

12 S4 On-off/Dim/Shutter 241301

Devices Employing the Program

Product family:	Push Button
Product type:	Push Button, 4-fold
Manufacturer:	Siemens
Name:	Push Button UP 245 4-fold titanium white/DELTA profil
Order-no.:	5WG1 245-2AB11
Name:	Push Button UP 245 4-fold silver/DELTA profil
Order-no.:	5WG1 245-2AB71
Name:	Push Button UP 245 4-fold anthracite/DELTA profil
Order-no.:	5WG1 245-2AB21
Name:	Push Button UP 245 4-fold pearl grey/DELTA profil
Order-no.:	5WG1 245-2AB01
Name:	Push Button UP 246 4-fold titanium white/DELTA profil
Order-no.:	5WG1 246-2AB11
Name:	Push Button UP 246 4-fold silver/DELTA profil
Order-no.:	5WG1 246-2AB71
Name:	Push Button UP 246 4-fold anthracite/DELTA profil
Order-no.:	5WG1 246-2AB21
Name:	Push Button UP 246 4-fold pearl grey/DELTA profil
Order-no.:	5WG1 246-2AB01

Application Description

The application program "12 S4 On-Off/Dim/Shutter 241301" provides parameters to independent switching, dimming, blinds control, value setting, and status display via LED tasks with the four Push buttons of the push button 4-fold UP 245/246 DELTA profil.

The operating mode to the Push buttons can be selected with the corresponding parameter "Function of upper/lower push button". According to the mode selected the parameter window corresponding to the Push button changes and displays the appropriate parameters in their default setting. Furthermore, the objects required are added to the object list, changing their type according to the selected operating mode (e.g. from 1 bit to switching to 4 bit to dimming).

Push button

The various modes can be selected individually to each Push button by setting the parameter "Function of upper/lower push button" in the corresponding parameter window:

Switching: Upon operating the Push button an appropriate telegram is sent (On/Off/Toggle).

Blinds Control: On a long switch operation a telegram is sent to raising (up) or lowering (down) the blinds. On a short operation a telegram is sent to halting moving blinds or adjusting the louvres.

Dimming: Switching (On/Off) and dimming (Brighter/Darker) tasks: The application program distinguishes between long and short switch operations. A short switch operation sends a switching telegram (e.g. Push button top: "On", Push button bottom: "Off"). When operating the Push button to a longer period of time (threshold can be adjusted in the parameter list), a dimming telegram (Push button top: "Brighter", Push button bottom: "Darker") is sent.

Value: Parameters are provided to allocating individual light intensity values to the Push button top and the Push button bottom. On operating the Push button top/bottom a 1 byte telegram is sent that holds the specified value.

LED display

The four LEDs situated in the centre of the Push buttons can be set to display actual object status or to use as orientation lights. The LED situated in the centre of the Push buttons can be permanently disabled or used as orientation light.

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Communication Objects (Switching)

Phys. Addr.	Program	no.	Function	Object name	Type
01.01.062	12 S4 On-off/Dim/Shutter	241301			
		0	On / Off	Switch outer left	1 Bit
		2	On / Off	Switch centre left	1 Bit
		4	On / Off	Switch centre right	1 Bit
		6	On / Off	Switch outer right	1 Bit

Note:

The order of the entries may vary from the above due to individual customization of the table.

Obj	Function	Object name	Type	Flags
0	On/Off Off/On	Switch outer left	1-Bit	CWTU
This is the switching object to the Push button. According to the parameter settings (see parameter: "Function of upper/lower push button") "On" or "Off" telegrams are sent.				
2	On/Off Off/On	Switch centre left	1-Bit	CWTU
This is the switching object to the Push button. According to the parameter settings (see parameter: "Function of upper/lower push button") "On" or "Off" telegrams are sent.				
4	On/Off Off/On	Switch centre right	1-Bit	CWTU
This is the switching object to the Push button. According to the parameter settings (see parameter: "Function of upper/lower push button") "On" or "Off" telegrams are sent.				
6	On/Off Off/On	Switch outer right	1-Bit	CWTU
This is the switching object to the Push button. According to the parameter settings (see parameter: "Function of upper/lower push button") "On" or "Off" telegrams are sent.				

