KLS'S GOGTE INSTITUTE OF TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

CREINTORS AUTOMATION SOLUTIONS PVT.LTD.

PRESENTS

HONOR'S PROGRAM IN PLC PROGRAMMING

Syllabus of Course

1. Basics of PLC

2. PLC Programming

3. SCADA Programming

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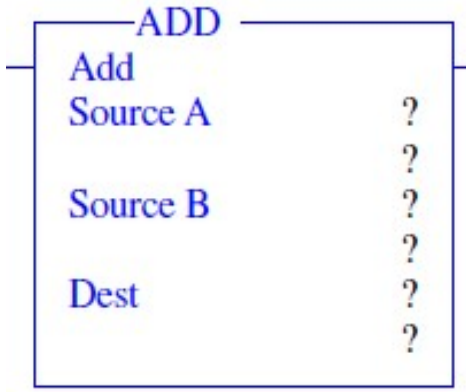
FUNCTION BLOCKS

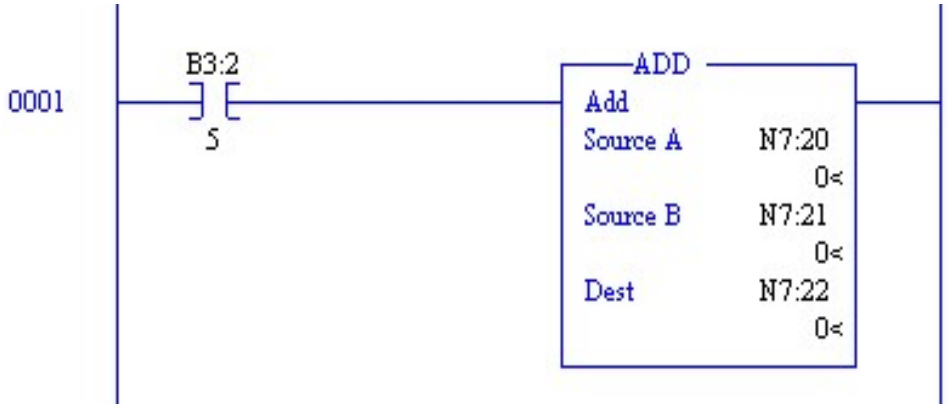
The address used in the function blocks are Integer %N7:0 to %N7: 999 in Source A / Source B / Destination. The value also can be put in Source A and B. The destination should be a address.

Addition Function



The ADD instruction is used to add a numerical value in source A to another numerical value in source B. The result is then placed into a destination register.

Examples



The ADD Block above adds the contents of N7:20 to the contents of N7:21 and saves the result in location N7:22. This occurs only when B3:2/5 is true.

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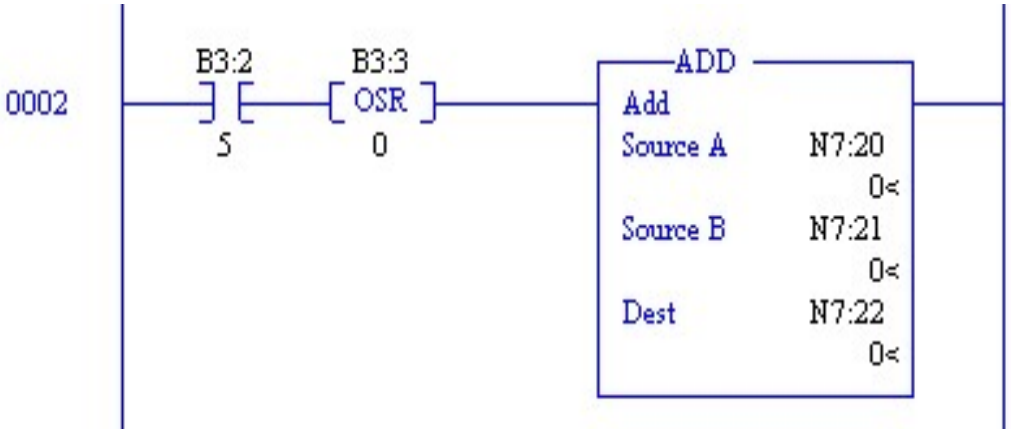
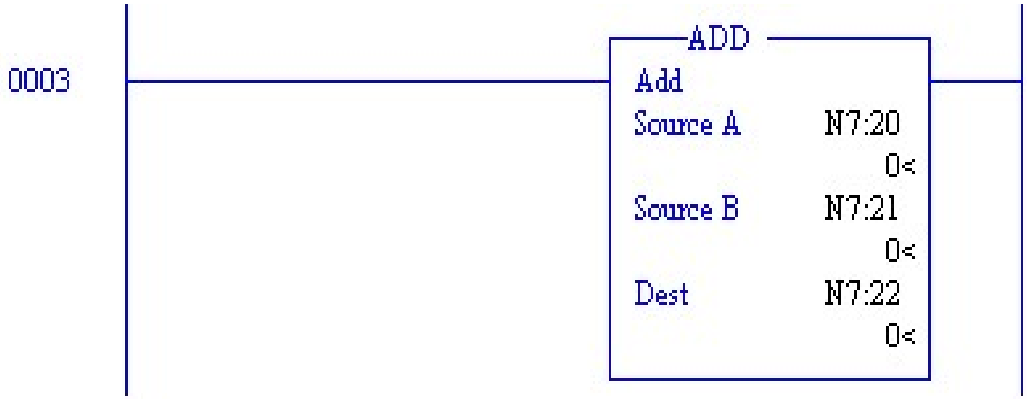
Using one-shot logic with the ADD Block:



