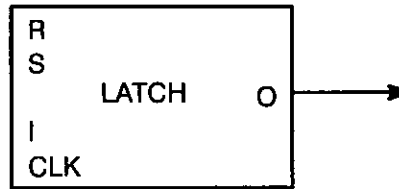


# 15.0 LATCH

This function can be used in AutoMax Control Block tasks and UDC Control Block tasks.



## Function

If RESET is TRUE set OUTPUT FALSE

else

if RESET is FALSE and SET is TRUE  
set OUTPUT TRUE

else if

RESET and SET are FALSE and CLOCK is TRUE  
set OUTPUT to the state of INPUT

else

OUTPUT state is unchanged.

## Program Statement

```
CALL LATCH (RESET=reset@, SET=set@,           &  
            CLOCK=clock@, INPUT=input@,       &  
            OUTPUT=output@)
```

## Inputs

R (RESET) =

Reset input, type BOOLEAN. This is an optional parameter. The default is FALSE. When RESET is TRUE the OUTPUT will be set FALSE.

S (SET) =

Set input, type BOOLEAN. This is an optional parameter. The default is FALSE. When RESET is FALSE and SET is TRUE the OUTPUT will be set TRUE.

CLK (CLOCK) =

Clock input, type BOOLEAN. This is an optional parameter. The default is FALSE. When RESET and SET are FALSE and CLOCK is TRUE, set OUTPUT equal to the state of INPUT.

I (INPUT) =

Data input, type BOOLEAN. This is an optional parameter. The default is FALSE. Determines the state of OUTPUT if RESET and SET are FALSE and CLOCK is TRUE.

## Outputs

O (OUTPUT) =

Data output, type BOOLEAN. This parameter must be specified. The state of OUTPUT is determined by the state of the inputs RESET, SET, CLOCK, and INPUT. See the functional description above.

## Notes

1. The order in which the input parameters (RESET, SET, CLOCK, and INPUT) are programmed is unimportant. However, a minimum of two of the four input parameters must be programmed. If this requirement is not met, a compilation error will occur.