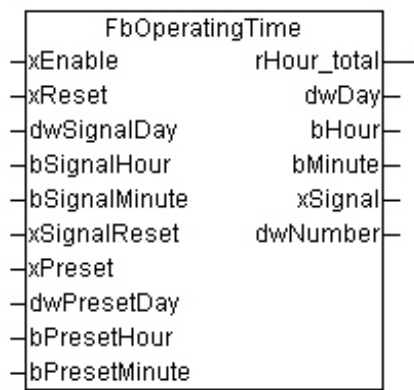


## Operating Time

WAGO-I/O-PRO 32 Library elements		
<b>Category:</b>	Building automation	
<b>Name:</b>	FbOperatingTime	
<b>Type:</b>	Function <input type="checkbox"/>	Function block <input checked="" type="checkbox"/> Program <input type="checkbox"/>
<b>Library name:</b>	Operating_time_01.lib	
<b>Applicable to:</b>	All programmable fieldbus controllers	
<b>Input parameter:</b>	<b>Data type:</b>	<b>Comment:</b>
xEnable	BOOL	The input set "TRUE" will start measurement of operating time.
xReset	BOOL	The input set "TRUE" will set all output values to "0".
dwSignalDay	DWORD	Parameter value for the days when a signal is to be output at xSignal. Preset value = 0
bSignalHour	BYTE	Parameter value for the hours when a signal is to be output at xSignal. Range of values 0 – 23 Preset value = 0
bSignalMinute	DWORD	Parameter value for the minutes when a signal is to be output at xSignal. Range of values 0 – 59 Preset value = 0
xSignalReset	BOOL	The input set "TRUE" will reset the "xSignal" output.
xPreset	BOOL	A rising edge at this input initialises the counter with preset values.
dwPresetDay	DWORD	Parameter for the number of days of the preset initial value Preset value = 0
bPresetHour	BYTE	Parameter for the number of hours of the preset initial value Value range 0 – 23 Preset value = 0
bPresetMinute	BYTE	Parameter for the number of minutes of the preset initial value Value range 0 – 59 Preset value = 0

Feedback value:	Data type:	Comment:
rHour_total	REAL	Total operating time.
dwDay	DWORD	Number of days of the total operating time
bHour	BYTE	Number of hours of the total operating time
bMinute	BYTE	Number of minutes of the total operating time
xSignal	BOOL	Output sends a signal that the preset operating time has been reached.
dwNumber	DWORD	Number of activations

**Graphical display:**



**Function description:**

If the input “**xEnable**” is set “TRUE”, the hour meter will be started. The number of activations via the xEnable input will be output at “**dwNumber**”.

If the hour meter reaches the preset values (“**dwSignalDay**”, “**bSignalHour**”, “**bSignalMinute**”) then the “**xSignal**” output will be activated. This message is used to report necessary maintenance work. The message can be reset by a rising edge at the input “**xSignalReset**”.

The total operating time is indicated via output “**rHour\_total**”.

The outputs “**dwDay**”, “**bHour**” and “**bMinute**” indicate the corresponding portion of the total operating time (see example).

A rising edge at the input “**xPreset**” initialises the counter with the input values “**dwPresetDay**”, “**bPresetHour**” and “**bPresetMinute**”.

All outputs (except “xSignal”) are reset to 0 via the input “**xReset**”.

**Important note:**

The resolution of the hour meter is 1 minute. It is therefore only reasonable to use this function block if the operating time is to be measured of devices that normally operate over a long period. The longer the operating time, the smaller is the percentage error of the measurement.

**Example:**

**Total operating time = 26h 30m**

⇒ rHour\_total = 26.5

⇒ dwDay = 1

⇒ bHour = 2

⇒ bMinute = 30

**Note:**

This function block uses some residual variables having a **VAR\_RETAIN** declaration.