Siemens S7-1200

CPU 1212C AC/DC/Relay

Program Control Operations

- **JUMP & LABEL**
- **JUMP LIST**
- **SWITCH: Jump Distributor**
- **Exercise Example**

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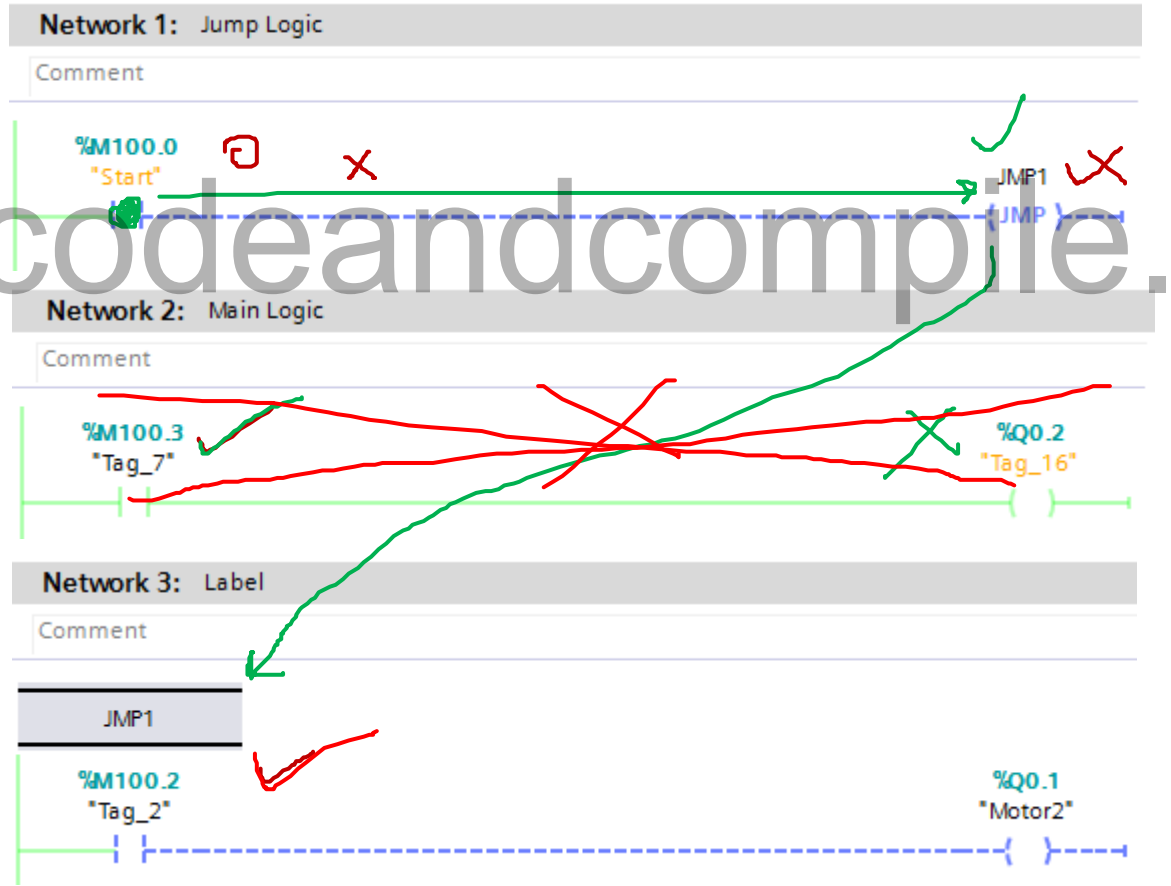
Understanding Move Operations – JUMP & LABEL

JUMP and LABEL Operation

You can use the "**Jump if RLO = 1**" instruction **to interrupt the linear execution of the program** and **resume it in another network**.

The destination network must be identified by a jump label (LABEL).



How it works?

