12 S2 On-off-toggle/Dim/Shu/Display 220F01

Devices Employing the Program

Product family: Push Button
Product type: Push Button, 2-fold
Manufacturer: Siemens

Name: DELTA BCU 2-fold (push button type)
Order-no.: 5WG1 116-2AB31

Application Description

The application program "12 S2 On-Off-Toggle/Dim/Shu/Display 220F01" provides parameters to switching, dimming, blinds control, status display via LEDs with the push button 2-fold, DELTA BCU (push button type). The operating mode to the push button can be selected with the parameter "Function of push buttons ". According to the mode selected, the "Push buttons" 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).

Push button
The various modes can be selected to the push button by setting the parameter "Push button: Function of push buttons " accordingly:

Switching: Upon operating the push button 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 push button 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 push button: "On", right push button: "Off"). When operating the push button to a longer period of time (threshold can be adjusted in the parameter list), a dimming telegram (left push button: "Brighter", right push button: "Darker") is sent. On releasing the push button, 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 push button: "On", right push button: "Off"), a long switch operation sends dimming telegrams (left push button: "Brighter", right push button: "Darker") with the frequency specified in the parameter list until the push button is released.

LED display
The two LEDs situated below the two push buttons can be set to display actual object status or to use as orientation lights.

Communication Objects (Switch)

Phys.Addr.	Program		
no.	Function	Object name	Type
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0	Off	Switch left	1 Bit
1	On	Switch right	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.

Obj	Function	Object name	Type	Flags
0	On Off Toggle	Switch left	1-Bit	CWTU
This parameter governs the operating mode to the left push button. According to the parameter settings (see parameter: "Left push button ") "On" or "Off" telegrams are sent. When set to "Toggle", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.				
1	On Off Toggle	Switch right	1-Bit	CWTU
This parameter governs the operating mode to the right push button. According to the parameter settings (see parameter: "Right push button ") "On" or "Off" telegrams are sent. When set to "Toggle", telegrams are sent ("On" or "Off") appropriate to change the actual signal status.				

Maximum number of group addresses: 4
Maximum number of assignments: 5

Parameters

Mounting position (establish first of all):

Parameters	Settings
Mounting position of push button	**normal (LEDs at the top)** inverted (LEDs at the bottom)
This parameter defines the mounting position to all parameters below.	

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Parameters (Switch)

Push buttons:

Parameters	Settings
Function of push buttons	**Switch** Shutter Dimming with stop telegram Dim. with cyclical sending
This parameter governs the operating mode to the two push buttons. According to the mode selected, the "Push buttons" 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) Dimming by stop telegram (object type: 4 bit) Dimming by cyclic sending (object type: 4 bit)	
Left push button	On **Off** Toggle
This parameter governs whether an " On " or "Off" telegram is sent via object [0] on operating the left push button. When set to "Toggle", telegrams are sent ("On " or "Off") appropriate to change the actual signal status.	
Right push button	**On** Off Toggle
This parameter governs whether an " On " or "Off" telegram is sent via object [0] on operating the right push button. When set to "Toggle", telegrams are sent ("On " or "Off") appropriate to change the actual signal status.	
Function of left LED	**Off** On Status of push button obj. [0] Status of push button obj. [1] LED object- object [2]
The left LED (below the push button) 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.	
Function of right LED	**Off** On Status of push button obj. [0] Status of push button obj. [1] LED object- object [3]
The right LED (below the push button) can be set to display the status of an object (either object [0], object [1], or optionally object [3]) or to use as an orientation light.	

Parameters	Settings
LED display	**left: normal, right: normal** left: inverted, right: inverted left: normal, right: inverted left: inverted, right: normal
This parameter defines how the two LEDs (default: below the push buttons) will display object status.	

Note:

When selecting "LED object [2]" in the parameter window "Push buttons: Function of left LED" or "LED object [3]" in the parameter window "Push buttons: Function of right LED", the appropriate objects (here: display object [2] and [3]) are added to the list of objects to assigning appropriate group addresses.

Communication Objects (Shutter)

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	Open/Closed	Louvres	1-Bit	CWTU
This is the switching object to adjusting louvres on a short switch operation: Operating the left push button opens the louvres by one step with an "Off" telegram and operating the right push button closes the louvres by one step with an " On " telegram				
1	Up/Down	Shutter	1-Bit	CWTU
This is the switching object to raising and lowering (down) the blinds on a long switch operation: Operating the left push button raises (up) the blinds with an "Off" telegram and operating the right push button lowers (down) the blinds with an " On " telegram when using the default parameter setting (see parameter window "Push buttons: Left/right push button"). A short switch operation halts a moving blind.				

