

## 12 S1 On-off-toggle/Dim/Shu/Display 212001

### Devices Employing the Program

Product family: Push button  
 Product type: Push button, single  
 Manufacturer: Siemens

Name: Push button UP 221E  
 DELTA i-system  
 Order-no.: 5WG1 2221-2EB\_1

### Application Description

The application program "12 S1 On-Off-Toggle/Dim/Shu/Display 212001" provides parameters to switching, dimming, blinds control, status display via LEDs with the wall switch 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. left rocker contact: "On", right rocker contact: "Off"). When operating the rocker to a longer period of time (threshold can be adjusted in the parameter list), a dimming telegram (left rocker contact: "Brighter", right rocker contact: "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. left rocker contact: "On", right rocker contact: "Off"), a long switch operation sends dimming telegrams (left

rocker contact: "Brighter", right rocker contact: "Darker") with the frequency specified in the parameter list until the rocker is released.

#### LED display

The LED situated beside the right 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)

Nummer	Name	Funktion	Länge
0	Switch	On	1 bit
1	Switch	Off	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	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	Off	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.				

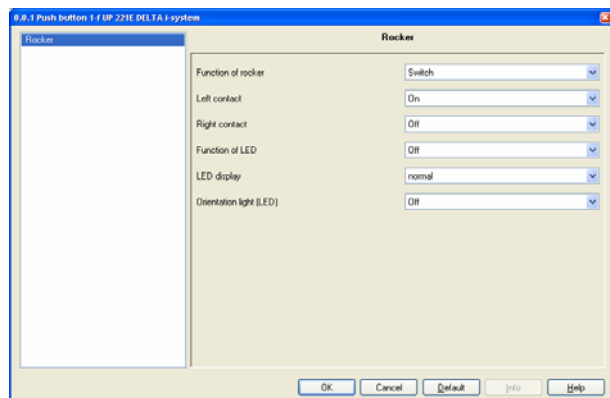
Maximum number of group addresses: 13

Maximum number of assignments: 13

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### Parameters (Switch)

#### Rocker:



Parameters	Settings
<b>Function of rocker</b>	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)	
<b>Left contact</b>	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.	
<b>Right contact</b>	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.	
<b>Function of LED</b>	Off On Status of rocker object [0] Status of rocker object [1] LED object - object [2]
The LED (beside the right rocker) can be set to display the status of an object (either object [0], object [1], or object [2]) or to use as an orientation light.	

Parameters	Settings
<b>LED display</b>	normal inverted
This parameter defines how the LEDs (beside the right rocker) will display object status.	
<b>Orientation light (LED)</b>	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.

Nummer	Name	Funktion	Länge
0	Switch	On	1 bit
1	Switch	Off	1 bit
2	LED object[2]	Display	1 bit

### Communication Objects (Shutter)

Nummer	Name	Funktion	Länge
0	Louvres	Open / Closed	1 bit
1	Shutter	Up / Down	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/Closed	Louvres	1-Bit	CUWT
This is the switching object to adjusting louvres on a short switch operation: A operation of the left rocker contact opens the louvres by one step with an "Off" telegram and a operation of the right rocker contact 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 left rocker contact raises (Up) the blinds with an "Off" telegram and a operation of the right rocker contact 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.				

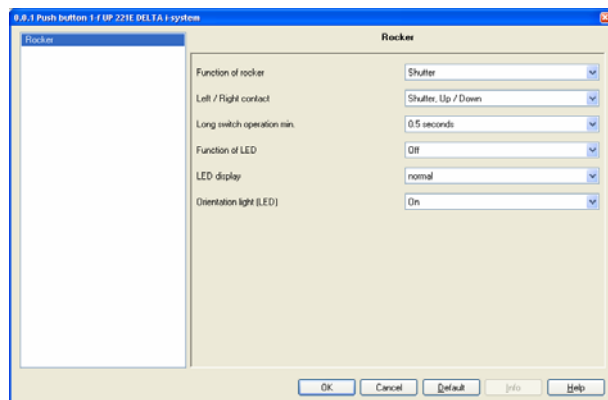
Maximum number of group addresses: 13

Maximum number of assignments: 13

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## Parameters (Shutter)

## Rocker:



Parameters	Settings
<b>Function of rocker</b>	Switch <b>Shutter</b> 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)	
<b>Left / right contact</b>	<b>Shutter Up/Down</b> Shutter Down/Up
This parameter defines the operating mode to the left rocker contact and the right rocker contact. When using the default setting, a short operation of the left rocker contact opens the louvres by one step with an "Off" telegram and a short operation of the right rocker contact closes the louvres by one step with an "On" telegram. A long operation of the left rocker contact raises (Up) the blinds with an "Off" telegram and a long operation the right rocker contact lowers (Down) the blinds with an "On" telegram.	
<b>Long switch operation min.</b>	0,3; 0,4; <b>0,5</b> ; 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.	

Parameters	Settings
<b>Function of LED</b>	<b>Off</b> On Status of rocker object [0] Status of rocker object [1] LED object- object [2]
The LED (beside the right rocker) can be set to display the status of an object (either object [0], object [1], or object [2]) or to use as an orientation light.	
<b>LED display</b>	<b>normal</b> inverted
This parameter defines how the LEDs (beside the right rocker) will display object status.	
<b>Orientation light (LED)</b>	<b>On</b> 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: Function of LED", the appropriate object (here: display object [2]) is added to the list of objects to assigning the appropriate group address.