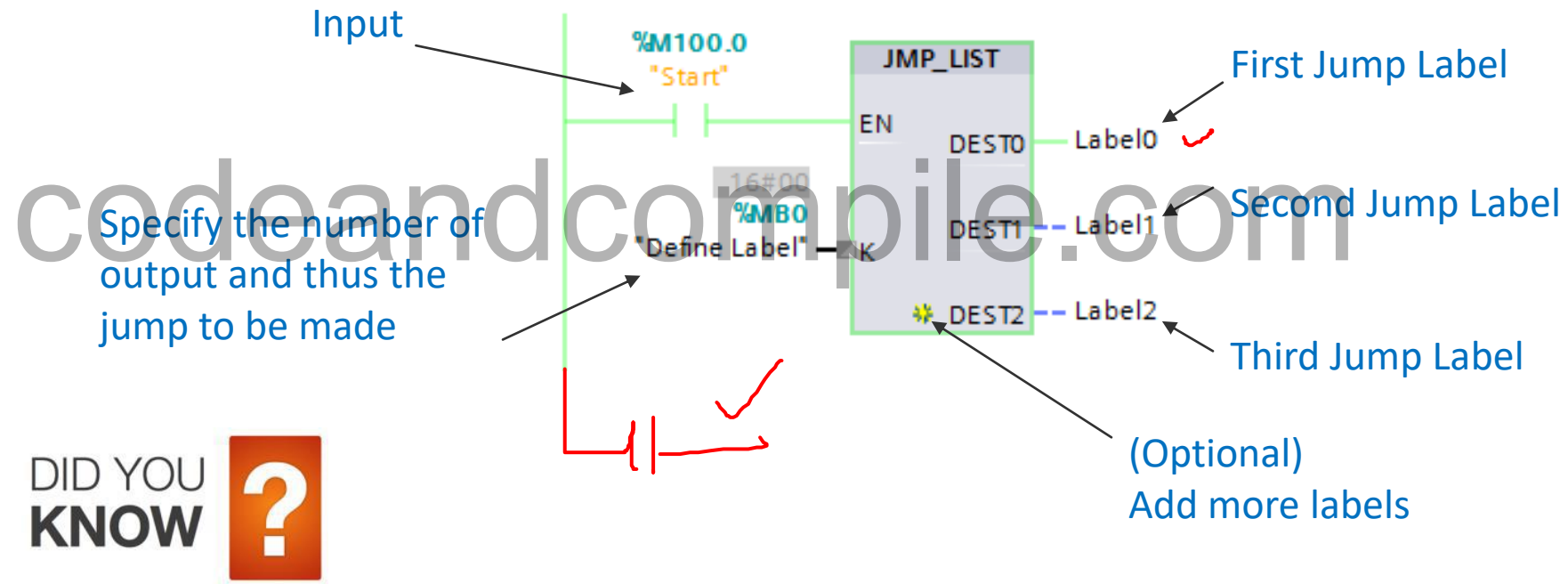
If the result of logic operation **(RLO) at the input of the instruction is "1"**, the jump to the network identified by the specified **jump label is executed**.

If the condition at the **input of the instruction is not fulfilled (RLO = 0),** execution of the **program continues in the next network.**

Understanding Move Operations – **JUMP_LIST**

Jump List operation

You can use the "**Define jump list**" instruction to define several conditional jumps and continue the program execution in a specific network depending on the value of the K parameter.