Maximum number of group addresses: 9
Maximum number of assignments: 9

Parameters

General:

Outer right push buttons	
General	Outer left push buttons Centre left push buttons Centre right push buttons
Long switch operation min. (for dimming or shutter)	0.5 seconds
Orientation light (LED)	On

Parameters	Settings
Long switch operation min. (for dimming or shutter)	0,3; 0,4; 0,5; 0,6; 0,8; 1,0; 1,2; 1,5; 2,0; 2,5; 3,0; 4,0; 5,0; 6,0; 7,0 seconds
This parameter defines the operating period to generating long and short switch operations. Operating the Push button longer than the selected period produces a long switch operation.	
Orientation light (LED)	On Off
This parameter governs whether the LED (situated in the centre of the Push button) is disabled or used as an orientation light.	

Parameters (Switch)

Outer left push buttons:

Outer right push buttons	
General	Outer left push buttons Centre left push buttons Centre right push buttons
Function of upper / lower push buttons	On / off
Function of outer left LED	Status display

Parameters	Settings
Function of upper / lower push buttons	On/Off Off/On Shutter, up/down Shutter, down/up Dimming, On/Off Value
This parameter governs the operating mode to the outer left Push button. According to the mode selected, the "Outer Left Push button" parameter window displays the appropriate parameters in their default setting. Furthermore, the object list displays all objects required to the selected mode, changing types according to the selected operating mode (e.g. from 1 bit to switching to 4 bit to dimming) as given below: Switching (object type: 1 bit) Shutter (object type: 1 bit) Dimming (object type: 4 bit) Dimming by value sending (object type: 4 bit)	
Function of outer left LED	Status display no display
The LED situated between the two Push buttons can be used to displaying object status.	

The parameters of the parameter windows "Centre left push buttons", "Centre right push buttons" and "Outer right push buttons" can be set accordingly.

12 S4 On-off/Dim/Shutter 241301**Communication Objects (Shutter)**

Phys. Addr. Program				
no.	Function	Object name	Type	
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0	Closed / Open	Louvres outer left	1 Bit	
1	Down / Up	Shutter outer left	1 Bit	
2	Open / Closed	Louvres centre left	1 Bit	
3	Up / Down	Shutter centre left	1 Bit	
4	Open / Closed	Louvres centre right	1 Bit	
5	Up / Down	Shutter centre right	1 Bit	
6	Open / Closed	Louvres outer right	1 Bit	
7	Up / Down	Shutter outer right	1 Bit	

Note:

The order of the entries may vary from the above due to individual customization of the table.

Obj	Function	Object name	Type	Flags
0	Open/close	Louvres outer left	1-Bit	CTU
This is the switching object to adjusting louvres on a short switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top opens the louvres by one step with an "Off" telegram while operating the Push button bottom closes the louvres by one step with an "On" telegram.				
1	Up/down	Shutter outer left	1-Bit	CTU
This is the switching object to raising (up) and lowering (down) the blinds on a long switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top raises (up) the blinds with an "Off" telegram while operating the Push button bottom lowers (down) the blinds with an "On" telegram.				
2	Open/closed	Louvres centre left	1-Bit	CTU
This is the switching object to adjusting louvres on a short switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top opens the louvres by one step with an "Off" telegram while operating the Push button bottom closes the louvres by one step with an "On" telegram.				
3	Up/down	Shutter centre left	1-Bit	CTU
This is the switching object to raising (up) and lowering (down) the blinds on a long switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top raises (up) the blinds with an "Off" telegram while operating the Push button bottom lowers (down) the blinds with an "On" telegram.				
4	Open/closed	Louvres centre right	1-Bit	CTU
This is the switching object to adjusting louvres on a short switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top opens the louvres by one step with an "Off" telegram while operating the Push button bottom closes the louvres by one step with an "On" telegram.				

Obj	Function	Object name	Type	Flags
5	Up/down	Shutter centre right	1-Bit	CTU
This is the switching object to raising (up) and lowering (down) the blinds on a long switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top raises (up) the blinds with an "Off" telegram while operating the Push button bottom lowers (down) the blinds with an "On" telegram.				
6	Open/closed	Louvres outer right	1-Bit	CTU
This is the switching object to adjusting louvres on a short switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top opens the louvres by one step with an "Off" telegram while operating the Push button bottom closes the louvres by one step with an "On" telegram.				
7	Up/down	Shutter outer right	1-Bit	CTU
This is the switching object to raising (up) and lowering (down) the blinds on a long switch operation: When using the default setting (see parameter "Function of upper/lower push button"), operating the Push button top raises (up) the blinds with an "Off" telegram while operating the Push button bottom lowers (down) the blinds with an "On" telegram.				

