20 A1 Actuator-BCU Dimming 903602

Use of the application program

Product family: Input/output
Product type: Binary/binary
Manufacturer: Siemens

Name: Dimmer UP 525
Order no.: 5WG1 525-2AB01

Functional description

With the application program “20 A1 Actuator-BCU Dimming 903602”, it is possible to assign parameters to the output of the dimmer UP 525 and to the 4-fold push button DELTA profil that is connected to its physical external interface.
The four rockers of the push button can be assigned the following functions independently: switching (on/off/toggle/value), dimming (on/off or brighter/darker), controlling shutters, skylights and security gates etc., or recalling/programming scenes. Each rocker contact has its own communication object available. The LEDs can be parameterised for status display or as an orientation light.
The dimmer output offers the following functions: switching on/off, dimming, setting the brightness value, sending the dimming status (8 bit), sending the switching status (1 bit) and setting brightness limits.

Functions of the rockers

Switching

There is a separate communication object available for each rocker contact of the four rockers. It is therefore possible to switch up to eight different groups of luminaires. It is possible to set via parameters which switch function (on/off/toggle) is set when the rocker is pressed or released. An 8 bit value can also be assigned to each rocker contact. The corresponding value is sent when the rocker is pressed. It is therefore possible for a dimming actuator for example to be set to a defined value.

Dimming

It is possible to choose between two types of dimming: “Dimming with stop telegram” and “Dimming with cyclical sending”. A distinction is made between a long and short push button action. A switching command is sent after a short rocker operation while a dimming command to dim brighter or darker is sent after a long push button action.

Shutter control

A distinction is made between a short and long push button action. If the rocker is pressed briefly, a switching command for louvre adjustment is sent. The decision as to whether an Up or Down command is sent is dependent on whether the upper or lower rocker has been operated as well as the parameters selected. Skylights and security gates for example can be controlled in both directions using this parameter. (In this case the Up command corresponds to the Off command and the Down command corresponds to the On command). After a long push button action (the duration of which can be set) the shutters are either raised or lowered. If the rocker is pressed briefly (short rocker operation) while the shutter is moving, this is interpreted as a stop command and the shutter is halted. Otherwise the louvres are rotated in the corresponding direction after a short rocker operation.

Scene

Using the “Scene” function, users are able to reprogram a scene module themselves without changing the project design in ETS i.e. they can assign other brightness values or switching states to the individual groups of the respective scene. Two scenes can be recalled by pressing the rocker briefly (e.g. upper contact: scene 1, lower contact: scene 2) while a long rocker operation is used to program them. It is therefore possible to recall or save up to 8 scenes using the 4 rockers of the push button. The scene is recalled via a 1 bit switching command, whereby scene 1 is recalled with a “0” telegram and scene 2 is recalled with a “1” telegram. It is possible to specify in the parameters which telegrams are sent by the upper and lower rocker contacts.
The scene is saved via a 1 bit switching command, whereby scene 1 is saved with a “0” telegram and scene 2 is saved with a “1” telegram. An application with this type of function must also be used in the scene module. The application programs “12 C0 Scene 740701” and “12 C0 Scene 740801” are available. It is therefore possible to address 6 dimming groups or 6 switch/shutter groups.
Before programming a scene, the actuators concerned must be set to the required brightness values or switching states using the sensors provided. The scene modules that have been addressed are requested on receipt of a telegram to scan the current brightness values and switching states of the actuators and to store them in the corresponding scene. A long rocker operation is indicated by the LED lighting up. It is possible to specify the period that distinguishes a short and long push button action.

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LED
The push button has 5 LEDs. There are 4 communication objects available for the upper 4 LEDs of the push button. The LEDs can then either be used for displaying the switching states or as an orientation light, depending on the parameters assigned. The fifth (centre) LED serves as an orientation light.

Functions of the dimmer output

Switching on/off
The dimmer output can be switched on or off via On or Off commands.
The change in the brightness value (switched off or specific value) is carried out immediately on receipt of the switching command. Depending on the parameter settings, either a preset (adjustable) brightness value or the final dimming value (before switching off) is set on receipt of an On command. The adjustable brightness value may not be greater than the selected maximum value as the program does not limit the starting value.