The ADD Block above adds the contents of N7:20 to the contents of N7:21 and saves the results in N7:22 only on the leading edge of B3:2/5. The use of the one-shot allows only a single occurrence of the calculation and is a very efficient way to execute math operations.

Use of the Continuous Execution Math Block:



In this example, however, execution of the ADD Block occurs continuously (once each scan).

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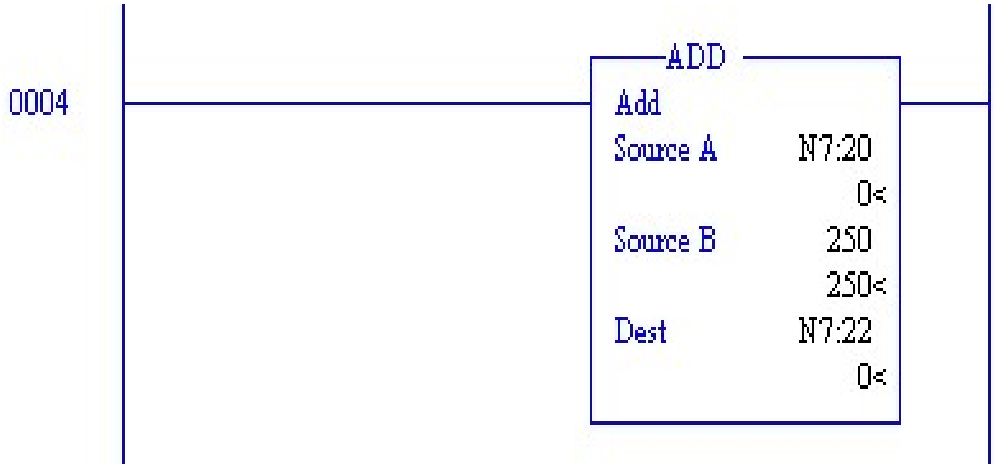
Use of Constants in Math Blocks:



In this example, the ADD Block adds a variable (N7:20) to a constant (250) and places the results in a variable location (N7:21).

The decision must be made when programming how to treat constants. If the number in Source B above is never changed, then entering 250 into Source B is the preferred approach. If the number is to be changed at a later date, however, use the addressing approach and store the number 250 in N7:21.