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Maximum number of group addresses: 4
Maximum number of assignments: 5

Parameters (Shutter)

Push buttons:

Parameters	Settings
Function of push buttons	Switch **Shutter** Dimming with stop telegram Dim. with cyclical sending
This parameter governs the operating mode to the two push buttons. According to the mode selected, the "Push button" 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) Dimming by stop telegram (object type: 4 bit) Dimming by cyclic sending (object type: 4 bit)	
Left/right push button	**Shutter Up/Down** Shutter Down/Up
This parameter defines the operating mode to the left push button and the right push button. When using the default setting, a short operation of the left push button opens the louvres by one step with an "Off" telegram and a short operation of the right push button closes the louvres by one step with an " On " telegram. A long operation of the left push button raises (up) the blinds with an "Off" telegram and a long operation the right push button lowers (down) the Sutter with an " On " telegram.	
Long push button action 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 push button switch longer than the selected period produces a long switch operation.	
Function of left LED	**Off** On status of push button obj. [0] status of push button obj. [1] LED object- object [2]
The left LED (below the push button) 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 "Push buttons: Function of left LED ", the appropriate object (display object [2]) is added to the list of objects to assigning the appropriate group address.	

Parameters	Settings
Function of right LED	**Off** On Status of push button obj. [0] Status of push button obj. [1] LED object- object [3]
The right LED (below the push button) can be set to display the status of an object (either object [0], object [1], or optionally object [3]) or to use as an orientation light. Note: When selecting "LED object [3]" in the parameter window "Push buttons: Function of right LED ", the appropriate object (display object [3]) is added to the list of objects to assigning the appropriate group address.	
LED display	**left: normal, right: normal** left: inverted, right: inverted left: normal, right: inverted left: inverted, right: normal
This parameter defines how the two LEDs (default: below the push buttons) will display object status.	

Note:

When selecting "LED object [2]" in the parameter window "Push buttons: Function of left LED" or "LED object [3]" in the parameter window "Push buttons: Function of right LED", the appropriate objects (here: display object [2] and [3]) are added to the list of objects to assigning appropriate group addresses.

Communication Objects (Dimming with stop telegram)

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	CWTU
This is the switching object to short switch operations: When using the default setting (see parameter window "Push buttons: Left/right push button"), operating the left push button sends an "On" telegram and operating the right push button 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	CWTU
This is the switching object to sending a dimming telegram on a long switch operation: operating the left push button sends a "Brighter" telegram and operating the right push button sends a "Darker" telegram. On releasing the push button switch the "stop" telegram is sent.				

Maximum number of group addresses: 4
Maximum number of assignments: 5

Parameters (Dimming with stop telegram)

Push buttons:

Parameters	Settings
Function of push buttons	Switch
	Shutter
	Dim. with stop telegram
	Dim. with cyclical sending
This parameter governs the operating mode of the two push buttons. According to the mode selected, the "Push buttons" 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) Dimming by stop telegram (object type: 4 bit) Dimming by cyclic sending (object type: 4 bit)	

Parameters	Settings
Left/right push button	Toggle/Toggle **On/Off**
This parameter defines the operating mode to the left push button and the right push button of the push button. When using the default setting a short operation of the left push button sends an "On" telegram and a short operation of the right push button sends an "Off" telegram. A long operation (see parameter "long switch operation min.") of the left push button sends a "Brighter" telegram and a long operation of the right push button sends a "Darker" telegram. On releasing the push button 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 push button action 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 push button switch longer than the selected period produces a long switch operation.	
Function of left LED	**Off** On status of push button obj. [0] status of LED object [2]
The left LED (below the push button) can be set to display the status of an object (either object [0] or optionally object [2]) or to use as an orientation light. Note: When selecting "LED object [2]" in the parameter window "Push buttons: Function of left LED", the appropriate object (display object [2]) is added to the list of objects to assigning the appropriate group address.	
Function of right LED	**Off** On Status of push button obj. [0] LED object- object [3]
The right LED (below the push button) can be set to display the status of an object (either object [0] or optionally object [3]) or to use as an orientation light. Note: When selecting "LED object [3]" in the parameter window "Push buttons: Function of right LED", the appropriate object (display object [3]) is added to the list of objects to assigning the appropriate group address.	
LED display	**left: normal, right: normal** left: inverted, right: inverted left: normal, right: inverted left: inverted, right: normal
This parameter defines how the two LEDs (default: below the push buttons) will display object status.	

