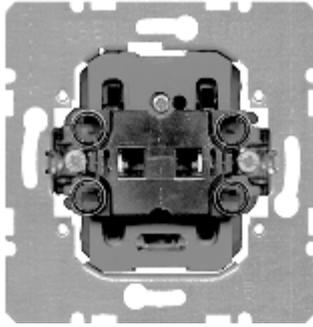


**Push button BCU 2gang,
Flush-mounted (Up)
75142000**

**Technical
Documentation**



The push button BCU 2gang is a bus coupling unit combined with two micro switches and a mechanical recording unit for rockers in all Berker standard and area programmes in the module system. Depending on the parameter settings, when the switch is pressed switch or switch/dim or shutter control telegrams are sent into the system. The value of the communication objects can be displayed through 2 status LEDs.

General technical data:

Terminal **EIB**
Terminal control element:
Protection mode:
Protection class:
Test mark
Ambient temperature:
Storage temperature:
Mounting position:

plug-in terminal
push-on with rocker adapter
IP 20 (under EN 60529)
III (under IEC 40)
EIB
- 5°C to + 45°C
-25°C to +70°C
any (not with 230 V appliances or leads in one outlet)
none
installation in appliance connector boxes (∅ 60 mm, 40 mm deep) or in combined wall and joint boxes (∅ 60 mm, 60 mm deep)

Minimum clearances:
Fixing method:

Supply instabus EIB:

Voltage:
Terminal:

24 V DC (+6 V / -4 V)
instabus supply terminal and branch terminal

Behaviour on voltage failure:

Bus voltage only:

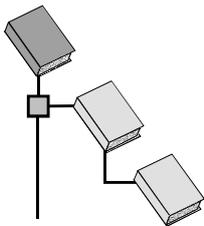
No telegrams sent.

Behaviour on voltage return:

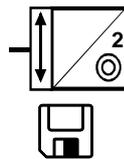
Bus voltage only:

No telegrams sent.

Product management



Gebr. Berker
 Berker
 Push button
 Push button 2gang

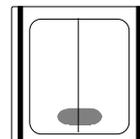
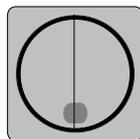
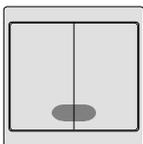


Push button 2gang, Flush-mounted

Order no. 75142000

Switching, dimming, shutter 105701

General information



The push button BCU 2gang is fitted with 2 LEDs. In combination with the serial rocker with lens (take note of the design!) along with the representation of the object and switching status the switch can also be used as orientation lighting. The two LEDs are designed with separate objects for linking with functions (group addresses).

Application characteristics



Push button BCU 2gang, Flush-mounted (Up) 75142000

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- Multiple applications for switching, dimming, shutter control
- Switching function with changeover possible (TOGGLE)

- Status LEDs with own communication objects
- Area dimming possible

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No. of group addresses (max.): 4
No. of associations (max.): 5

Parameter description:

Multiple applications enable different functions to be parameterised with the help of an application. **We recommend that the basic parameters are set to the required function before the group addresses are allocated!**

Communication objects function: Switching

Application: Switching, dimming, shutter control 105701						
	Obj	Function	Name	Type	Prio	Flag
<input type="checkbox"/>	0	Switching	Left push button	1 bit	Auto	C W R T
<input type="checkbox"/>	1	Switching	Right push button	1 bit	Auto	C W R T
<input type="checkbox"/>	2*	Indication	Left status LED	1 bit	Auto	C W R T
<input type="checkbox"/>	3*	Indication	Right status LED	1 bit	Auto	C W R T

- dynamic object

Objects 0,1; Switching (with left or right push button):

When the corresponding rocker is activated, sends a switching telegram with the sending group address. These and other allocated group addresses can also be received to change the object value.

Object 2,3; Indication (of left or right status LED) (dynamic objects):

If the parameter "**Function of the status LED for object n**" is selected, corresponding objects are opened that enable allocation with group addresses (typically one group address/object). In this case, the LED only follows the status of the corresponding object and is independent of the push button operation.

Parameter description for function: Switching

Push button	
Function of the push buttons	Switching Shutter control Dimming with stop telegram Dimming with telegram repetition
Command at operating the N push button	ON, OFF, TOGGLE
Function of the N status LED	always OFF always ON for object 0 for object 1 for object 2 or 3
Status LED indication	left normal, right normal left inverted, right inverted left normal, right inverted left inverted, right normal

Command at operating the N push button: each rocker switch can be planned separately. If the push button BCU is used to control a function, we recommend that you use the left push button to transmit the ON command, and the right push button to send the OFF command.