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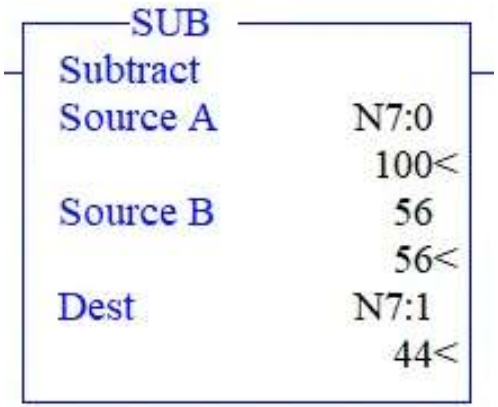
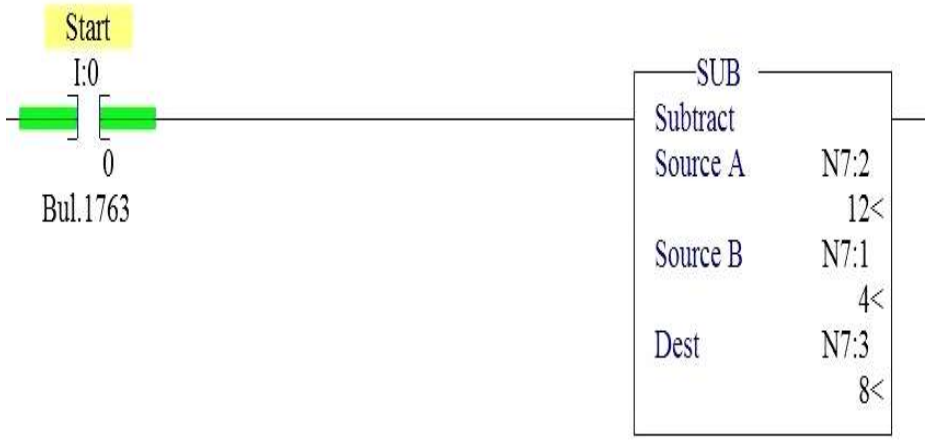
Subtraction Function



The SUB instruction is used to subtract a numerical value from source B to another numerical value in source A. The result is then placed into a destination register.



In this example, the SUB Block subtracts a variable (N7:2) to a variable (N7:1) and places the results in a variable location (N7:3).

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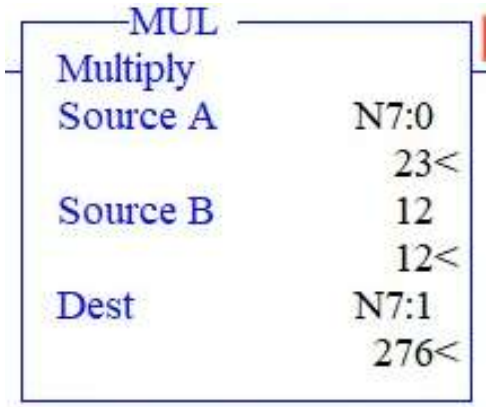
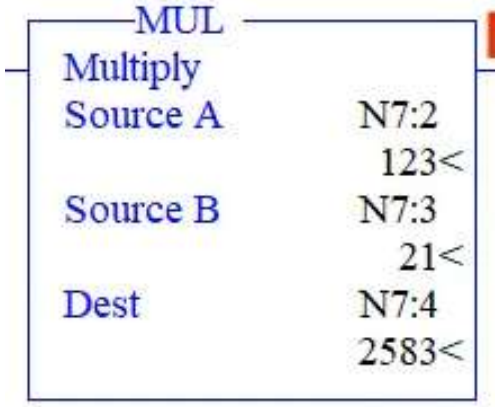
Multiplication Function



In this example, the MUL Block multiplies a variable (N7:0) to a constant (12) and places the results in a variable location (N7:1).



The MUL instruction is used to multiply a numerical value from source A with another numerical value in source B. The result is then placed into a destination register.

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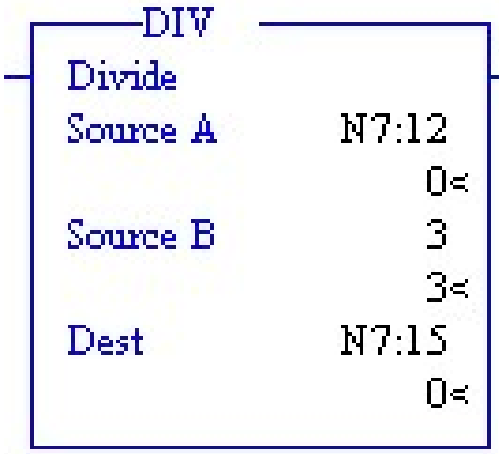
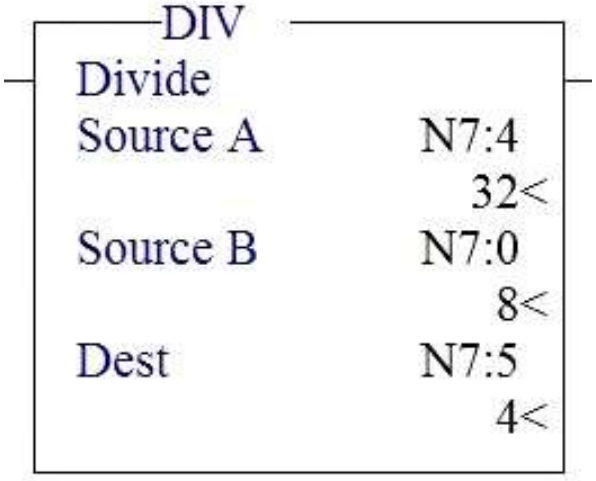
Division Function



In this example, the DIV Block divides a variable (N7:12) to a constant (3) and places the results in a variable location (N7:15).