Nummer	Name	Funktion	Länge
0	Louvres	Open / Closed	1 bit
1	Shutter	Up / Down	1 bit
2	LED object[2]	Display	1 bit

## Communication Objects (Dimming with stop telegram)

Nummer	Name	Funktion	Länge
0	Dimming On / Off	On / Off	1 bit
1	Dimming	Brighter / Darker	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	1-Bit	CUWT
This is the switching object to short switch operations: When using the default setting (see parameter window "Rocker: left/right contact"), a operation of the left rocker contact sends an "On" telegram and a operation of the right rocker contact sends an "Off" telegram. When set to "Toggle/Toggle", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.				

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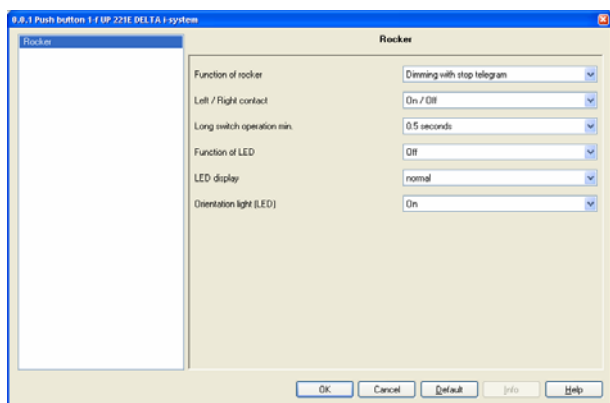
Obj	Function	Object name	Type	Flags
1	Brighter/Darker	Dimming	4-Bit	CUWT

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:



Parameters	Settings
Function of rocker	Switch Shutter <b>Dim. with stop telegram</b> 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
Left / right contact	Toggle/Toggle <b>On/Off</b>
This parameter defines the operating mode to the left rocker contact and the right rocker contact of the rocker. When using the default setting a short operation of the left rocker contact sends an "On" telegram and a short operation of the right rocker contact sends an "Off" telegram. A long operation (see parameter "Long switch operation min.") of the left rocker contact sends a "Brighter" telegram and a long operation of the right rocker contact 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.	
Long switch operation min.	0,3; 0,4; <b>0,5</b> ; 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	<b>Off</b> On Status of rocker – object [0] LED object- object [2]
The LED (beside the right 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.	
LED display	<b>normal</b> inverted
This parameter defines how the LEDs (beside the right rocker) will display object status.	
Orientation light (LED)	<b>On</b> Off
This parameter governs whether the LED (between the both rockers) 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.

Number	Name	Funktion	Länge
0	Dimming On / Off	On / Off	1 bit
1	Dimming	Brighter / Darker	4 bit
2	LED object[2]	Display	1 bit

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## Communication Objects (Dim. with cyclical sending)

Nummer	Name	Funktion	Länge
0	Dimming On / Off	On / Off	1 bit
1	Dimming	Brighter / Darker	4 bit

## Note:

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

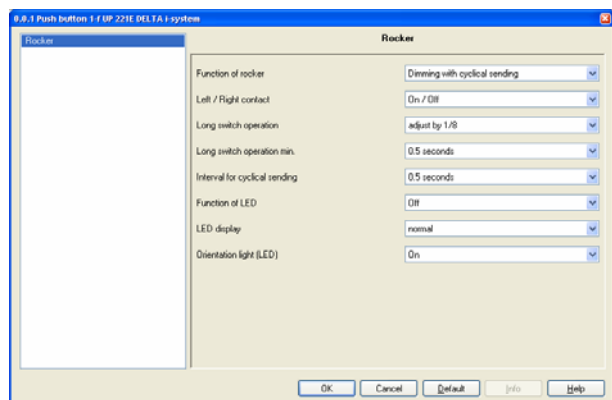
Obj	Function	Object name	Type	Flags
0	On/Off	Dimming On/Off	1-Bit	CRWT
This is the switching object to short switch operations: When using the default setting (see parameter window "Rocker: left/right contact"), a operation of the left rocker contact sends an "On" telegram and a operation of the right rocker contact 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 left rocker sends a "Brighter" telegram and a operation of the right rocker 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:



Parameters	Settings
Function of rocker	Switch Shutter Dimming with stop telegram <b>Dim. with cyclical sending</b>
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)	
Left / right contact	Toggle/Toggle On/Off
This parameter defines the operating mode to the left rocker contact and the right rocker contact. When using the default setting, a short operation of the left rocker contact sends an "On" telegram and a short operation of the right rocker contact sends an "Off" telegram. A long operation (see parameter "Long switch operation min.") of the left rocker contact repeatedly sends a "Brighter" telegram and a long operation of the right rocker contact 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 <b>adjust by 1/8</b> 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; <b>0,5</b> ; 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; <b>0,5</b> ; 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.	

## Application Programs Description

July 2005

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Parameters	Settings
<b>Function of LED</b>	Off On LED object- object [2]
The LED (beside the right rocker) can be set to display the status of an object (either object [0], object [1]) or to use as an orientation light.	
<b>LED display</b>	normal inverted
This parameter defines how the LEDs (beside the right rocker) will display object status.	
<b>Orientation light (LED)</b>	On Off
This parameter governs whether the LED (between the both rockers) 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.

Nummer	Name	Funktion	Länge
0	Dimming On / Off	On / Off	1 bit
1	Dimming	Brighter / Darker	4 bit
2	LED object[2]	Display	1 bit