Dimming
It is possible to set the “Dimming time”. On receipt of the step width, the actuator begins to change the brightness in the given direction at a set speed. Should a stop command be received before the end of the dimming process, the process is interrupted and the achieved brightness value is maintained.

Setting the brightness value
On receipt of a value telegram, the dimmer can be set to a defined value. It is possible to select whether the dimmer jumps or dims to this value.

Sending the dimming status (8 bit)
The current analogue brightness value of the dimmer is always made available via an 8 bit status object. The program also has an automatic sending mechanism for dynamically limiting the sending frequency. On the one hand, this dynamic limit should reduce the bus load and on the other hand it should react quickly to particular events. The status is sent immediately on receipt of a switching signal. However, on receipt of a signal to dim brighter/darker, the first signal is only sent after a delay of approx. 2 seconds. After each sending signal, the next sending time is calculated (exception: receipt of the switching signal). If the changes in brightness stop, the intervals between the sending periods are extended each time by 1 second. The maximum interval can be set (2 to 15 seconds). If there is no change in the brightness value before the next calculated sending time, the status is not sent and the interval is reset (2 seconds).

Sending the switching status (1 bit)
It is defined via a parameter whether the switching status is sent or not. If the switching state should be sent, it can also be defined whether the status is sent via the switching object or via another object (additional status object).

Brightness limits
The application program has 2 possibilities for limiting the brightness level.
A maximum and minimum brightness level can be set via the first limit. When dimming brighter, the maximum brightness level is the value set in the parameters. When dimming darker, the brightness value can only dim down to the minimum value selected. On receipt of a value signal, the signal is only accepted if the value lies between the minimum and maximum value.
With the second limit, it is possible to set a dimming range. If e.g. the parameters for the first limit are set to maximum value = 100% and minimum value = 0%, then the maximum brightness value is limited to 80% via the second limit (e.g. min = 10%, max = 80%).
The receipt of a value signal: 255 (100%) therefore corresponds to 80% brightness; the receipt of a value signal: 230 (90%) then corresponds to 73% brightness etc. This second limit is mainly used for hardware adaptation. It is therefore possible to limit the maximum and minimum control range for an object without restricting the permitted values.

Bus voltage recovery
It is possible to set the behaviour on bus voltage recovery via parameters.

Maximum number of group addresses:	38
Maximum number of associations:	38

Note

The view of the communication objects can be arranged individually i.e. this view can vary depending on the parameters selected.

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Assigning parameters to the rockers

Switch

Communication objects

Phys.Addr.		Program	
no.	Function	Object name	Type
1.01.014		20 A1 Actuator-BCU Dimming 903602	
0	On	Switch, Rocker A (upper rocker contact)	1 Bit
1	Off	Switch, Rocker A (lower rocker contact)	1 Bit
2	On	Switch, Rocker B (upper rocker contact)	1 Bit
3	Off	Switch, Rocker B (lower rocker contact)	1 Bit
4	On	Switch, Rocker C (upper rocker contact)	1 Bit
5	Off	Switch, Rocker C (lower rocker contact)	1 Bit
6	On	Switch, Rocker D (upper rocker contact)	1 Bit
7	Off	Switch, Rocker D (lower rocker contact)	1 Bit
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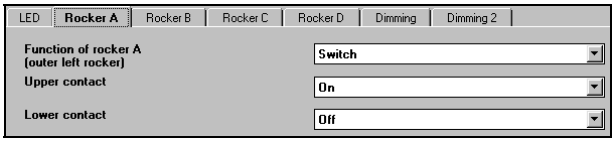
Obj	Function	Object name	Type	Flag
0	On	Switch, Rocker A (upper rocker contact)	1 Bit	CT
1	Off	Switch, Rocker A (lower rocker contact)	1 Bit	CT
The switching telegrams of the rocker are sent via the group addresses in these objects. It is possible to set via parameters which switching state is generated when the rocker is pressed or released. If “Toggle” is selected, all the central addresses that are also contained in the actuator must be entered in order to synchronise the sensor.				