Maximum number of group addresses: 9

Maximum number of assignments: 9

Parameters (Shutter)**Outer left push buttons:**

Outer right push buttons	
General	Outer left push buttons
Centre left push buttons	Centre right push buttons
Function of upper / lower push buttons	Shutter, Down / Up
Function of outer left LED	no display

Parameters	Settings
Function of upper / lower push buttons	On/Off Off/On Shutter, Up/Down Shutter, Down/Up Dimming, On/Off Value
This parameter governs the operating mode to the outer left Push button switch. According to the mode selected, the "Outer Left Push button" parameter window displays the appropriate parameters in their default setting. Furthermore, the object list displays all objects required to the selected mode, changing types according to the selected operating mode (e.g. from 1 bit to switching to 4 bit to dimming) as given below: Switching (object type: 1 bit) Shutter (object type: 1 bit) Dimming (object type: 4 bit) Dimming by value sending (object type: 4 bit)	

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Parameters	Settings
Function of outer left LED	no display
When using the "Shutter" operating mode, the LED cannot be used to display object status.	

The parameters of the parameter windows "Centre left push buttons", "Centre right push buttons" and "Outer right push buttons" can be set accordingly.

Communication Objects (Dimming, On/Off)

Phys. Addr. Program				
no.	Function	Object name	Type	
01.01.062	12 S4 On-off/Dim/Shutter	241301		
0	On / Off	Dimming On / Off outer left	1 Bit	
1	Brighter / Darker	Dimming outer left	4 Bit	
2	On / Off	Dimming On / Off centre left	1 Bit	
3	Brighter / Darker	Dimming centre left	4 Bit	
4	On / Off	Dimming On / Off centre right	1 Bit	
5	Brighter / Darker	Dimming centre right	4 Bit	
6	On / Off	Dimming On / Off outer right	1 Bit	
7	Brighter / Darker	Dimming outer right	4 Bit	

Note:

The order of the entries may vary from the above due to individual customization of the table.

Obj	Function	Object name	Type	Flags
0	On/Off	Dimming On/Off outer left	1-Bit	CWTU
This is the switching object of the outer left Push button to short switch operations: Operating the Push button top sends an "On" telegram while operating the Push button bottom sends an "Off" telegram.				
1	Brighter/Darker	Dimming outer left	4- Bit	CTU
This is the switching object of the outer left Push button to sending a dimming telegram on a long switch operation: operating the Push button top sends a "Brighter" telegram while operating the Push button bottom sends a "Darker" telegram.				
2	On/Off	Dimming On/Off centre left	1- Bit	CWTU
This is the switching object of the centre left Push button to short switch operations: Operating the Push button top sends an "On" telegram while operating the Push button bottom sends an "Off" telegram.				
3	Brighter/Darker	Dimming centre left	4- Bit	CTU
This is the switching object of the centre left Push button to sending a dimming telegram on a long switch operation: operating the Push button top sends a "Brighter" telegram while operating the Push button bottom sends a "Darker" telegram.				
4	On/Off	Dimming On/Off centre right	1- Bit	CWTU
This is the switching object of the centre right Push button to short switch operations: Operating the Push button top sends an "On" telegram while operating the Push button bottom sends an "Off" telegram.				

Obj	Function	Object name	Type	Flags
5	Brighter/Darker	Dimming centre right	4- Bit	CTU
This is the switching object of the centre right Push button to sending a dimming telegram on a long switch operation: operating the Push button top sends a "Brighter" telegram while operating the Push button bottom sends a "Darker" telegram.				
6	On/Off	Dimming On/Off outer right	1- Bit	CWTU
This is the switching object of the outer right Push button to short switch operations: Operating the Push button top sends an "On" telegram while operating the Push button bottom sends an "Off" telegram.				
7	Brighter/Darker	Dimming outer right	4- Bit	CTU
This is the switching object of the outer right Push button to sending a dimming telegram on a long switch operation: operating the Push button top sends a "Brighter" telegram while operating the Push button bottom sends a "Darker" telegram.				

