



Add Stop Watch function for
calculating cycle time

OUTLINE

➤ Purpose

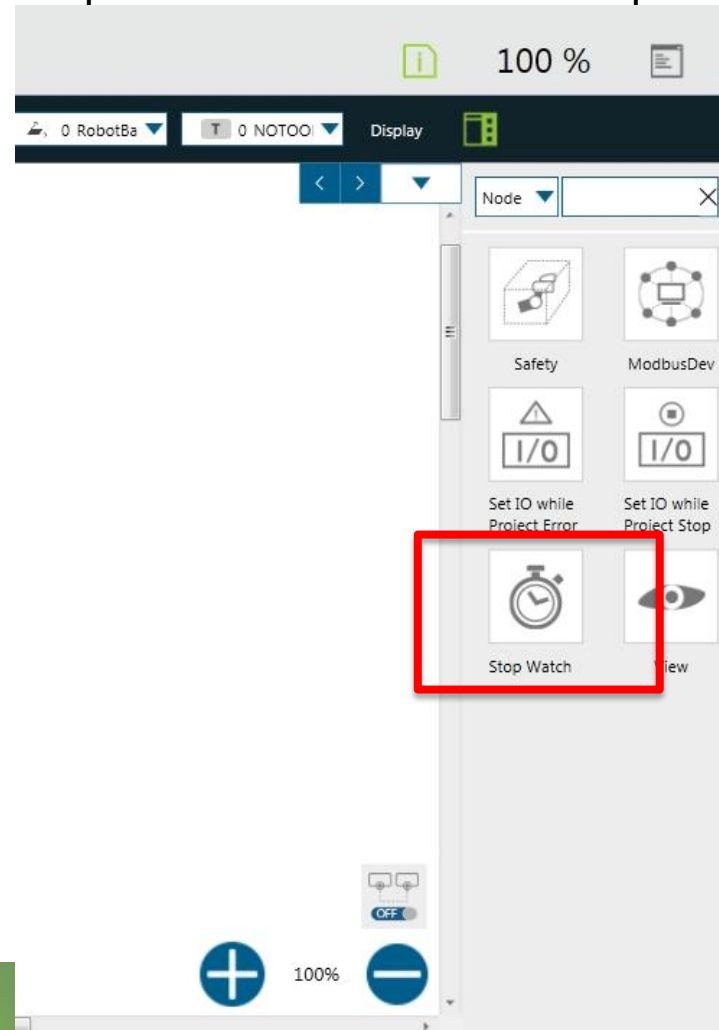
Using Stop Watch to calculate period time that user required.

➤ Equipment

TM5

➤ Function operation

Stop watch



Function operation



Stop Watch

The screenshot displays a PLC programming software interface. At the top, a toolbar includes icons for file operations and a 'Display' button, which is highlighted with a red box and a yellow circle labeled '1'. Below the toolbar, a menu bar contains options like 'Step Run', 'Point Manager', 'Base Manager', 'Controller', 'Variables', 'Select', and 'EditBlock'. The main workspace shows a ladder logic diagram for a program named 'Marc'. The diagram starts with a 'Start' button leading to a parallel circuit with two paths: one through point P1 and another through an 'If' block. The 'If' block has a 'Yes' path leading to point P3 and a 'No' path leading to point P2. A 'Stop Watch' component is highlighted with a red box and a yellow circle labeled '2' in the component palette on the right. The palette also shows other components like 'Safety', 'ModbusDev', and 'View'. The bottom right corner features zoom controls (+, 100%, -) and a power button (OFF).