Note

Objects 2-7 of rockers B-D correspond to the objects for the “Switch” function of rocker A and are therefore not described in detail.

Parameters



The function and parameters of rockers A-D are identical.

Parameters	Settings
Function of rocker A (outer left rocker)	**Switch** Shutter Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)
The function of the rocker is set via this parameter. The parameter window “Rocker A” changes depending on the function that is selected here and the relevant parameters are displayed with default settings. The object types of object [0] and object [1] change automatically in the object list (e.g. from “Switch 1 Bit” to “Dimming 4 Bit”).	
Upper contact	Off **On** Toggle 8-bit Value press: On, release: Off press: Off, release: On
Lower contact	**Off** On Toggle 8-bit Value press: On, release: Off press: Off, release: On
This parameter determines which switching value is sent via the corresponding switching object when the upper and lower rocker contacts are pressed or released. “On” or “Off”: Pressing the contact generates an On or Off telegram. There is no evaluation when the rocker is released. “Toggle”: The value in the switching object is inverted when the contact is pressed. There is no evaluation when the contact is released. “8-bit Value”: An adjustable 8 bit value is sent when the contact is pressed. When this setting is selected, an additional parameter is displayed where the value can be defined. There is no evaluation when the contact is released. “press: On, release: Off”: An On telegram is generated when the contact is pressed while releasing the contact produces an Off telegram. “press: Off, release: On”: An Off telegram is generated when the contact is pressed while releasing the contact produces an On telegram.	

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Dimming with stop telegram

Communication objects

Phys.Addr.		Program	
no.	Function	Object name	Type
1.01.014		20 A1 Actuator-BCU Dimming 903602	
0	On / Off	Dimming On / Off, Rocker A	1 Bit
1	Brighter / Darker	Dimming, Rocker A	4 Bit
2	On / Off	Dimming On / Off, Rocker B	1 Bit
3	Brighter / Darker	Dimming, Rocker B	4 Bit
4	On / Off	Dimming On / Off, Rocker C	1 Bit
5	Brighter / Darker	Dimming, Rocker C	4 Bit
6	On / Off	Dimming On / Off, Rocker D	1 Bit
7	Brighter / Darker	Dimming, Rocker D	4 Bit
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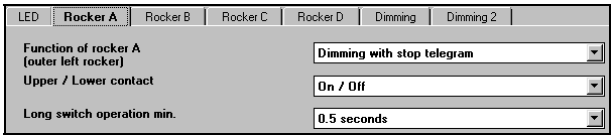
Obj	Function	Object name	Type	Flag
0	On / Off	Dimming On / Off, Rocker A	1 Bit	CT
The switching telegrams of rocker A are sent via the group addresses in this object. It is possible to set via parameters which switching state is generated when the upper or lower rocker contact is pressed. If “Toggle / Toggle” is selected, the central addresses that are also contained in the actuator must be entered in order to synchronise the sensor.				
1	Brighter / Darker	Dimming, Rocker A	4 Bit	CT
This object serves as a dimming object for rocker A and sends a dimming telegram after a long push button action. It is possible to set via parameters which dimming telegrams are generated when the upper or lower rocker contact is pressed.				

Note

Objects 2-7 of rockers B-D correspond to the objects for the function “Dimming with stop telegram” for rocker A and are therefore not described in detail.

Parameters



The function and parameters of rockers A-D are identical.

Parameters	Settings
Function of rocker A (outer left rocker)	Switch Shutter **Dimming with stop telegram** Dimming with cyclical sending Scene (recall / program)
The function of the rocker is set via this parameter. The parameter window “Rocker A” changes depending on the function that is selected here and the relevant parameters are displayed with default settings. The object types of object [0] and object [1] change automatically in the object list (e.g. from “Switch 1 Bit” to “Dimming 4 Bit”).	
Upper / Lower contact	**On / Off** Toggle / Toggle
This parameter determines the switching value that is sent via the object when the upper and lower rocker contacts are pressed briefly. “On / Off”: Pressing the upper contact generates an On telegram while an Off telegram is sent when the lower contact is pressed. “Toggle / Toggle”: The value in the switching object is inverted when either contact is pressed.	
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 time limit for a short/long rocker operation. If the rocker is pressed for longer than the set period, the push button detects a long rocker operation and sends dimming telegrams.	

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Dimming with cyclical sending

Communication objects

Phys.Addr.		Program	
no.	Function	Object name	Type
1.01.014		20 A1 Actuator-BCU Dimming 903602	
0	On / Off / Toggle	Dimming On / Off / Toggle, Rocker A	1 Bit
1	Brighter / Darker	Dimming, Rocker A	4 Bit
2	On / Off / Toggle	Dimming On / Off / Toggle, Rocker B	1 Bit
3	Brighter / Darker	Dimming, Rocker B	4 Bit
4	On / Off / Toggle	Dimming On / Off / Toggle, Rocker C	1 Bit
5	Brighter / Darker	Dimming, Rocker C	4 Bit
6	On / Off / Toggle	Dimming On / Off / Toggle, Rocker D	1 Bit
7	Brighter / Darker	Dimming, Rocker D	4 Bit
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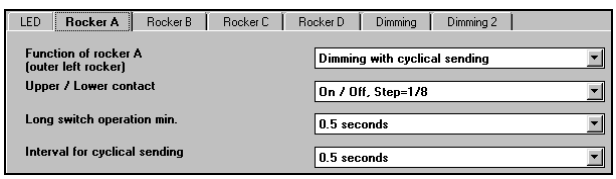
Obj	Function	Object name	Type	Flag
0	On / Off / Toggle	Dimming On / Off / Toggle, Rocker A	1 Bit	CWT
The switching telegrams of rocker A are sent via the group addresses in this object. It is possible to set via parameters which switching state is generated when the upper or lower rocker contact is pressed. If “Toggle / Toggle” is selected, the central addresses that are also contained in the actuator must be entered in order to synchronise the sensor.				
1	Brighter / Darker	Dimming, Rocker A	4 Bit	CT
This object serves as a dimming object for rocker A and sends a dimming telegram after a long push button action. It is possible to set via parameters which dimming telegrams are generated when the upper or lower rocker contact is pressed.				

Note

Objects 2-7 of rockers B-D correspond to the objects for the function “Dimming with cyclical sending” for rocker A and are therefore not described in detail.

Parameters



The function and parameters of rockers A-D are identical.

Parameters	Settings
Function of rocker A (outer left rocker)	Switch Shutter Dimming with stop telegram **Dimming with cyclical sending** Scene (recall / program)
The function of the rocker is set via this parameter. The parameter window “Rocker A” changes depending on the function that is selected here and the relevant parameters are displayed with default settings. The object types of object [0] and object [1] change automatically in the object list (e.g. from “Switch 1 Bit” to “Dimming 4 Bit”).	
Upper / Lower contact	On / Off, Step = 1/1 On / Off, Step = 1/2 On / Off, Step = 1/4 **On / Off, Step = 1/8** On / Off, Step = 1/16 On / Off, Step = 1/32 On / Off, Step = 1/64 Toggle / Toggle, adjustment = 1/1 Toggle / Toggle, adjustment = 1/4 Toggle / Toggle, adjustment = 1/8 Toggle / Toggle, adjustment = 1/16 Toggle / Toggle, adjustment = 1/32 Toggle / Toggle, adjustment = 1/64
This parameter determines which switching value is sent when the upper and lower contacts are pressed briefly. The change in the brightness value that is carried out by a dimming telegram when a long push button action is detected is also set here. For example, in the setting “Step = 1/8”, 8 dimming telegrams have to be sent in order to dim from 0% to 100%. “On / Off, Step = x”: A short operation of the upper contact generates an On telegram while an Off telegram is sent after the lower contact is pressed briefly. “Dim brighter” telegrams are sent if the upper contact is pressed for a long period while “Dim darker” telegrams are sent if the lower contact is pressed. “Toggle / Toggle, adjustment = x”: The value in the switching object is inverted after a short push button action.	
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 time limit for a short/long rocker operation. If the rocker is pressed for longer than the set period, the push button detects a long rocker operation and sends dimming telegrams.	