Note:

When selecting "LED object [2]" in the parameter window "Push buttons: Function of left LED" or "LED object [3]" in the parameter window "Push buttons: Function of right LED", the appropriate objects (here: display object [2] and [3]) are added to the list of objects to assigning appropriate group addresses.

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Product		Program	
no.	**Function**	**Object name**	**Type**
	DELTA BCU UP 116 (swit...	12 S2 On-off-toggle/Dim/Shu/Display 220F01	
0	On / off	Dimming on/off	1 Bit
1	Brighter / darker	Dimming	4 Bit
2	Display	Left LED - object[2]	1 Bit
3	Display	Right LED - object[3]	1 Bit

Communication Objects (Dim. with cyclical sending)

Product		Program	
no.	**Function**	**Object name**	**Type**
	DELTA BCU UP 116 (swit...	12 S2 On-off-toggle/Dim/Shu/Display 220F01	
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	CWTU
	This is the switching object to short switch operations: When using the default setting (see parameter window "Push buttons: Left/right push button"), operating the left push button sends an "On" telegram and operating the right push button 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	CWTU
	This is the switching object to sending a dimming telegram on a long switch operation: operating the left push button repeatedly sends a "Brighter" telegram and operating the right push button sends a "Darker" telegram with the frequency specified in the parameter " Interval for cyclical sending ".			

Maximum number of group addresses: 4
Maximum number of assignments: 5

Parameters (Dim. with cyclical sending)

Push buttons:

Parameters	Settings
Function of push buttons	Switch Shutter Dimming with stop telegram **Dim. with cyclical sending**
This parameter governs the operating mode of the two push buttons. According to the mode selected, the "Push button" 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) Dimming by stop telegram (object type: 4 bit) Dimming by cyclic sending (object type: 4 bit)	
Left/rightpush button	Toggle/Toggle **On/Off**
This parameter defines the operating mode to the left push button and the right push button. When using the default setting, a short operation of the left push button sends an "On" telegram and a short operation of the right push button sends an "Off" telegram. A long operation (see parameter "Long switch operation min.") of the left push button repeatedly sends a "Brighter" telegram and a long operation of the right push button repeatedly sends a "Darker" telegram with the frequency specified in the parameter list (see parameter " Interval for cyclical sending ") until the push button 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 push button action	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%.	

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Parameters	Settings
Long push button action 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 push button 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.	
Function of left LED	**Off** On Status of push button obj. [0] LED object- object [2]
The left LED (below the push button) can be set to display the status of an object (either object [0] or optionally object [2]) or to use as an orientation light. Note: When selecting "LED object [2]" in the parameter window "Push buttons: Function of left LED ", the appropriate object (display object [2]) is added to the list of objects to assigning the appropriate group address.	
Function of right LED	**Off** On status of push button obj. [0] status of LED object [3]
The right LED (below the push button) can be set to display the status of an object (either object [0] or optionally object [3]) or to use as an orientation light. Note: When selecting "LED object [3]" in the parameter window "Push buttons: Function of right LED", the appropriate object (display object [3]) is added to the list of objects to assigning the appropriate group address.	
LED display	**left: normal, center: normal** left: inverted, center: inverted left: normal, center: inverted left: inverted, center: normal
This parameter defines how the two LEDs (default: below the push buttons) will display object status.	

Note:

When selecting "LED object [2]" in the parameter window "Push buttons: Function of left LED" or "LED object [3]" in the parameter window "Push buttons: Function of right LED ", the appropriate objects (here: display object [2] and [3]) are added to the list of objects to assigning appropriate group addresses.

Product		Program	
no.	**Function**	**Object name**	**Type**
	DELTA BCU UP 116 (swit...	12 S2 On-off-toggle/Dim/Shu/Display 220F01	
0	On / off	Dimming on/off	1 Bit
1	Brighter / darker	Dimming	4 Bit
2	Display	Left LED - object[2]	1 Bit
3	Display	Right LED - object[3]	1 Bit