag and Drop one Timer and double click on it. There are a number of possibilities offered. By clicking in the circles, a scheme appears. (Check out the functions like [d], [AC] and [L]).

Once again, there is the Latching, the HELP and the fact that you can block the function parameters with a password.

13. The Counters:



Allows to count pulses.

Here again note the Latching, the HELP and the fact that you can block the function parameters with a password.

14. The Fast Counters:



It allows to count pulses till a 1kHz frequency.

Once again, there is the Latching, the HELP and the fact that you can block the function parameters with a password.

15. The counters coparators:



This function is used to compare the current counting values of two counters.

Usefull for pump switcher.

Drag and Drop and double-click on it. Here you see the various possibilities and whats more the software writes itself the formula (negative values or positives values)

Once again, you have the Latching, the HELP and you can block the function parameters with a password.

16. The analog comparators:



Analog automation functions can be used for smart relays with a real time clock and DC current supply.

17. The clock

There were 4 in the Zelio 1, with Zelio 2 you get 8.

The Clock function is used to validate the time ranges during which actions can be executed.

It behaves like a weekly programmer and has 4 ranges (A, B, C, D) which are used to control its output

Double-click on it and check it out

18. It is possible to take into account the daylight saving without any hassles – Something you will love



Drag-drop, and double-click on [Date Format]. You can choose your zone.

19. Text block:



This function is really powerful. It can be used to display the following on the LCD screen. : text, date, time, or a numerical value of a function block (eg. Timer, counter, etc). The Date, Time and callibration parameters can be modified on the front panel of the module in the « PARAMETERING » Menu if the function is not locked.

Drag-drop it in the Coil column. Double-click. Click on DATE, in the screen. It appears
 RED = If Modification not-authorized and
 GREEN = If Modification authorized.

20. LCD backlighting :



21. Summer\Winter



Enables to show a message to confirm the change of the hour.

LETS MOVE ON TO FBD

THERE ARE SOME WONDERFUL POSSIBILITIES WITH FBD THAT YOU WILL NOT WANT TO MISS

FBD (Function Block Diagram)

1. Programming using function blocks. These function blocks are grouped by type in the function bar.
2. The inputs:
Drag and Drop 2 inputs on the left of the screen.
Double-click on it, and you can change the symbol.



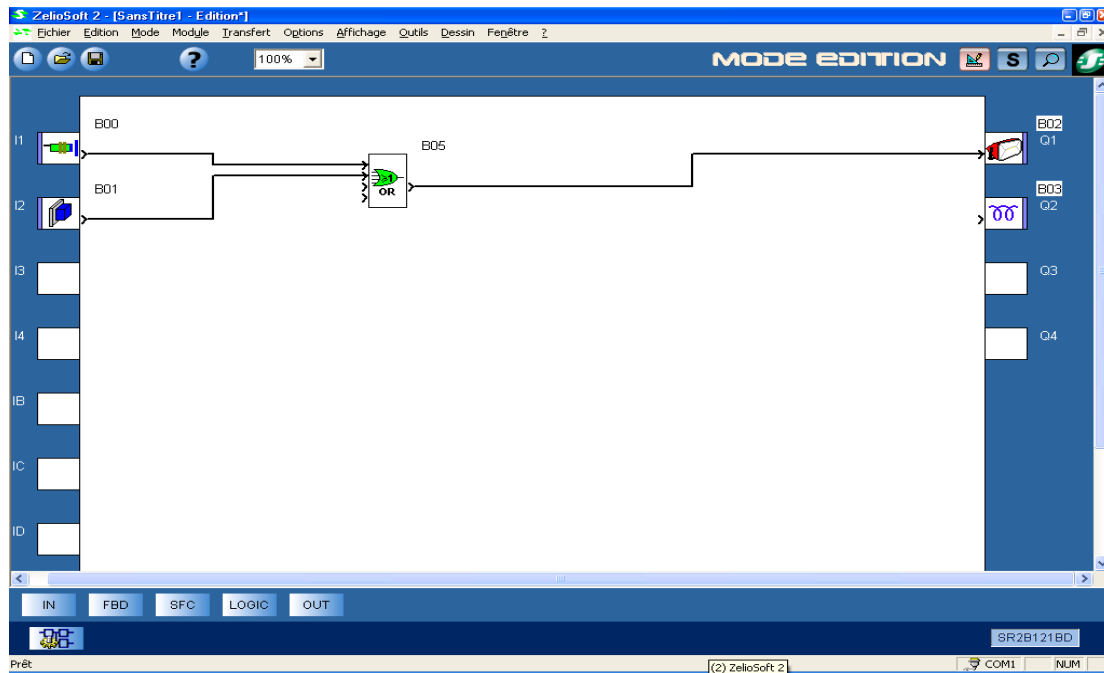
The same with two outputs (on the right).