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Parameters	Settings
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
The repetition rate for cyclical sending after a long push button action is set here. The bus load should be taken into consideration when setting this interval.	

Shutter

Communication objects

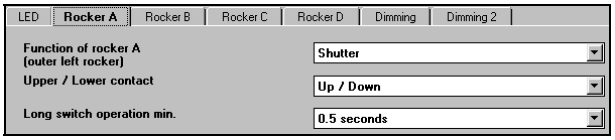
Phys.Addr.		Program	
no.	Function	Object name	Type
1.01.014		20 A1 Actuator-BCU Dimming 903602	
0	Open / Closed	Louvres, Rocker A	1 Bit
1	Up / Down	Shutter, Rocker A	1 Bit
2	Open / Closed	Louvres, Rocker B	1 Bit
3	Up / Down	Shutter, Rocker B	1 Bit
4	Open / Closed	Louvres, Rocker C	1 Bit
5	Up / Down	Shutter, Rocker C	1 Bit
6	Open / Closed	Louvres, Rocker D	1 Bit
7	Up / Down	Shutter, Rocker D	1 Bit

Obj	Function	Object name	Type	Flag
0	Open / Closed	Louvres, Rocker A	1 Bit	CWTU
This object sends a switching command for louvre adjustment when rocker A is pressed briefly. It is possible to set via parameters which switching command is generated when the rocker is pressed.				
1	Up / Down	Shutter, Rocker A	1 Bit	CWTU
When rocker A is pressed for a long period, this object sends a switching command to lower or raise the shutters. It is possible to set via parameters which switching command is generated when the upper or lower rocker contacts are pressed.				

Note

Objects 2-7 of rockers B-D correspond to the objects for the “Shutter” function of rocker A and are therefore not described in detail.

Parameters



The function and parameters of rockers A-D are identical.

Parameters	Settings
Function of rocker A (outer left rocker)	Switch **Shutter** Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)
The function of the rocker is set via this parameter. The parameter window “Rocker A” changes depending on the function that is selected here and the relevant parameters are displayed with default settings. The object types of object [0] and object [1] change automatically in the object list (e.g. from “Switch 1 Bit” to “Dimming 4 Bit”).	
Upper / Lower contact	**Up / Down** Down / Up
This parameter defines the function of the upper and lower rocker contacts. In the default setting, pressing the upper contact briefly opens the louvres by a step with an Off telegram. Pressing the lower contact closes the louvres by a step with an Off telegram. Pressing the upper contact for a long period raises the shutter with an Off telegram while pressing the lower contact lowers the shutter with an On 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
This parameter defines the time limit for a short/long rocker operation. If the rocker is pressed for longer than the set period, the push button detects a long rocker operation.	

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Scene

Communication objects

Phys.Addr.		Program	
no.	Function	Object name	Type
1.01.014		20 A1 Actuator-BCU Dimming 903602	
0	Recall	Scene, Rocker A	1 Bit
1	Save	Scene, Rocker A	1 Bit
2	Recall	Scene, Rocker B	1 Bit
3	Save	Scene, Rocker B	1 Bit
4	Recall	Scene, Rocker C	1 Bit
5	Save	Scene, Rocker C	1 Bit
6	Recall	Scene, Rocker D	1 Bit
7	Save	Scene, Rocker D	1 Bit
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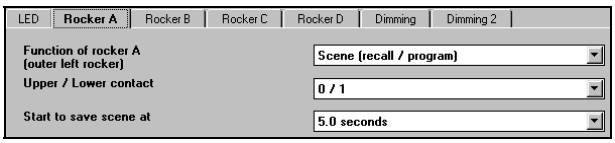
Obj	Function	Object name	Type	Flag
0	Recall	Scene, Rocker A	1 Bit	CWTU
The telegrams for recalling the scene are sent via the group address in this object. On receipt of the telegram, the scene module sends the stored brightness values of the scene via the group objects to the switch/dim actuators that have been addressed.				
1	Save	Scene, Rocker A	1 Bit	CWTU
The programming telegrams are sent via the group address in this object to the corresponding scene module.				