Maximum number of group addresses: 9
Maximum number of assignments: 9

Parameters (Dimming, On/Off)

Outer left push buttons:

Outer right push buttons	
General	Centre left push buttons
Function of upper / lower push buttons	Dimming, On/ Off
Function of outer left LED	Status display

Parameters	Settings
Function of upper / lower push buttons	On/Off Off/On Shutter, Up/Down Shutter, Down/Up Dimming, On/Off Value
This parameter governs the operating mode to the outer left Push button. According to the mode selected, the "Outer Left Push button" parameter window displays the appropriate parameters in their default setting. Furthermore, the object list displays all objects required to the selected mode, changing types according to the selected operating mode (e.g. from 1 bit to switching to 4 bit to dimming) as given below: Switching (object type: 1 bit) Shutter (object type: 1 bit) Dimming (object type: 4 bit) Dimming by value sending (object type: 4 bit)	
Function of outer left LED	Status display no display
The LED situated between the two Push buttons can be used to displaying object status.	

The parameters of the parameter windows "Centre left push buttons", "Centre right push buttons" and "Outer right push buttons" can be set accordingly.

12 S4 On-off/Dim/Shutter 241301**Communication Objects
(Dim by value sending)**

Phys. Addr.	Program	no.	Function	Object name	Type
01.01.062	12 S4 On-off/Dim/Shutter	241301			
		0	8 bit	Value of outer left	1 Byte
		2	8 bit	Value of centre left	1 Byte
		4	8 bit	Value of centre right	1 Byte
		6	8 bit	Value of outer right	1 Byte

Note:

The order of the entries may vary from the above due to individual customization of the table.

Obj	Function	Object name	Type	Flags
0	8-bit	Value of outer left	1-Byte	CTU
This object is used to sending the dimming values as specified to the outer left Push button: Two light intensity values can be selected per Push button (see parameter "Function of upper/lower push button").				
2	8-bit	Value of centre left	1-Byte	CTU
This object is used to sending the dimming values as specified to the centre left Push button: Two light intensity values can be selected per Push button (see parameter "Function of upper/lower push button").				
4	8-bit	Value of centre right	1-Byte	CTU
This object is used to sending the dimming values as specified to the centre right Push button: Two light intensity values can be selected per Push button (see parameter "Function of upper/lower push button").				
6	8-bit	Value of outer right	1-Byte	CTU
This object is used to sending the dimming values as specified to the outer right Push button: Two light intensity values can be selected per Push button (see parameter "Function of upper/lower push button").				

Maximum number of group addresses: 9
Maximum number of assignments: 9

Parameters (Dim by value sending)**Outer left push button**

Outer right push buttons	
General	Outer left push buttons
Function of upper / lower push buttons	
Function of outer left LED	Value
Value upper contact (0-255)	no display
Value lower contact (0-255)	255
	0

Parameters	Settings
Function of upper / lower push buttons	On/Off Off/On Shutter, Up/Down Shutter, Down/Up Dimming, On/Off Value
This parameter governs the operating mode to the outer left Push button switch. According to the mode selected, the "Outer Left Push button" parameter window displays the appropriate parameters in their default setting. Furthermore, the object list displays all objects required to the selected mode, changing types according to the selected operating mode (e.g. from 1 bit to switching to 4 bit to dimming) as given below: Switching (object type: 1 bit) Shutter (object type: 1 bit) Dimming (object type: 4 bit) Dimming by value sending (object type: 4 bit)	
Function of outer left LED	no display
When using the "value" operating mode the LED cannot be used to displaying object status.	
Value of upper contact [0..255]	255
This parameter defines the desired light intensity value (8-bit) to the Push button top of the outer left Push button. The value can range from "0" to "255". On operating the Push button top this value is sent on the bus.	
Value of lower contact [0..255]	0
This parameter defines the desired light intensity value (8 bit) to the Push button bottom of the outer left Push button. The value can range from "0" to "255". On operating the Push button bottom this value is sent on the bus.	

The parameters of the parameter windows "Centre left push buttons", "Centre right push buttons" and "Outer right push buttons" can be set accordingly.

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Notes: