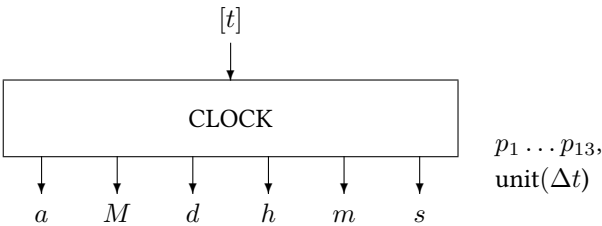


Block CLOCK

The CLOCK block generates date and time of the actual simulation time step with constant increment.



Name	CLOCK
Function	fb0024
Inputs	0 ... [1]
Outputs	6
Parameters	13
Strings	1
Group	T

Inputs

- 1
- Output t of a predecessor (optional). Should the block defining the t signal be executed again after CLOCK has finished its operation, the CLOCK block performs a reset and starts again.

Outputs

- 1
- Year a
- 2
- Month M
- 3
- Day d
- 4
- Hour h
- 5
- Minute m
- 6
- Second s

Parameters

- 1
- Start on year a_1
- 2
- Start on month M_1
- 3
- Start on day d_1
- 4
- Start on hour h_1
- 5
- Start on minute m_1

```

6   Start on second  $s_1$ 
7   Stop on year  $a_2$ 
8   Stop on month  $M_2$ 
9   Stop on day  $d_2$ 
10  Stop on hour  $h_2$ 
11  Stop on minute  $m_2$ 
12  Stop on second  $s_2$ 
13  Increment  $\Delta t$ 

```

Strings

```

1   Unit of the increment  $\Delta t$ , case sensitive, ie 'm'  $\neq$  'M', for example
    'a'   Years
    'M'   Months
    'd'   Days
    'h'   Hours
    'm'   Minutes
    's'   Seconds

```

clock.vseit



The **CLOCK** block runs through two hours with a time step of 20 minutes. It starts on the February 28 at 23 o'clock and ends on February 29 at 1 o'clock. The result (year a , month M , day d , hour h , minute m and second s) is shown by a **SCREEN** block.

2012.	2.	28.	23.	0.	0.
2012.	2.	28.	23.	20.	0.
2012.	2.	28.	23.	40.	0.
2012.	2.	29.	0.	0.	0.
2012.	2.	29.	0.	20.	0.
2012.	2.	29.	0.	40.	0.

Remarks

(1) Please note how the **CLOCK** block handles the time variables. The time, which is an output of the **CLOCK** block, remains constant during the whole time step, and is set to the start value of each time interval. The stop time 01:00:00 is given as a block parameter. The simulation time given by the start and stop time parameters is two hours in total. With a time step of 20 minutes this parameter setting results in six time steps, so that the **CLOCK** block starts at 23:00:00 and ends at 00:40:00—six time steps later.

(2) Please observe that the stop time at 1 o'clock does not appear as output, since this would indicate a seventh time step and this would be wrong!

(3) The **CLOCK** block handles midnight of a day—28 February 2000, for instance—as time 00:00:00 of the following day.

See also [Blocks GREGOR, JULIAN, DOW.](#)