The MUL instruction is used to multiply a numerical value from source A with another numerical value in source B. The result is then placed into a destination register.

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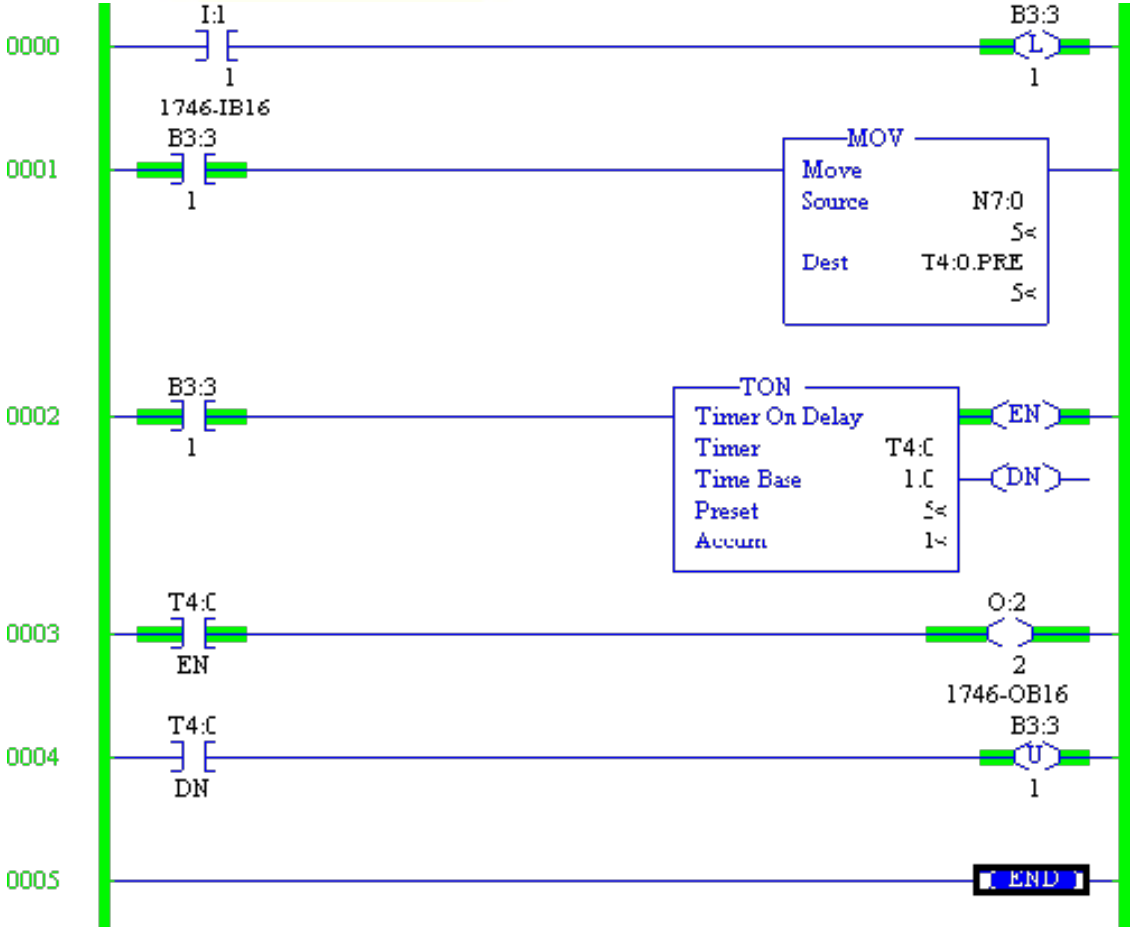
Move Function

The MOV instruction moves a Source value to a Destination location.



This example shows that when a button is pushed, the binary bit B3:3/1 is latched. This bit then activates the MOV command to move the value of five into the preset of the timer T4:0. This timer keeps the output O:2/2 on for five seconds. When the timer is done, the bit B3:3/1 is then unlatched.


THANK YOU