Note

Objects 2-7 of rockers B-D correspond to the objects for the “Scene” function of rocker A and are therefore not described in detail.

Scene

Parameters



The function and parameters of rockers A-D are identical.

Parameters	Settings
Function of rocker A (outer left rocker)	Switch Shutter Dimming with stop telegram Dimming with cyclical sending **Scene (recall / program)**
The function of the rocker is set via this parameter. The parameter window “Rocker A” changes depending on the function that is selected here and the relevant parameters are displayed with default settings. The object types of object [0] and object [1] change automatically in the object list (e.g. from “Switch 1 Bit” to “Dimming 4 Bit”).	
Upper / Lower contact	**0 / 1** 1 / 0
This parameter defines the sending signal when the rocker contacts are pressed. “0 / 1”: When the upper contact is pressed briefly, scene 1 is set with a “0” telegram by the scene modules that have been addressed. In the same way, scene 2 is set with a “1” telegram when the lower contact is pressed briefly. After a long push button action, these scene modules are requested on receipt of a telegram to scan the current brightness values and switching states of the actuators and to store them in the corresponding scenes. “1 / 0”: The assignment of scenes to the rocker contacts is inverted in this setting.	
Start to save scene at	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 indicates the length of time that the rocker must be operated to distinguish between recalling the scene and switching to programming mode. Shorter push button action than the set time: The scene is recalled. Longer push button action than the set time: The scene is switched to programming mode.	

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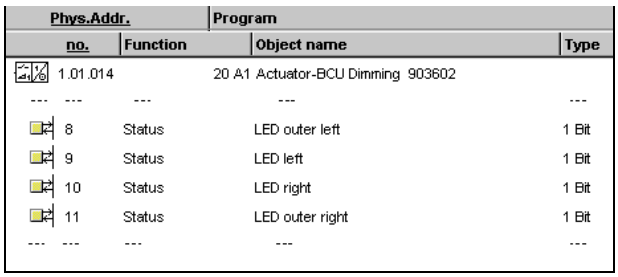
LED

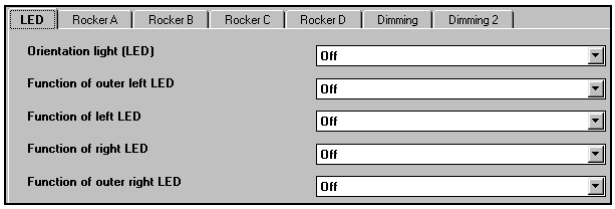
Communication objects



Obj	Function	Object name	Type	Flag
8	Status	LED outer left	1 Bit	CRW
9	Status	LED left	1 Bit	CRW
10	Status	LED right	1 Bit	CRW
11	Status	LED outer right	1 Bit	CRW
The switching telegrams are received via the group addresses in these objects when the 4 LEDs are used for status display. If the parameter settings “On” or “Off” are selected, these objects are not displayed and have no function.				

LED

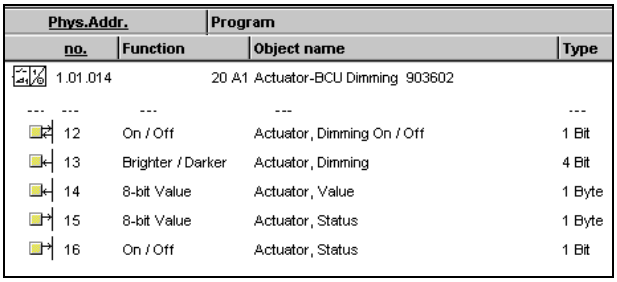
Parameters



Parameters	Settings
Orientation light (LED)	**Off** On
With this parameter, the lower LED can be switched off or used as an orientation light.	
Function of outer left LED	**Off** On Status (via separate object) Inverted (via separate object)
Function of left LED	**Off** On Status (via separate object) Inverted (via separate object)
Function of right LED	**Off** On Status (via separate object) Inverted (via separate object)
Function of outer right LED	**Off** On Status (via separate object) Inverted (via separate object)
With these parameters, the LEDs can be parameterised as an orientation light or for status display. When the LEDs are used for status display, there is a separate object available for each LED. The status can also be displayed as inverted.	

