

12 S1 On-off-toggle/Dim/Shu/Display 211301**Devices Employing the Program**

Product family:	Push Button
Product type:	Push Button, single
Manufacturer:	Siemens
Name:	Push Button UP 241 single titanium white/DELTA profil
Order-no.:	5WG1 241-2AB11
Name:	Push Button UP 241 single silver/DELTA profil
Order-no.:	5WG1 241-2AB71
Name:	Push Button UP 241 single anthracite/DELTA profil
Order-no.:	5WG1 241-2AB21
Name:	Push Button UP 241 single pearl grey/DELTA profil
Order-no.:	5WG1 241-2AB01
Name:	Push Button UP 242 single titanium white/DELTA profil
Order-no.:	5WG1 242-2AB11
Name:	Push Button UP 242 single silver/DELTA profil
Order-no.:	5WG1 242-2AB71
Name:	Push Button UP 242 single anthracite/DELTA profil
Order-no.:	5WG1 242-2AB21
Name:	Push Button UP 242 single pearl grey/DELTA profil
Order-no.:	5WG1 242-2AB01

Application Description

The application program "12 S1 On-Off-Toggle/Dim/Shu/Display 211301" provides parameters to switching, dimming, blinds control, status display via LEDs with the push button single.

The operating mode to the rocker can be selected with the parameter "Function of rocker". According to the mode selected, the "Rocker" parameter window displays the appropriate parameters in their default setting. Furthermore, the type of object [1] changes automatically (e.g. from 1 bit to switching to 4 bit to dimming).

Rocker

The various modes can be selected to the rocker by setting the parameter "Rocker: Function of rocker" accordingly:

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

Blinds Control: The application program distinguishes between long and short switch operations. On a long operation of the rocker a telegram is sent to raising (Up) or lowering (Down) the blinds. On a short operation a telegram is sent to adjusting the louvres or halting the blinds if moving up or down.

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

Dim by cyclic sending: The application program distinguishes between long and short switch operations. A short switch operation sends a switching telegram (e.g. rocker top: "On", rocker bottom: "Off"), a long switch operation sends dimming telegrams (rocker top: "Brighter", rocker bottom: "Darker") with the frequency specified in the parameter list until the rocker is released.

LED display

The LED situated below the rocker can be set to display object status or to use as an orientation light. The second LED situated in the rocker's centre can be disabled or illuminated permanently to use as an orientation light.

Communication Objects (Switching)

Phys.Addr.	Program		Type
	no.	Function	
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
	0	On	Switch
	1	Off	Switch

Note:

The order of the entries may vary from the above due to individual customization of the table.
All objects that correspond with a user operation have to be assigned to a group address.

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Obj	Function	Object name	Type	Flags
0	On Off Toggle	Switch	1-Bit	CUWT
This object governs the operating mode to the rocker top. According to the parameter settings (see parameter: "Upper/Lower contact") "On" or "Off" telegrams are sent. When set to "over", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.				
1	On Off Toggle	Switch	1-Bit	CUWT
This object governs the operating mode to the rocker bottom. According to the parameter settings (see parameter Upper/Lower contact) "On" or "Off" telegrams are sent. When set to "over", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.				

Maximum number of group addresses: 13
 Maximum number of assignments: 13

Parameters (Switch)

Rocker:

Rocker	
Function of rocker	Switch
Upper contact	On
Lower contact	Off
Function of LED	Off
LED display	normal
Orientation light (LED)	On

Parameters	Settings
Function of rocker	Switch Shutter Dimming with stop telegram Dim. with cyclical sending
This parameter governs the rocker's operating mode. According to the mode selected, the "Rocker" parameter window displays the appropriate parameters in their default setting. Furthermore, the type of object [1] changes automatically (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) Dimmer by stop telegram (object type: 4 bit) Dimmer by cyclic sending (object type: 4 bit)	
Upper contact	On Off Toggle
This parameter governs whether an "On" or "Off" telegram is sent via object [0] on operating the rocker top. When set to "Toggle", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.	