Function operation



Stop Watch

100 %

Display

Stop Watch

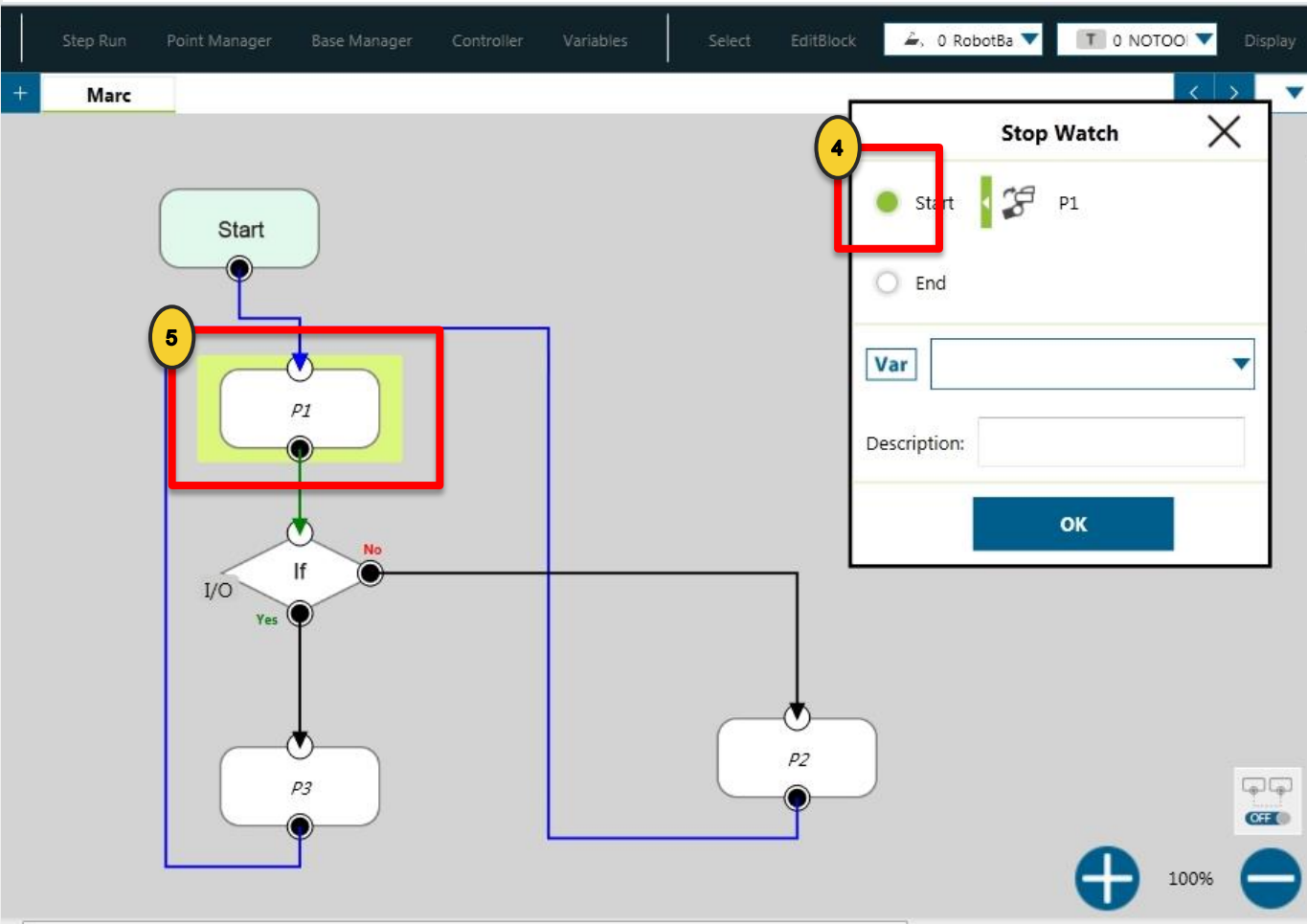
3

New...

