

3.3 EXAMPLE IN FBD

3.3.1 Program Editing

If you performed the previous example in Ladder language (3.2), select **New** in the **File** menu to start a program in FBD.

We are going to use the following example:

I1—————**Q1**

Input **I1** is connected to discrete output (TOR) **Q1** (Relay).

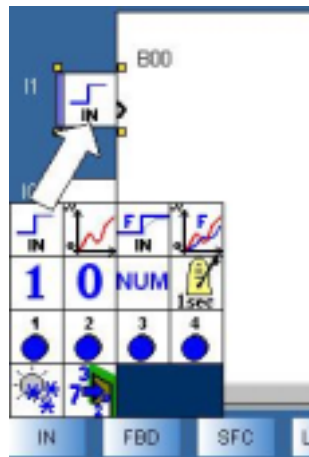
To reproduce this example in the wiring sheet:

- Move the mouse arrow over the **IN**  icon in the lower left corner:



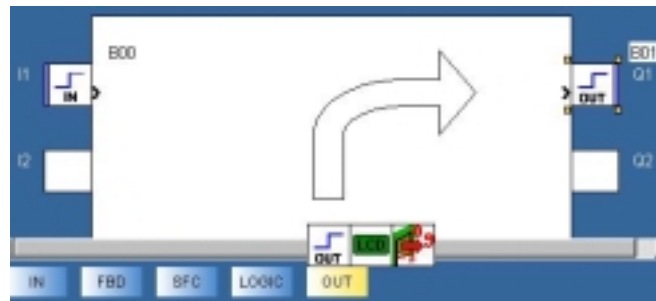
A chart with the different input-type possibilities appears.

Select the **discreet entry** icon in the chart by clicking and dragging the icon to cell **I1** in the upper left corner of the wiring sheet.

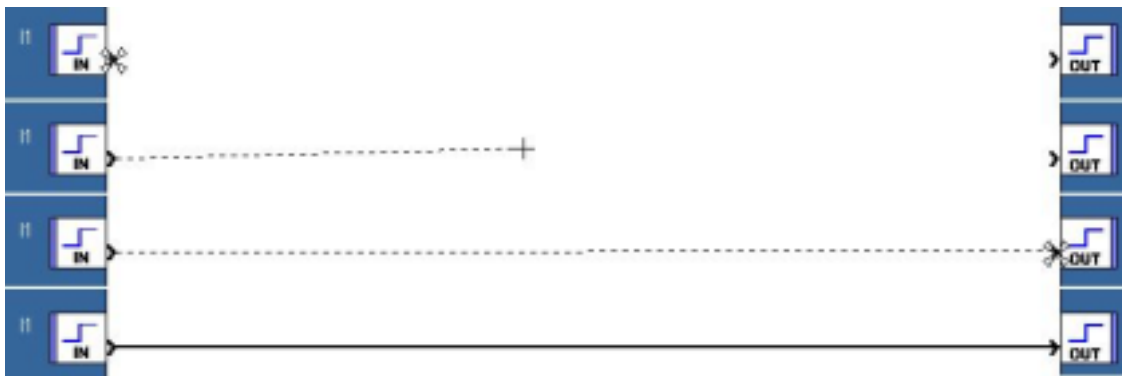


- Now move the mouse arrow over the **OUT**  icon at the bottom of the screen. A chart with the different output-type possibilities appears.

Select the **TOR (discreet output)** icon by clicking and dragging the icon to the **Q1** cell in the upper right corner of the wiring sheet. Release the mouse button: output **Q1** is now in place.



Connect the wiring from **I1** to **Q1**: Point to output > for **I1** : the arrow changes to a cross. Now click and drag the icon over to input > for **Q1**, until the arrow again changes to a cross, then release the button:



3.3.2 Program simulation

Click on the simulation icon in the upper right to simulate the program chosen:



The chosen program is now compiled and the simulation screen appears. Next click on the **RUN** icon to simulate the module start-up:



A blue input or output indicates **OFF (0)**, red indicates **ON (1)**.

Click left to force input.

Click once on the **I1** input for Output **Q1 ON**. Click a second time on **I1**, to return **Q1** to **OFF**.



3.3.3 Program transfer

Power on the module and connect it to the computer before transferring the program:

Click on the corresponding icon to return to **Edit mode**:



- In the **Transfer** menu, select **Transfer Program** then click on **PC>MODULE**.

*Note 1: You cannot write in the module when it is running. Click on **STOP Module** in the **Transfer** menu to stop the module.*

*Note 2: If the module connected to the computer is not the module selected when starting the program, you may select another module by clicking on **Module/programming option** in the **Module** menu.*

Note 3: When you have loaded a program in Ladder language in the preceding module (or when you first use it), the program should update the module firmware. You will be offered the option to update during transfer.

After confirmation, the program is transferred to the module.

You can then test the program that is in the module by starting it up (in the application: Click on **RUN Module** in the **Transfer** menu).

As in the simulation, if the Zelio Logic **I1** input is **ON**, **Q1** will be **ON**, and if **I1** is **OFF**, so is **Q1**.

3.3.4 Monitoring Mode

When the module is connected to the PC, it is possible to run it in real-time with the program.

Note: Monitoring mode is only possible when the program contained in the module is identical to that in the application.

Click on the corresponding icon to select Monitoring mode:



Then start the module by clicking on **RUN**. Just as in simulation, you may activate the inputs by clicking on them, they are then activated in real time on the module.

The forcing of input may be made by a left click of the mouse. For example, if you click on **I1**, the **Q1** output will be **ON** on the screen (red color) and on the module.

3.3.5 Moving around the module

You may move around the different module menus by using the ▲ and ▼ buttons. The selected function flashes. To enter the function, click on **Menu/Ok**. Click on ◀ to return to the previous menu. The **Shift** key (white key) will show additional functions.

For example, to change the module language: from the main menu, go to **LANGUAGE** using the ▲ and ▼ (the selected word will blink). Press **Menu/OK** to confirm. Select a language by using the ▲ and ▼ keys then confirm by clicking on **Menu/Ok**, you may then go back to the main menu which is translated into the language you have chosen.