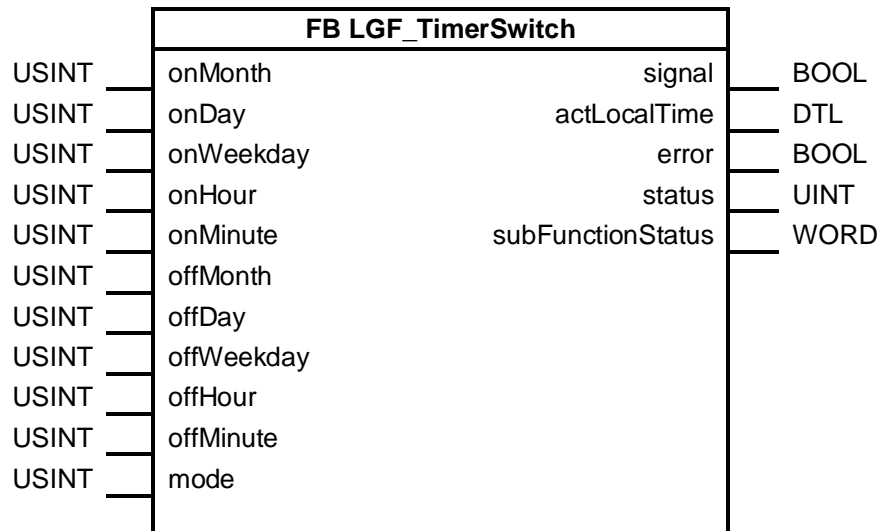## LGF_TimerSwitch

Short description

This block is a timer. It is possible to define daily, weekly, monthly, yearly time switch points and time switch points for working days or weekend days.

Block

```
                         FB LGF_TimerSwitch
USINT  ──┐ onMonth                              signal  ├── BOOL
USINT  ──┤ onDay                          actLocalTime  ├── DTL
USINT  ──┤ onWeekday                             error  ├── BOOL
USINT  ──┤ onHour                               status  ├── UINT
USINT  ──┤ onMinute                   subFunctionStatus ├── WORD
USINT  ──┤ offMonth
USINT  ──┤ offDay
USINT  ──┤ offWeekday
USINT  ──┤ offHour
USINT  ──┤ offMinute
USINT  ──┤ mode
```

Input parameters

Parameters	Data type	Description
onMonth	USINT	Month in which the signal will be set.
onDay	USINT	Day on which the signal will be set.
onWeekday	USINT	Day of the week on which the signal will be set. (Sunday = 1)
onHour	USINT	Hour in which the signal will be set.
onMinute	USINT	Minute in which the signal will be set.
offMonth	USINT	Month in which the signal will be reset.
offDay	USINT	Day on which the signal will be reset.
offWeekday	USINT	Day of the week on which the signal will be reset. (Sunday = 1)
offHour	USINT	Hour in which the signal will be reset.
offMinute	USINT	Minute in which the signal will be reset.
mode	USINT	Specifies the mode (see Principle of operation).

Output parameters

Parameters	Data type	Description
signal	BOOL	Output signal
actLocalTime	DTL	Current local time
error	BOOL	FALSE: No error TRUE: An error occurred during the execution of the FB.
status	WORD	16#0000-16#7FFF: Status of the FB, 16#8000-16#FFFF: Error identification (see following Table).
subFunctionStatus	WORD	Status or return value of the called FCs and system blocks.

Status and error displays

status	Meaning	Remedy / notes
16#0000	No error	-
16#8200	No valid mode was transferred at the input "mode".	Permitted values "1", "2", "3", "4", "5", "6"
16#8600	Error in "RD_LOC_T" command.	Check the error code in "subFunctionStatus"

Note	The status of called commands is output in "subFunctionStatus". In this case, the output value in "status" indicates which command caused the error. In this case, refer to the TIA Portal Online Help section for information on the respective commands.

Principle of operation

The block offers various timer types, which are determined in the "mode" parameter:

- Daily timer (mode = 1)
- Weekly timer (mode = 2)
- Monthly timer (mode = 3)
- Yearly timer (mode = 4)
- Weekdays, Monday to Friday (mode = 5)
- Weekend, Saturday and Sunday (mode = 6)

Depending on the mode, the following formal parameters must be interconnected:

Mode	Mode	Required formal parameters
1	Daily timer	• onHour / offHour • onMinute / offMinute
2	Weekly timer	• onWeekday / offWeekday • onHour / offHour • onMinute / offMinute
3	Monthly timer	• onDay / offDay • onHour / offHour • onMinute / offMinute
4	Yearly timer	• onMonth / offMonth • onDay / offDay • onHour / offHour • onMinute / offMinute
5	Weekdays	• onHour / offHour • onMinute / offMinute
6	Weekend	• onHour / offHour • onMinute / offMinute

If the set start time equals the current local time of the controller, the output "signal" is set to "TRUE". If the set switch-off time equals the current local time of the controller, the "signal" output is reset again.

Note	Please note that the block can be used in the "Monthly timer" modes (mode = 3) or "yearly timer" (mode = 4) the block only switches if the days that you specify at the input parameters, "onDay" and "offDay", actually occur in this month.

Further information on libraries in TIA Portal:

- Topic page libraries
  https://support.industry.siemens.com/cs/ww/en/view/109738702
- Guideline on Library Handling
  https://support.industry.siemens.com/cs/ww/en/view/109747503
- Programming Guideline for S7-1200/1500 in chapter "Libraries"
  https://support.industry.siemens.com/cs/ww/en/view/81318674
- Programming Styleguide
  https://support.industry.siemens.com/cs/ww/en/view/81318674