OFF

100%

ROBOT



Function operation

- Create a **double** variable to receive the value of period time

The screenshot displays a PLC programming environment with a ladder logic diagram and three configuration dialog boxes. The diagram shows a sequence of steps: Start, P1, an If condition (I/O), P2, and P3. The 'No' branch of the If condition leads to P2, which is highlighted with a red box and a yellow circle labeled '7'. The 'Yes' branch leads to P3. Three dialog boxes are overlaid on the diagram:

- Stop Watch** (top center): A dialog box with a close button (X). It has two radio buttons: 'Start' (unselected) and 'End' (selected). The 'End' option is highlighted with a red box and a yellow circle labeled '6'. Below the radio buttons are two robot icons labeled 'P1' and 'P2'. There is a 'Var' dropdown menu and a 'Description' field. An 'OK' button is at the bottom.
- Stop Watch** (top right): A smaller dialog box with a 'New...' button. A yellow circle labeled '8' is next to it.
- Create Variable** (bottom right): A dialog box with a back arrow. The 'Type' dropdown is set to 'double' and is highlighted with a red box and a yellow circle labeled '9'. The 'Name' field contains 'StopWatch' and the 'Value' field contains 'd'. An 'OK' button is at the bottom.

A red box at the bottom center contains the text: "Build a double variable to receive the value of period time".

Function operation

➤ Select the receiving variable

The screenshot displays a PLC programming software interface. The main workspace shows a ladder logic diagram with a 'Start' button, a sequence of steps P1, P2, and P3, and an 'If' decision block. A yellow circle with the number '10' highlights the 'Stop Watch' dialog box. The dialog box has a title bar 'Stop Watch' and a close button. It contains two radio buttons: 'Start' (selected) and 'End'. Below these is a 'Var' dropdown menu with 'var_StopWatch' selected and highlighted in green. An 'OK' button is at the bottom. The background diagram shows a sequence starting at 'Start', going to P1, then to an 'If' block. The 'If' block has a 'Yes' path leading to P3 and a 'No' path leading to P2. P2 is highlighted with a yellow box. The software interface includes a top menu bar with 'Step Run', 'Point Manager', 'Base Manager', 'Controller', and 'Variables'. A right sidebar shows a 'Stop Watch' panel with a 'New...' button. The bottom right corner has zoom controls (+, 100%, -) and a power button (OFF).

Function operation

- Select the variable to display

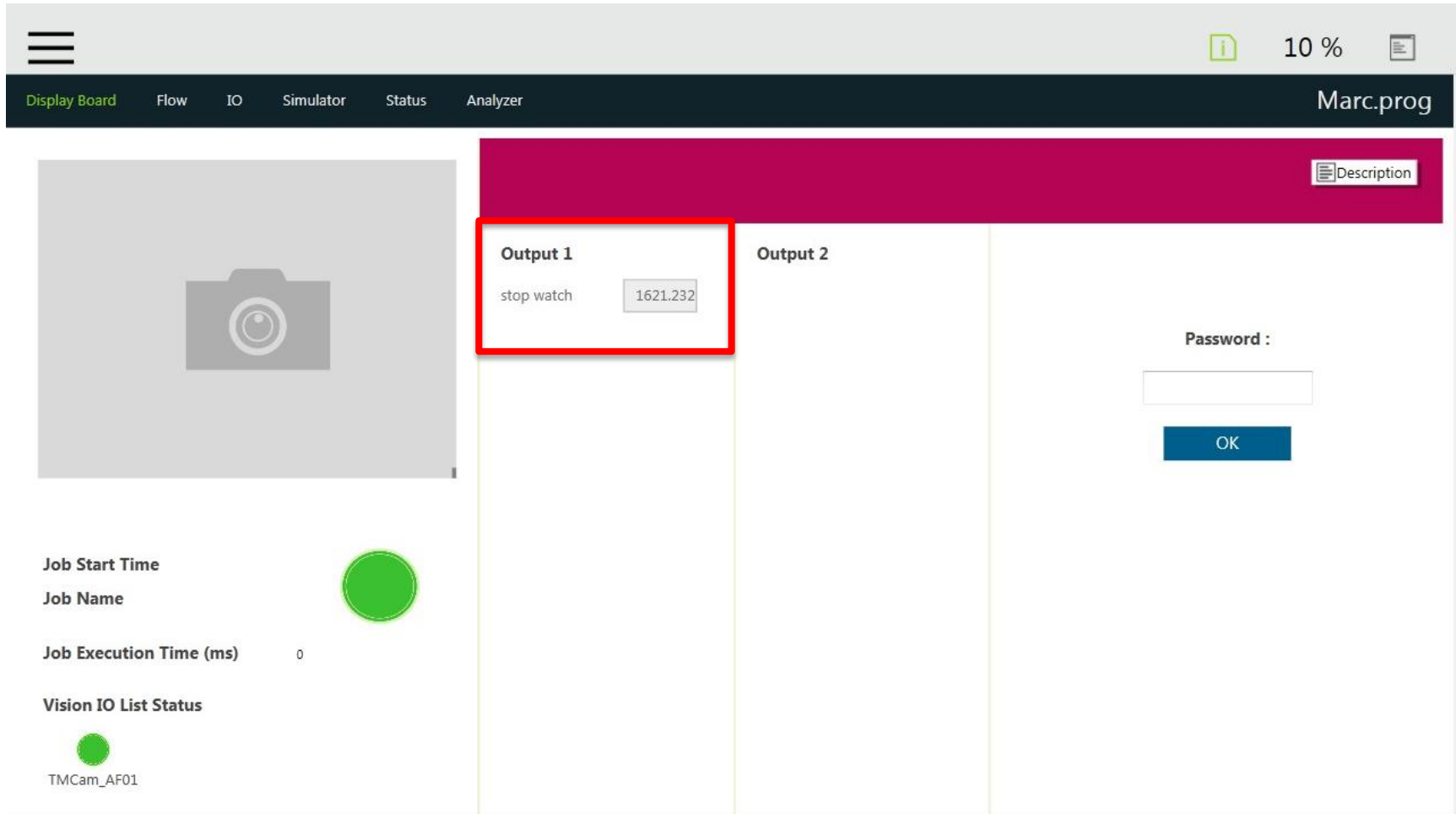
The screenshot shows the 'Stop Watch' function configuration window. The window is titled 'Display Manager' and has a close button (X) in the top right corner. It features three buttons: 'Output1' (highlighted in green), 'Output2', and 'Input'. Below these buttons is a 'Flash Time' field set to '300 ms'. A table with 7 rows is shown, with the first row highlighted in red. The table has columns for 'Slot', 'Title', and 'Variable'. The first row contains '1', 'stop watcl', and 'var_StopWatch' with a right-pointing arrow. A yellow circle with the number '12' is positioned over the first row. In the background, a 'Display' button is highlighted with a red box and a yellow circle with the number '11'. The background also shows a ladder logic diagram with a 'Start' button, an 'I/O' block, and an 'If' block. The bottom of the window has an 'OK' button.

Slot	Title	Variable
1	stop watcl	var_StopWatch >
2		>
3		>
4		>
5		>
6		>
7		>

Play Result



➤ 10% speed



10 %

Display Board Flow IO Simulator Status Analyzer Marc.prog

Description

Output 1
stop watch 1621.232

Output 2

Password :

OK

Job Start Time
Job Name
Job Execution Time (ms) 0
Vision IO List Status
TMCam_AF01

Play Result



➤ 35% speed, higher speed, less duration time.

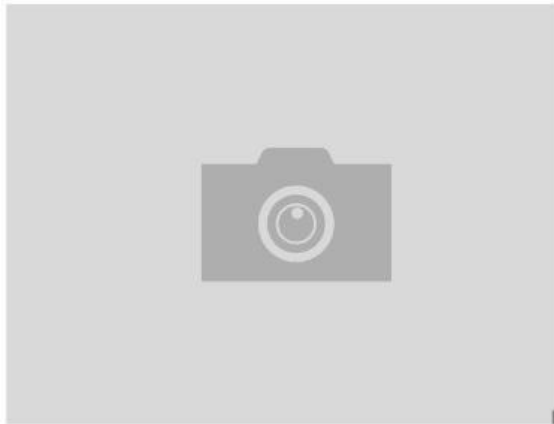


35 %



Display Board Flow IO Simulator Status Analyzer

Marc.prog



Description

Output 1

stop watch 463.765

Output 2

Password :

OK

Job Start Time

Job Name



Job Execution Time (ms) 0

Vision IO List Status



TMCam_AF01

END