Parameters	Settings
Lower contact	On Off Toggle
This parameter governs whether an "On" or "Off" telegram is sent via object [0] on operating the rocker bottom. When set to "Toggle", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.	
Function of LED	Off On Status of rocker object [0] Status of rocker object [1] LED object- object [2]
The LED (below the rocker) can be set to display the status of an object (either object [0], object [1], or optionally object [2]) or to use as an orientation light. Note: When selecting "LED object [2]" in the parameter window "Rocker: Function of LED", the appropriate object (display object [2]) is added to the list of objects to assigning the appropriate group address.	
LED display	normal inverted
This parameter defines how the LEDs (below the rocker) will display object status.	
Orientation light (LED)	On Off
This parameter governs whether the LED is to be disabled or used as an orientation light.	

Note:

When selecting "LED object [2]" in the parameter window "Rocker: LED mode", the appropriate object (here: display object [2]) is added to the list of objects to assigning the appropriate group address.

Phys.Addr.	Program		
no.	Function	Object name	Type
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
0	On	Switch	1 Bit
1	Off	Switch	1 Bit
2	Display	LED object[2]	1 Bit

Communication Objects (Shutter)

Phys.Addr.	Program		
no.	Function	Object name	Type
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
0	Open / Closed	Loures	1 Bit
1	Up / Down	Shutter	1 Bit

Note:

The order of the entries may vary from the above due to individual customization of the table.
All objects that correspond with a user operation have to be assigned to a group address.

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Obj	Function	Object name	Type	Flags
0	Open/Closed	Louvres	1-Bit	CUWT
This is the switching object to adjusting louvres on a short switch operation: A operation of the rocker top opens the louvres by one step with an "Off" telegram and a operation of the rocker bottom closes the louvres by one step with an "On" telegram.				
1	Up/Down	Shutter	1-Bit	CUWT
This is the switching object to raising (up) and lowering (down) the blinds on a long switch operation: A operation of the rocker top raises (Up) the blinds with an "Off" telegram and a operation of the rocker bottom lowers (Down) the blinds with an "On" telegram when using the default parameter setting (see parameter window "Rocker: Upper/Lower contact"). A short switch operation halts a moving blind.				

Maximum number of group addresses: 13
 Maximum number of assignments: 13

Parameters (Shutter)

Rocker:

Rocker	
Function of rocker	Shutter
Upper / Lower contact	Shutter, Up / Down
Long switch operation min.	0.5 seconds
Function of LED	Off
LED display	normal
Orientation light (LED)	On

Parameters	Settings
Function of rocker	Switch Shutter Dimming with stop telegram Dim. with cyclical sending
Upper / lower contact	Shutter, Up/Down Shutter, Down/Up
	This parameter defines the operating mode to the rocker top and the rocker bottom of the rocker. When using the default setting, a short operation of the rocker top opens the louvres by one step with an "Off" telegram and a short operation of the rocker bottom closes the louvres by one step with an "On" telegram. A long operation of the rocker top raises (Up) the blinds with an "Off" telegram and a long operation the rocker bottom lowers (Down) the blinds with an "On" telegram.

Parameters	Settings
Long switch operation min.	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 generate long and short switch operations. Operating the rocker switch longer than the selected period produces a long switch operation.

Function of LED	Off On Status of rocker object [0] Status of rocker object [1] LED object- object [2]
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The LED (below the rocker) can be set to display the status of an object (either object [0], object [1], or optionally object [2]) or to use as an orientation light.

Note: When selecting "LED object [2]" in the parameter window "Rocker: Function of LED", the appropriate object (display object [2]) is added to the list of objects to assigning the appropriate group address.

LED display	normal inverted
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This parameter defines how the LEDs (below the rocker) will display object status.

Orientation light (LED)	On Off
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This parameter governs whether the LED is to be disabled or used as an orientation light.

Note:

When selecting "LED object [2]" in the parameter window "Rocker: Function of LED", the appropriate object (here: display object [2]) is added to the list of objects to assigning the appropriate group address.