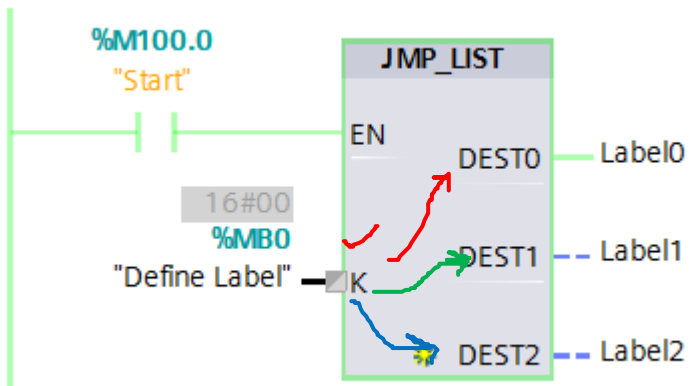


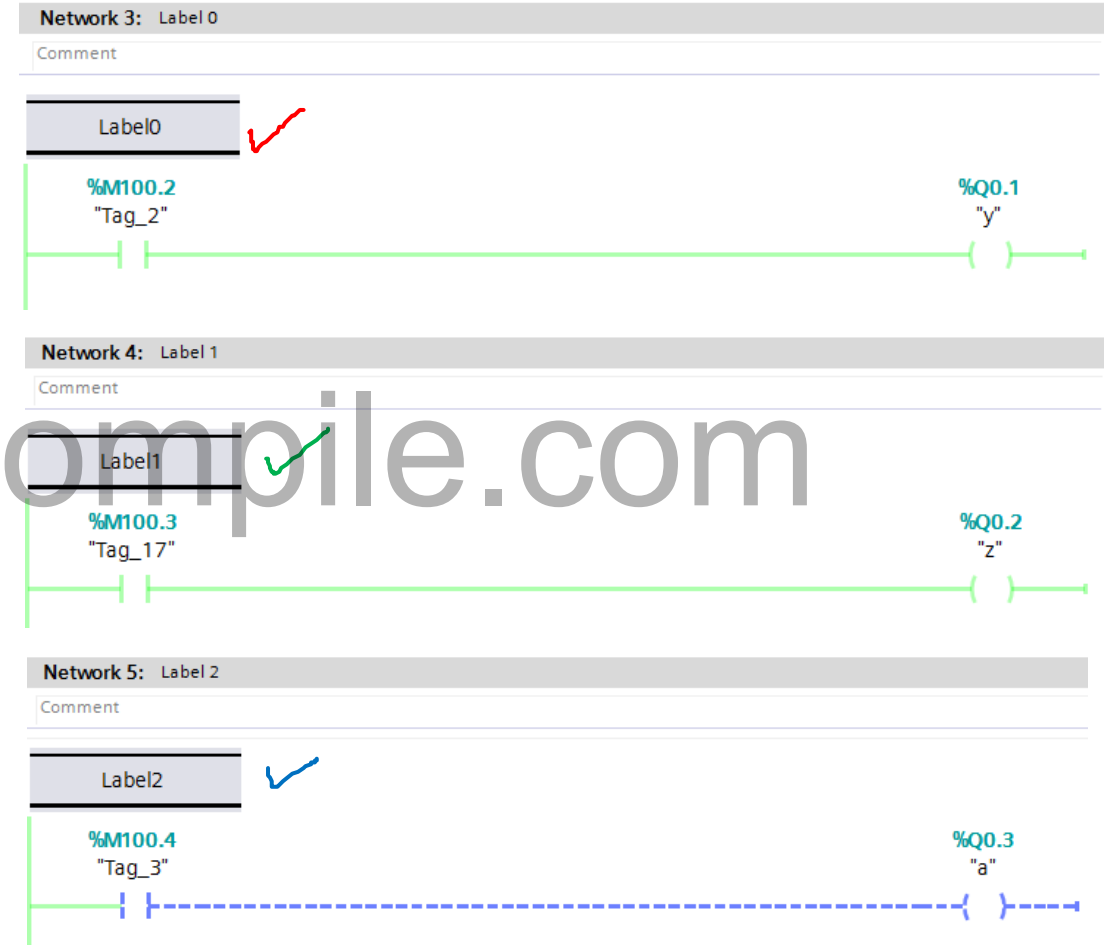
DID YOU KNOW ?

- You can declare up to **32 outputs** when you use a CPU S7-1200
- The **numbering of the outputs begins with the value "0"** and continues in ascending order with each new output
- **If the value in the K parameter is greater than the number of available outputs,** the program execution is resumed in the next network of the block.