Assigning parameters to the dimmer output

Communication objects



Obj	Function	Object name	Type	Flag
12	On / Off	Actuator, Dimming On / Off	1 Bit	CRWT
The switching output of the dimmer can be addressed via this object. The current switching state can also be queried. Changes in the current switching state due to dimming or setting the brightness value are also taken into consideration.				
13	Brighter / Darker	Actuator, Dimming	4 Bit	CW
The dimming telegram for dimming brighter or darker is received via this object.				
14	8-bit Value	Actuator, Value	1 Byte	CW
The brightness value that is to be set is received via this object.				
15	8-bit Value	Actuator, Status	1 Byte	CRT
This object serves as a sending object for the current status (brightness value) of the switch/dim actuator which can be read out via the bus (e.g. for visualisation purposes).				
16	On / Off	Actuator, Status	1 Bit	CRT
The current switching state of the dimmer can be queried via this object. Changes in the current switching state due to dimming or setting the brightness value are also taken into consideration. This object only appears if the parameter “Send switch status via” has been set to “separate Status object”.				

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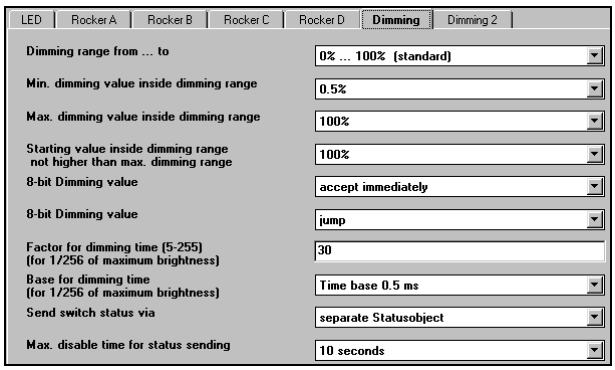
Dimming_1

Parameters



Parameters	Settings
Dimming range from … to	**0% ... 100% (standard)**, 0% ... 90%, 0% ... 80%, 0% ... 70%, 0% ... 60%, 0% ... 50%, 10% ... 100%, 10% ... 90%, 10% ... 80%, 10% ... 70%, 10% ... 60%, 10% ... 50%, 20% ... 100%, 20% ... 90%, 20% ... 80%, 20% ... 70%, 20% ... 60%, 30% ... 100%, 30% ... 90%, 30% ... 80%, 30% ... 70%, 40% ... 100%, 40% ... 90%, 40% ... 80%, 50% ... 100%, 50% ... 90%
The dimming range (second limit) can be defined via this parameter. A maximum and minimum value can be set whereby the actual value is compressed and raised with an offset. It can therefore be adapted to the available hardware in special cases.	
Min. dimming value inside dimming range	0% (switching Off via dimming possible), **0.5%,** 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45%, 50%, 60%, 70%
The minimum dimming value of the first limit can be set via this parameter. When dimming darker, only this value can then be accepted as the minimum brightness value.	
Max. dimming value inside dimming range	**100%**, 95%, 90%, 85%, 80%, 75%, 70%, 65%, 60%, 55%, 50%, 40%, 30%
The maximum dimming value of the first limit can be set via this parameter. When dimming brighter, only this value can then be accepted as the maximum brightness value.	

