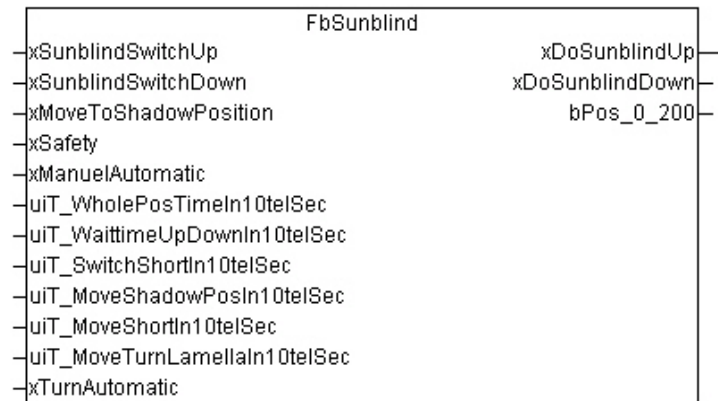


Sunblind

WAGO-I/O-PRO 32 Library elements		
Category:	Building automation	
Name:	FbSunblind	
Type:	Function <input type="checkbox"/>	Function block <input checked="" type="checkbox"/> Program <input type="checkbox"/>
Library name:	Sunblind_01.lib	
Applicable to:	All programmable fieldbus controllers	
Input parameter:		
	Data type:	Comment:
xSunblindSwitchUp	BOOL	Switch command Sunblind UP
xSunblindSwitchDown	BOOL	Switch command Sunblind DOWN
xMoveToShadowPosition	BOOL	Move to shadow position
xSafety	BOOL	Signal input: safety position
xManualAutomatic	BOOL	Switch-over Manual/Automatic
uiT_WholePosTimeIn10telSec	UINT	Motor running time Value range: 0 – 65535 [0.1s] Default setting = 700
uiT_WaittimeUpDownIn10telSec	UINT	Pause when changing direction Value range: 6 – 30 [0.1s] Default setting = 7
uiT_SwitchShortIn10telSec	UINT	Time for brief key actuation Value range: 0 – 2000 [0.1s] Default setting = 5
uiT_MoveShadowPosIn10telSec	UINT	Motor running time DOWN for shadow position Value range: 0 – 3000 [0.1s] Default setting = 300
uiT_MoveShortIn10telSec	UINT	Sunblind setting time via switch command Value range: 0 – 30 [0.1s] Default setting = 2
uiT_MoveTurnLamellaIn10telSec	UINT	Sunblind setting time, automatic Value range: 0 – 30 [0.1s] Default setting = 4
xTurnAutomatic	BOOL	Turn automatic ON / OFF Default setting = FALSE
Feedback value:		
	Data type:	Comment:
xDoSunblindUp	BOOL	Actuator command, sunblind UP
xDoSunblindDown	BOOL	Actuator command, sunblind DOWN
bPos_0_200	BYTE	Return information of the sunblind position 0 = sunblind up 200 = sunblind down

Graphical display:

Time referenced behavior:
Function description:

The sunblind function module is used to control roller blinds and sunblinds. The following functions are to be accomplished:

- UP/DOWN and sunblind setting
- Moving to a defined shadow position using the sunblind turn automatic (sun protection)
- Moving to safety position with interlocking feature (e.g. wind alarm)
- Selection possibility between manual/automatic mode
- Adjustable sunblind turn automatic after "DOWN" running time

Parameterization of running time, sunblind setting time and switch-over time is possible. The sunblind is accessed through the two input objects "**xSunblindSwitchUp**" and "**xSunblindSwitchDown**". With a "long 1" signal on these input objects (> as parameterized time "**uiT_SwitchShortIn10telSec**") a signal is sent at the corresponding output "**xDoSunblindUp**" or "**xDoSunblindDown**". Here the sunblind motor is accessed for the running time "**uiT_WholePosTimeIn10telSec**". If the input signal is shorter than the parameterized time, a stop telegram is sent or the sunblind moved up or down for the period of "**uiT_MoveShortIn10telSec**". Direct switching over from UP to DOWN and vice versa is possible, whereby the switch-over time "**uiT_WaittimeUpDownIn10telSec**" is taken into consideration. The safety position (e.g. wind) can be accessed via the input object "**xSafety**". When the sunblind has been moved to the safety position, it cannot be manually controlled until the safety input has been reset.

The sunblind can be moved to the shadow or sun protection position via the position object "**xMoveToShadowPosition**". It is possible to determine by the configuration parameter "**xTurnAutomatic**" whether the sunblind lamellae are to be adjusted after the UP run for the "**uiT_MoveTurnLamellaIn10telSec**" period.

The times for positioning and lamellae adjustment can be parameterized. The run command for sun protection is structured as followed:

1. Sunblind moves UP for the set running time **uiT_WholePosTimeIn10telSec**
2. Wait for the end of the switch-over pause **uiT_WaittimeUpDownIn10telSec**
3. Sunblind moves DOWN for the parameterized time "**uiT_MoveShadowPosIn10telSec**"
4. Wait for the end of the switch-over pause **uiT_WaittimeUpDownIn10telSec**
5. Then tilt the lamellae for the "**uiT_MoveTurnLamellaIn10telSec**" period

The sun protection automatic can be switched off via input "**xManualAutomatic**" (0 / 1). In this manner you can avoid that the sunblind will automatically move in the cause of events, such as training courses or exams.

The output "**bJalPos_0_200**" returns the information of the rough position of the sunblind. The position is calculated from the running time (**uiT_LfzGesamtIn_10telSec**). The accuracy therefore depends on the registered running time and the difference in speed between opening and closing of the sunblind.

The behavior of the function module following a reset does not entail any change at the output.