Phys.Addr.	Program		
no.	Function	Object name	Type
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
0	Open / Closed	Louvres	1 Bit
1	Up / Down	Shutter	1 Bit
2	Display	LED object[2]	1 Bit

Communication Objects (Dimming with stop telegram)

Phys.Addr.	Program		
no.	Function	Object name	Type
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
0	On / Off	Dimming On / Off	1 Bit
1	Brighter / Darker	Dimming	4 Bit

Note:

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

All objects that correspond with a user operation have to be assigned to a group address.

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Obj	Function	Object name	Type	Flags
0	On/Off	Dimming On/Off	1-Bit	CUWT
This is the switching object to short switch operations: When using the default setting (see parameter window "Rocker: Upper/Lower contact"), a operation of the rocker top sends an "On" telegram and a operation of the rocker bottom sends an "Off" telegram. When set to "Toggle/Toggle", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.				
1	Brighter/Darker	Dimming	4-Bit	CUWT
This is the switching object to sending a dimming telegram on a long switch operation: A operation of the rocker top sends a "Brighter" telegram and a operation of the rocker bottom sends a "Darker" telegram. On releasing the rocker the "Stop" telegram is sent.				

Maximum number of group addresses: 13
 Maximum number of assignments: 13

Parameters (Dimming with stop telegram)

Rocker:

Rocker	
Function of rocker	Dimming with stop telegram
Upper / lower contact	On / off
Long switch operation min.	0.5 seconds
Function of LED	Off
LED display	normal
Orientation light (LED)	On

Parameters	Settings
Function of rocker	Switch Shutter Dim. with stop telegram Dim. with cyclical sending
This parameter governs the rocker's operating mode. According to the mode selected, the "Rocker" parameter window displays the appropriate parameters in their default setting. Furthermore, the type of object [1] changes automatically (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) Dimmer by stop telegram (object type: 4 bit) Dimmer by cyclic sending (object type: 4 bit)	

Parameters	Settings
Upper / lower contact	Toggle/Toggle On/Off
This parameter defines the operating mode to the rocker top and the rocker bottom of the rocker. When using the default setting a short operation of the rocker top sends an "On" telegram and a short operation of the rocker bottom sends an "Off" telegram.	
Long switch operation min.	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
A long operation (see parameter "Long switch operation min.") of the rocker top sends a "Brighter" telegram and a long operation of the rocker bottom sends a "Darker" telegram. On releasing the rocker the "Stop" telegram is sent.	
When set to "Toggle/Toggle", a telegram is sent ("On" or "Off") on a short switch operation appropriate to change the actual signal status. Like the "On/Off" mode, this does not affect any dimming operations.	
Function of LED	Off On LED object- object [2]
The LED (below the rocker) can be set to display the status of an object (either object [0], object [1], or optionally object [2]) or to use as an orientation light.	
Note: When selecting "LED object [2]" in the parameter window "Rocker: Function of LED", the appropriate object (display object [2]) is added to the list of objects to assigning the appropriate group address.	
LED display	normal inverted
This parameter defines how the LEDs (below the rocker) will display object status.	
Orientation light (LED)	On Off
This parameter governs whether the LED (in the centre below the main rocker) is to be disabled or used as an orientation light.	

Note:

When selecting "LED object [2]" in the parameter window "Rocker: Function of LED", the appropriate object (here: display object [2]) is added to the list of objects to assigning the appropriate group address.

Phys.Addr.	Program		
no.	Function	Object name	Type
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
0	On / Off	Dimming On / Off	1 Bit
1	Brighter / Darker	Dimming	4 Bit
2	Display	LED object[2]	1 Bit

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Communication Objects (Dim. with cyclical sending)

Phys.Addr.	Program	Object name	Type
no.	Function		
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
0	On / Off	Dimming On / Off	1 Bit
1	Brighter / Darker	Dimming	4 Bit

Note:

The order of the entries may vary from the above due to individual customization of the table.
All objects that correspond with a user operation have to be assigned to a group address.