Understanding Move Operations – JUMP_LIST

Example





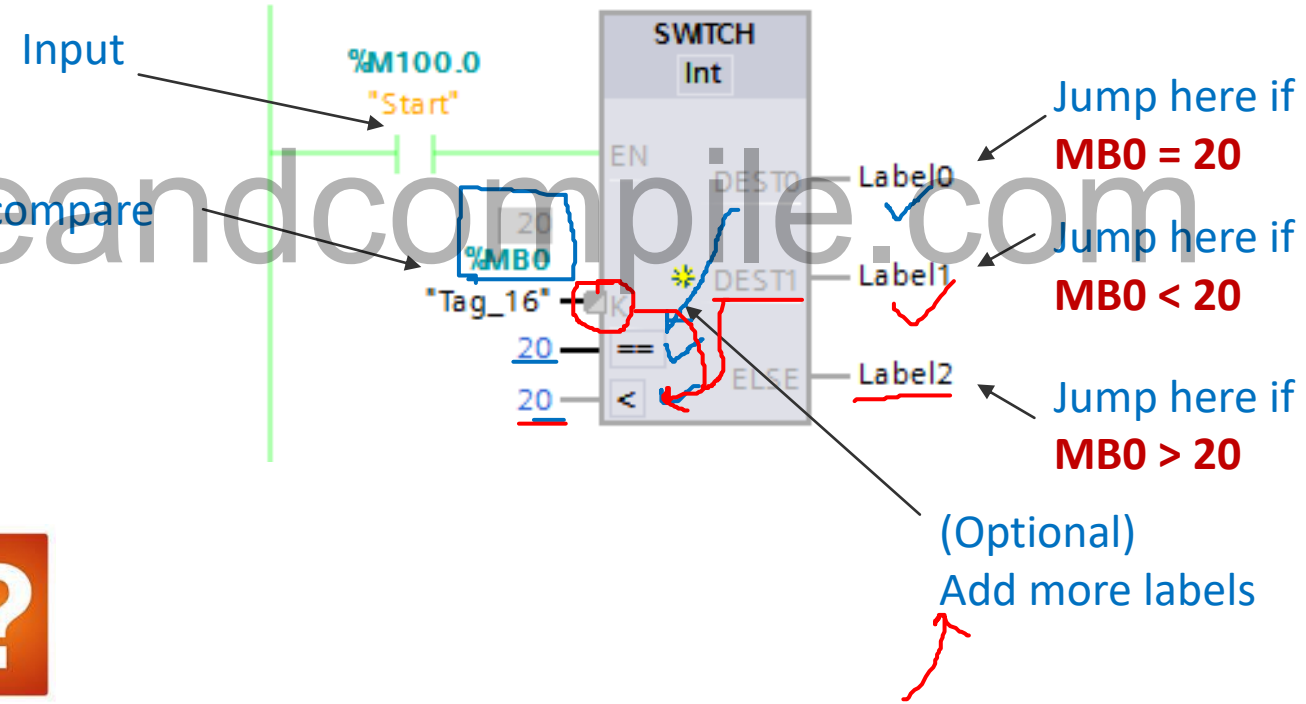
How Jump works here:

- Program Jump to Label0 **when K = 0**
- Program Jump to Label1 **when K = 1**
- Program Jump to Label2 **when K = 2**

Understanding Jump Operations – **SWITCH**

SWITCH: Jump Distributer

You can use the "**Jump distributor**" instruction to define multiple program jumps to be executed depending on the result of one or more comparison instructions.