Parameters	Settings
Starting value inside dimming range not higher than max. dimming range	**100%**, 95%, 90%, 85%, 80%, 75%, 70%, 65%, 60%, 55%, 50%, 40%, 30%, 20%, 10%, last value
In the setting “final value”, 100% is fundamentally used as a brightness value after a download. The value set in the parameters is ignored and only becomes “active” once the actuator has been switched on/off for the first time. Note: This value only comes into effect once object 12 “Dimming On / Off” has been activated.	
8-bit Dimming value	**accept immediately** only accept on On
This parameter defines whether the switch/dim actuator, when it is in the Off state, carries out a dimming value telegram that has been received via the bus (“accept immediately”) or whether the dimming value is stored and this dimming action is carried out on receipt of the next On telegram.	
8-bit Dimming value	**jump** dimming
This parameter defines whether the switch/dim actuator immediately accepts the brightness value of a dimming value telegram that has been received via the bus (“jump”) or triggers the new value at a rate defined by the dimming time.	
Factor for dimming time (5-255) (for 1/256 of maximum brightness)	**30**
Base for dimming time (for 1/256 of maximum brightness)	**Time base 0.5 ms** Time base 8.0 ms Time base 130 ms Time base 2.1 sec Time base 33 sec
The dimming time is set using the two parameters “Base” and “Factor” (Dimming time = Factor x Base). It determines the period that the dimming is carried out by 1/256.	
Send switch status via	On / Off object **separate Status object** not sending
The sending object for the switching state can be defined via this parameter.	
Max. disable time for status sending	2 seconds 3 seconds 4 seconds 5 seconds 7 seconds **10 seconds** 15 seconds
The maximum disable time for the dynamic sending of the value status can be set via this parameter. When using brightness control or several dimmers, the highest possible value should be selected (10 or 15 seconds), as the bus load can otherwise be too high.	

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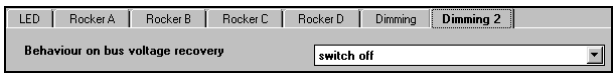
20 A1 Actuator-BCU Dimming 903602

Dimming_2

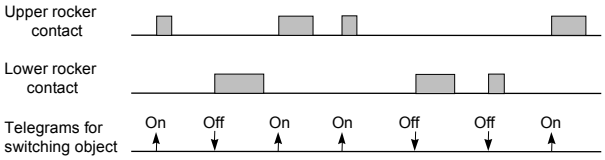
Parameters



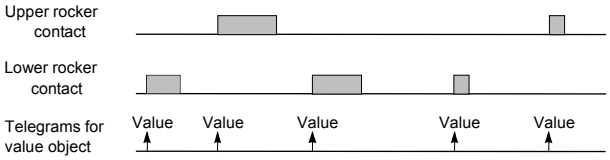
Parameters	Settings
Behaviour on bus voltage recovery	**switch off** switch on as before bus voltage failure
This parameter sets the behaviour of the output on bus voltage recovery.	

Timing diagrams: Example for a rocker

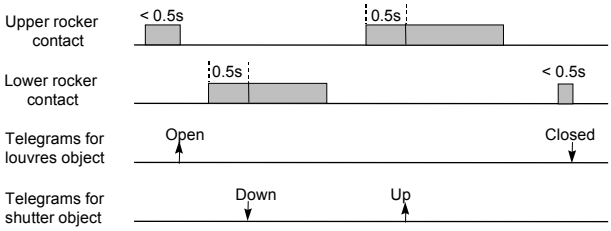
Configured for switch function: upper “On”, lower “Off”



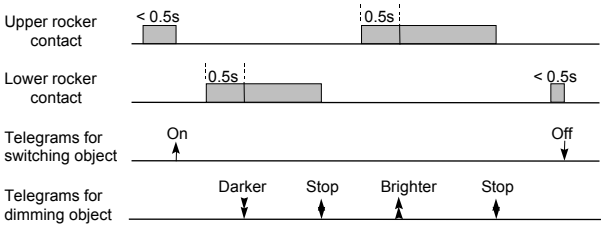
Configured for switch function: “8-bit Value”



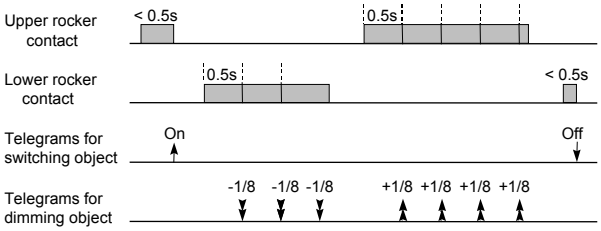
Configured for shutter: upper “Up”, lower “Down”



Configured for dimming with stop telegram



Configured for dimming with cyclical sending



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