Obj	Function	Object name	Type	Flags
0	On/Off	Dimming On/Off	1-Bit	CRWT
This is the switching object to short switch operations: When using the default setting (see parameter window "Rocker: Upper/Lower contact"), a operation of the rocker top sends an "On" telegram and a operation of the rocker bottom sends an "Off" telegram. When set to "Toggle/Toggle", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.				
1	Brighter/Darker	Dimming	4-Bit	CRWT
This is the switching object to sending a dimming telegram on a long switch operation: A operation of the rocker top sends a "Brighter" telegram and a operation of the rocker bottom sends a "Darker" telegram. On releasing the rocker the "Stop" telegram is sent.				

Maximum number of group addresses: 13
Maximum number of assignments: 13

Parameters (Dim. with cyclical sending)

Rocker:

Rocker	
Function of rocker	Dimming with cyclical sending
Upper / lower contact	On / off
Long switch operation	adjust by 1/8
Long switch operation min.	0.5 seconds
Interval for cyclical sending	0.5 seconds
Function of LED	Off
LED display	normal
Orientation light (LED)	On

Parameters	Settings
Function of rocker	Switch Shutter Dimming with stop telegram Dim. with cyclical sending
This parameter governs the rocker's operating mode. According to the mode selected, the "Rocker" parameter window displays the appropriate parameters in their default setting. Furthermore, the type of object [1] changes automatically (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) Dimmer by stop telegram (object type: 4 bit) Dimmer by cyclic sending (object type: 4 bit)	
Upper / lower contact	Toggle/Toggle On/Off
This parameter defines the operating mode to the rocker top and the rocker bottom. When using the default setting, a short operation of the rocker top sends an "On" telegram and a short operation of the rocker bottom sends an "Off" telegram. A long operation (see parameter "Long switch operation min.") of the rocker top repeatedly sends a "Brighter" telegram and a long operation of the rocker bottom repeatedly sends a "Darker" telegram with the frequency specified in the parameter list (see parameter "Interval for cyclical sending") until the rocker is released. When set to "Toggle/Toggle", a telegram is sent ("On" or "Off") on a short switch operation appropriate to change the actual signal status. Like the "On/Off" mode, this does not affect any dimming operations.	
Long switch operation	adjust by 100% adjust by 1/2 adjust by 1/4 adjust by 1/8 adjust by 1/16 adjust by 1/32 adjust by 1/64
This parameter defines the change in light intensity a dimming telegram is to establish on a long switch operation. When set to e.g. "adjust by 1/8", 8 dimming telegrams are required to change the light intensity from 0% to 100%.	
Long switch operation min.	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 generate long and short switch operations. Operating the rocker switch longer than the selected period produces a long switch operation.	
Interval for cyclical sending	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 governs the frequency to cyclic sending on a long switch operation. Consider busload when setting the cyclic send frequency.	

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Parameters	Settings
Function of LED	Off On LED object- object [2]
	The LED (below the rocker) can be set to display the status of an object (either object [0], object [1], or optionally object [2]) or to use as an orientation light. Note: When selecting "LED object [2]" in the parameter window "Rocker: Function of LED", the appropriate object (display object [2]) is added to the list of objects to assigning the appropriate group address.
LED display	normal inverted
	This parameter defines how the LEDs (below the rocker) will display object status.
Orientation light (LED)	On Off
	This parameter governs whether the LED (in the centre below the main rocker) is to be disabled or used as an orientation light.

Note:

When selecting "LED object [2]" in the parameter window "Rocker: Function of LED", the appropriate object (here: display object [2]) is added to the list of objects to assigning the appropriate group address.

Phys.Addr.	Program		
no.	Function	Object name	Type
01.01.049	12 S1 On-off-toggle/Dim/Shu/Display 211301		
0	On / Off	Dimming On / Off	1 Bit
1	Brighter / Darker	Dimming	4 Bit
2	Display	LED object[2]	1 Bit