Insert also a Logic function (menu LOGIC):



Here is the result:



Click on [S], then [RUN].

Click on the inputs to simulate.

3. Click on [STOP], then on :



Delete the

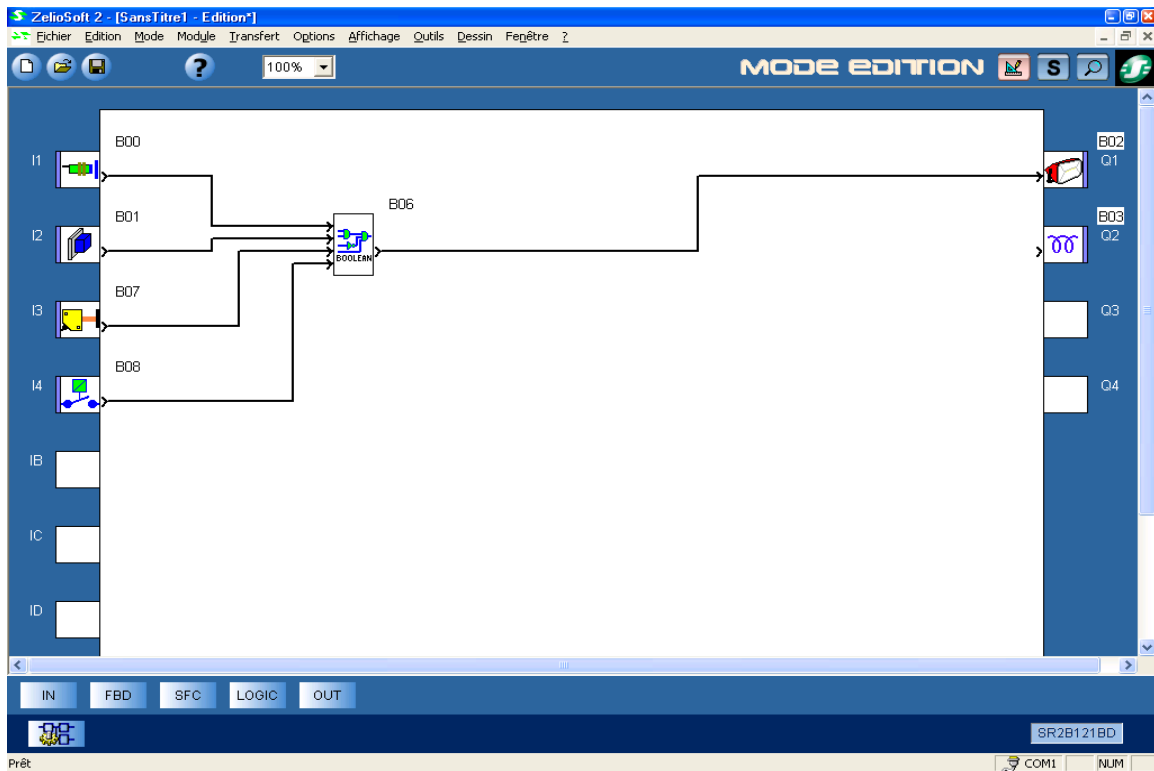


4. Now, we will see the Boolean function . You will simply love it.

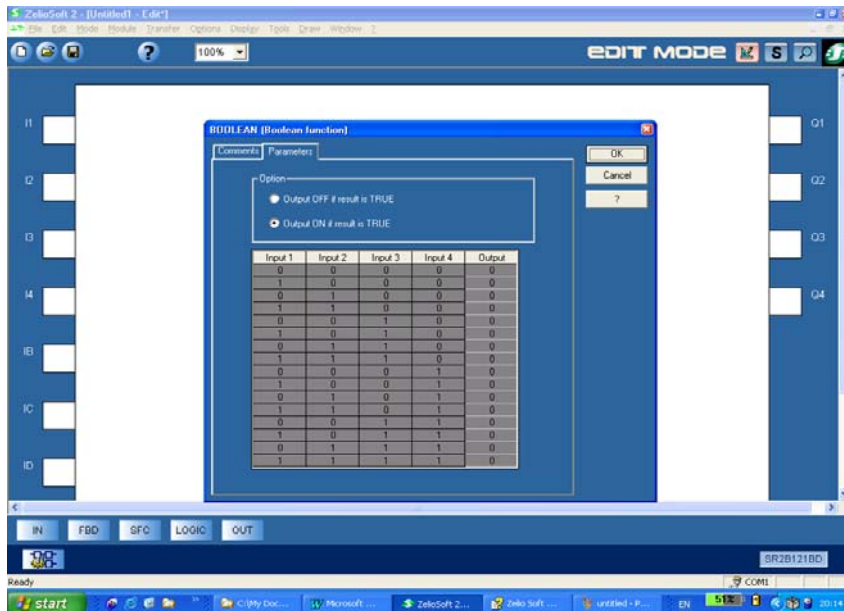
5. Add two inputs, then the Boolean function (menu FBD)



Here is the result :



6. Double-click on this function and it enables you to choose the On and the OFF according to the inputs.



In the column output, click to add 1 (ON) or 0 (OFF), then [OK]. This is really difficult to do in LADDER.

Click on [S], then [RUN]. Click on the Inputs to see the simulation .

7. Click on [STOP], then on :

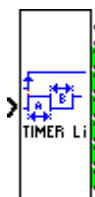
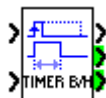


Delete the :

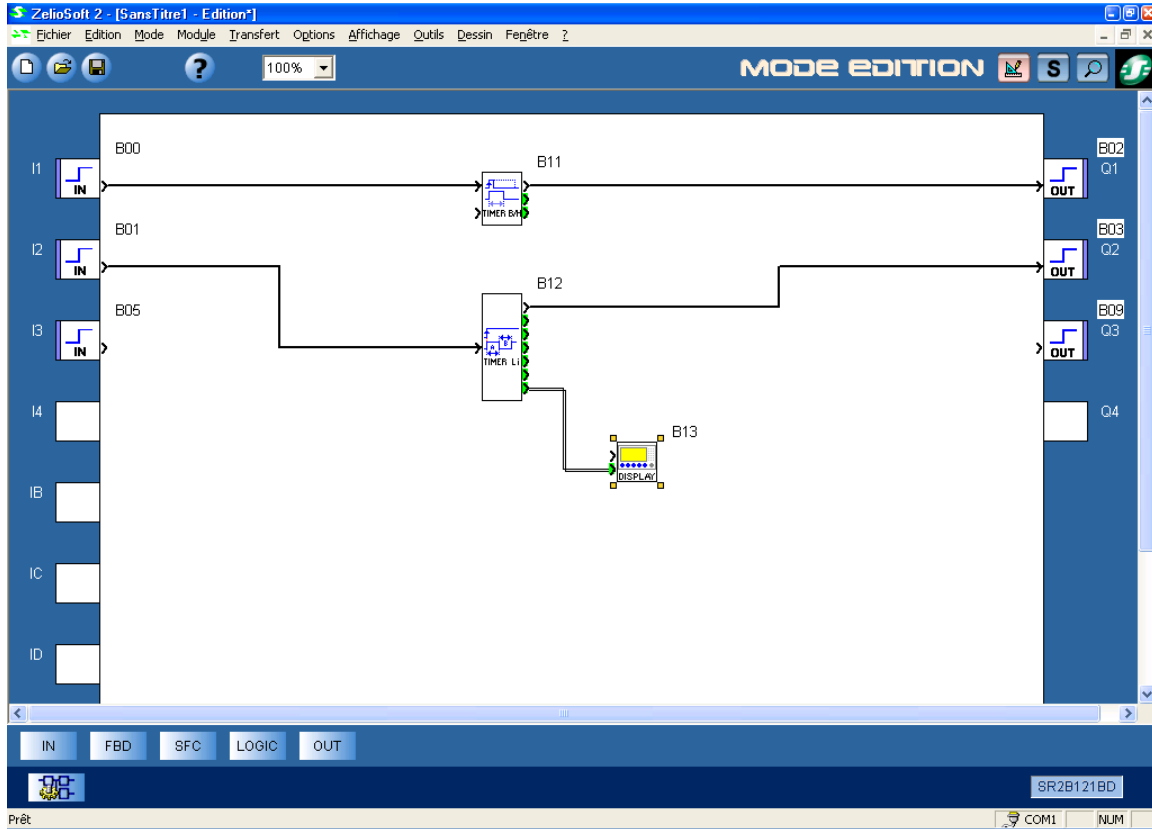


Now, Lets take a look at the Timers.

8. Let's take two examples.
In the menu [FBD], take the Timer B\H and the Timer Li :



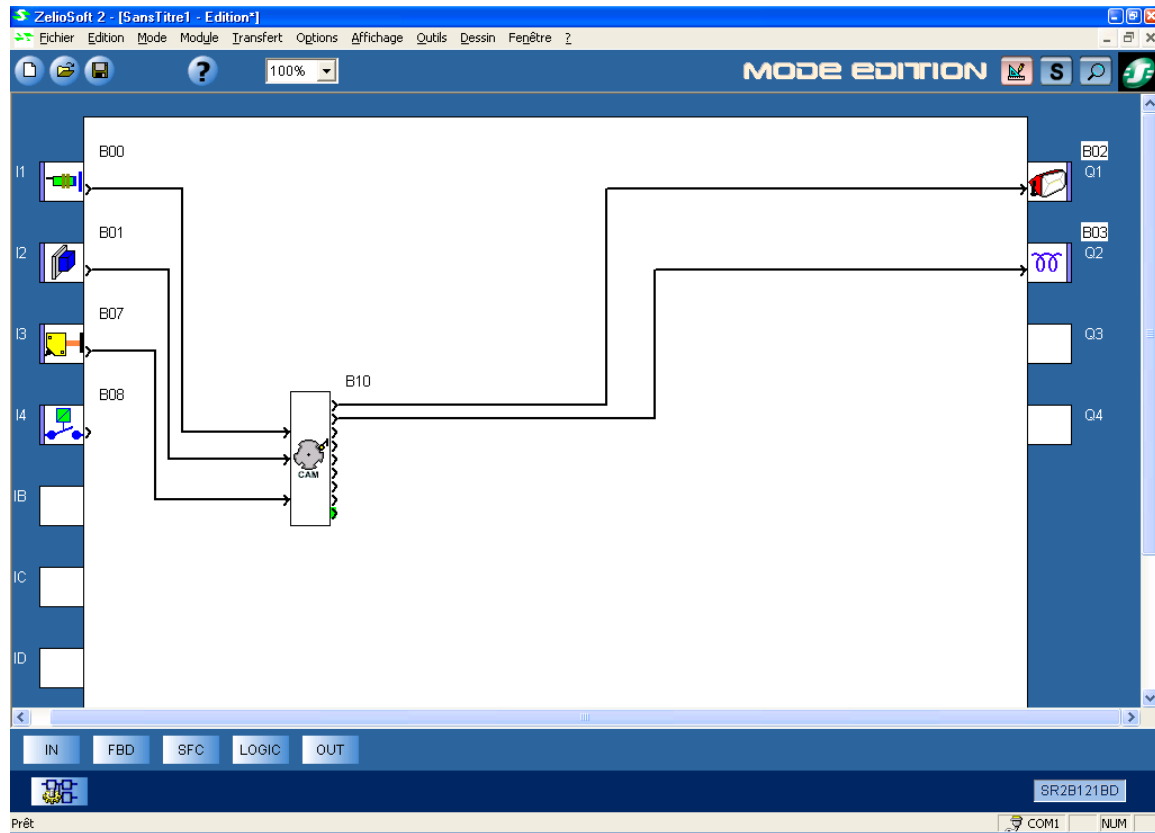
Drag and Drop, then double-click on it to see all the possibilities. We can also see the message on the LCD screen by inserting a Display item.
Here is the result :



Note the Latching, the HELP and the fact that you can block the function parameters with a password.

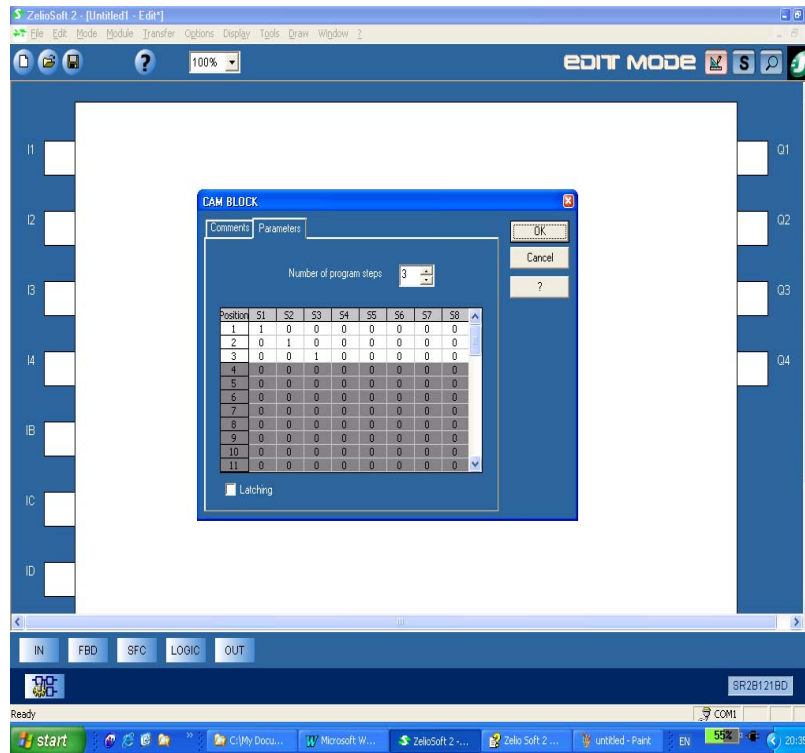
9. Delete the two Timers.

10. Now we are going to see the CAM Bloc function.



Create this Edit Mode window (you can find the CAM bloc function in the FBD menu).
Click on [S], then [RUN].
Double-click on the CAM block.

This window appears:



This function enables you to parameterize step by step many actions.
In this example, the programming is as following:

1. If you click on the input I 1, the output S1 will be ON.
2. Then, if you click again on I1, the output S2 will be ON and the S1 turns OFF.
3. Then, if you click again on I1, the output S2 will turn OFF, and S3 turn ON.
4. Then, if you click again on I1, we go back to the first position.
5. Then, if you click on I2, we will go back to the previous position- Position 3 (with only S3 ON).
6. If you click on I3, the cam is replaced to its initial position: the POSITION output is forced to 1.

50 positions are possible.

Once gain, note the Latching, the HELP and the fact that you can block the function parameters with a password.

7. Let's take a look at the Time Programming

In the menu [FBD], choose the Timer called [Time Prog] :



Double-click on it, then click [NEW].

You can see all the different possibilities.

As in every other function, you can also add some Comments .

8. Let's move onto the SFC function :

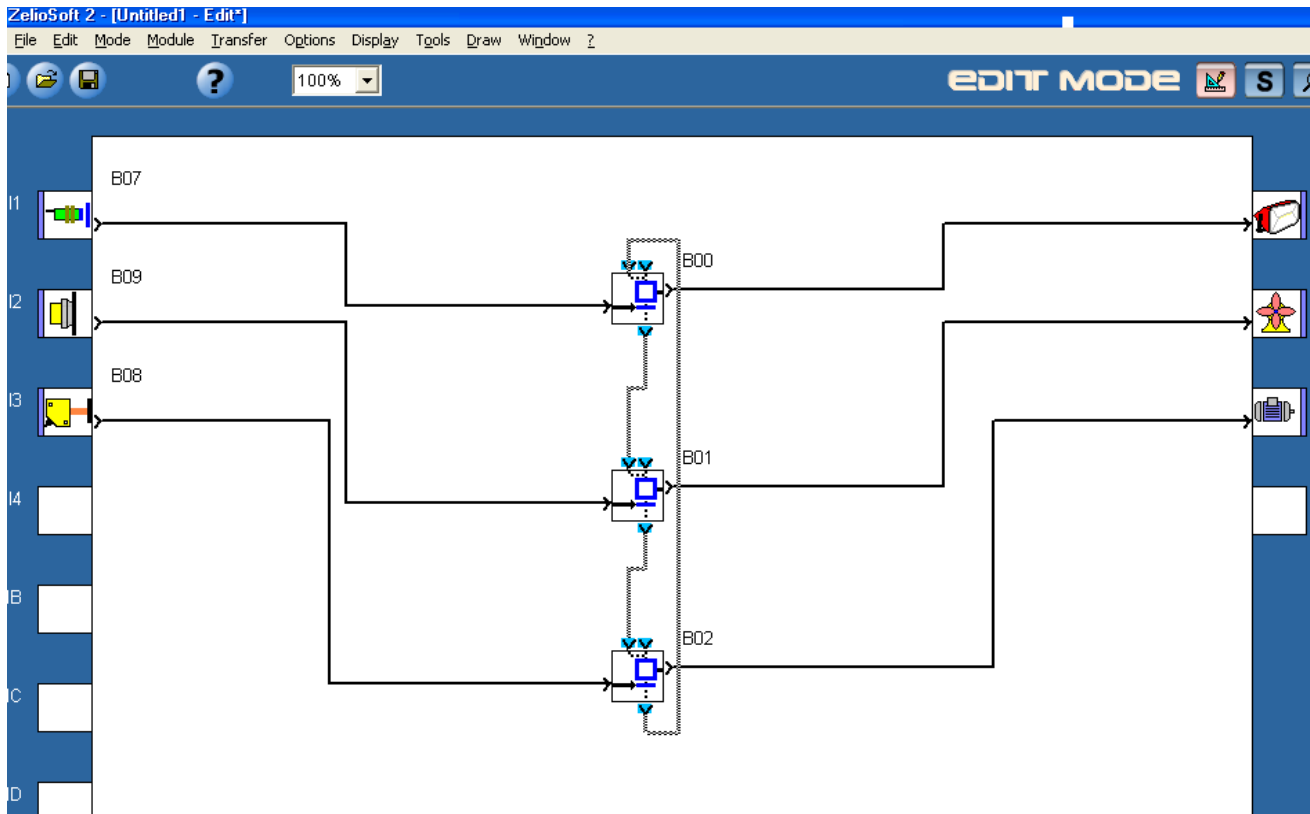
These functions enable you to configure so that nothing changes until we active the next input.
Example:

Take in the [SFC] menu, one function [Init Step} and two functions [STEP].

Click on [S], then [RUN].

If you click on I1, you go to the next step. Then, you can keep on clicking on I1, nothing will change. You need to click on I2 to go to the next step.