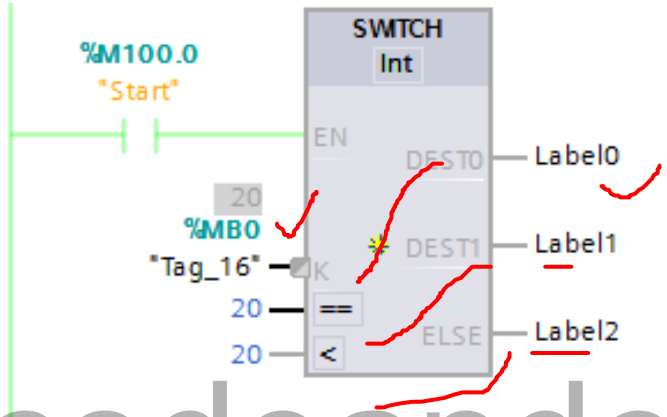


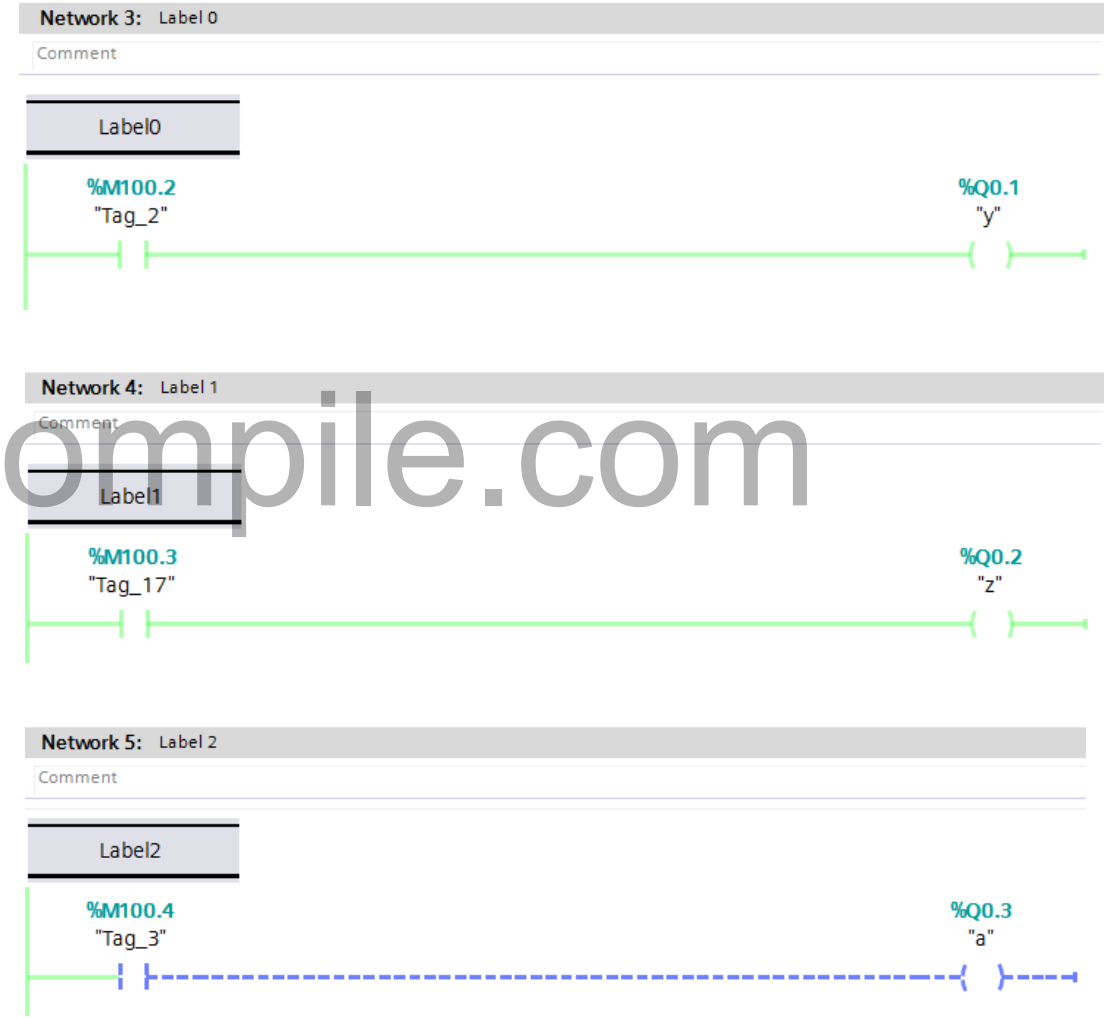
DID YOU KNOW ?

- The **number of outputs can be expanded in the instruction box**. The numbering of the outputs begins with the value "0" and continues in ascending order with each new output.
- **Optional jump labels(n = 2 to 99)**

Understanding Move Operations – JUMP_LIST

Example





How Jump works here:

- Program Jump to Label0 **when MB0 = 20**
- Program Jump to Label1 **when MB0 < 20**
- Program Jump to Label2 **when MB0 > 20**

What did we learn today?

There are 3 types of jumps operation in S7-1200:

- **Jump** : Used to jump when RLO is “1”
- **Jump List**: In which multiple jumps are defined and jump execution depends on value of ‘K”
- **Switch: Jump Distributor**: In which jump execution is based on comparison of two or more inputs

Thank you

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