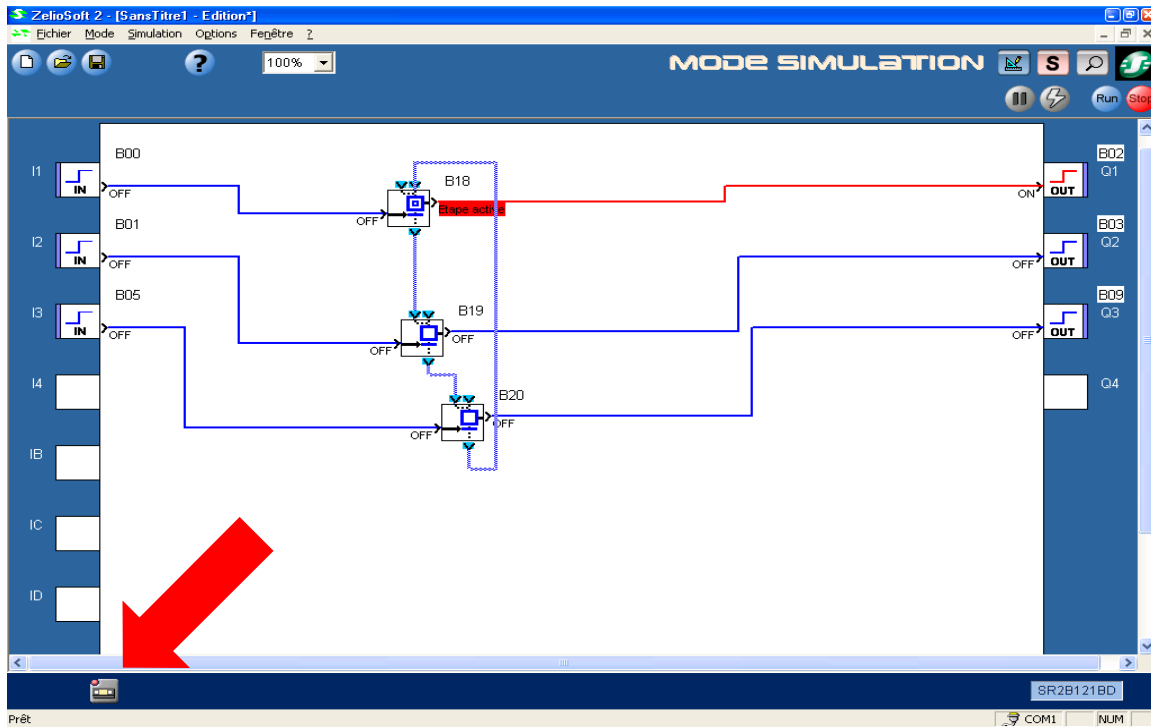
This is really usefull in a factory production line.



9. As in LADDER it is possible to take into account the daylight saving.

10. Frequently Asked Questions :

- Is possible to accelerate the simulation ?
YES. It's the small icone you can see below on the left of the screen.



- Is possible to simulate in Simulation Mode, a power failure ?



YES, Using this

- Is it possible to transfer directly the program on Zelio Logic 1, to Zelio Logic 2 ?
YES.
- There is no analog input in the 120\240 VAC, because it is expensive to do that, and the same is true for any other smart relay. You can find this possibilities only on NANO PLC's, as TWIDO.
- You can go up to 200 FBD blocks (even more if you use softer function as [AND]).
- You can program directly on the hardware only in LADDER, because it's really difficult to do that in FBD. But of course, you can parameterize on the Zelio 2 both in LADDER and FBD.
- To set a password, use the Hardware screen.
- You will find 90% of your needs in the Zelio Logic Library in the software.
- The above is only 30 % of the Zelio logic software skills, and that you will find many other interesting functions.
- Zelio 2 is a 100% Schneider-Electric product. It is produced in Normandie, France (both Soft and Hardware).
- Every single Zelio 2 is tested before commercialisation.

As you already might be thinking a lot issues you have can be quickly resolved with the new Zelio Logic .

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