If you want to trigger two functions with the help of the push buttons, select **TOGGLE function**. The "TOGGLE" function inverts the object value, and therefore the information content of the telegram, each time it is activated. If the corresponding actuators are controlled by other functions, e.g. a central



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Part 2**

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switching operation, the push button BCU has to be "informed" of these functions. These group addresses have to be fed back to the switch object as receiving group addresses.

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Function of the N status LED: the two status LEDs enable individual settings: always ON for pilot lighting (rockers with lenses) or always (rocker without lens). Depending on the parameters, the status LEDs can also be allocated directly to the communication objects.

A function of the status LEDs independent of the buttons is possible by setting the parameters "for object 2 or 3". In this case, only the correspondingly received group address has an effect on the LED.

Status LED indication: normal means that LEDs are on if object value = 1

Communication objects function:

Shutter control

Application: Switching, dimming, shutter 105701						
	<i>Obj</i>	<i>Function</i>	<i>Name</i>	<i>Type</i>	<i>Prio</i>	<i>Flag</i>
	0	Step operation	Push button	1 bit	Auto	C W R T
	1	Move operation	Push button	1 bit	Auto	C W R T
	2*	Indication	Left status LED	1 bit	Auto	C W R T
	3*	Indication	Right status LED	1 bit	Auto	C W R T

* dynamic objects

Objects 0; Step operation: if the appropriate rocker is pressed, sends a switch telegram (1 bit) with the group address. This controls the assigned actuator into the inching mode. The group address linked with the object is also used to stop the drive during the active move operation (drive running) if a button is pressed again.

Objects 1; Move operation: controls the linked drive into the latching function. The drive moves to the limit switch or is stopped prematurely through the reception of a step command.

Object 2,3; Indication (dynamic objects):

If the parameter "**Function of the left or right status LED for object n**" is selected, corresponding objects are opened that enable allocation with group addresses (typically one group address/object). In this case, the LED only follows the status of the corresponding object and is independent of the push button operation.

Parameter description for function: Shutter control



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Push buttons	
Function of the push buttons	Switching Shutter control Dimming with stop telegram Dimming with cyclical transmission
Command operating the push buttons	left = UP, right = DOWN left = DOWN, right = UP
Time between step and move operation	300 msec, 400 msec, 500 ms , 600 msec....6sec, 7sec
Function of the N status LED	always OFF always ON for object 0 for object 1 for object 2 or 3
Status LED indication	Left normal, right normal Left inverted, right inverted Left normal, right inverted Left inverted, right normal

 **Command operating the push buttons:** The push button BCU 2gang enables the direction of rotation of a group of motorised drives to be controlled manually. The parameter enables a customer-oriented setting of the control area. Transmission of an UP telegram is shown with the telegram content 0, and a DOWN telegram with 1.

 **Time between step and move operation:** when motorised drives are controlled manually a difference is made between 2 operating modes (sub-functions): 1. inching = step operations, and 2. latching mode = move operations. Both operating modes are supported by separate objects. The control function decides on the telegram to be sent by means of the activation duration: if the activation during is less than 500 ms (standard value), a step "Inching mode" telegram is sent. A longer activation generates a move telegram with the contents "latching". After the information "latching" has been sent, pressing the operator interface generates the command "Stop" and the drive stops. This is carried out through the step object. This means that the step object must always be assigned with a corresponding group address.

 **Function of the N status LED:** the two status LEDs enable individual settings: always ON for orientation lighting (rockers with lenses) or always (rocker without lens). Depending on the parameters, the status LEDs can also be allocated directly to the communications objects. A function of the status LEDs independent of the buttons is possible by setting the parameters "for object 2 or 3". In this case, only the correspondingly received group address has an effect on the LED.

 **Status LED indication:** normal means that LEDs are on if object value = 1.

Communication objects for functions:

**Dimming with stop telegram
Dimming with telegram repetition**



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Application: Switching, dimming , Venetian blind 105701						
	Obj	Function	Name	Type	Prio	Flag
<input type="checkbox"/>	0	Switching	Push button	1 bit	Auto	C W T
<input type="checkbox"/>	1	Dimming	Push button	4 bit	Auto	C W T
<input type="checkbox"/>	2*	<i>Indication</i>	<i>Left status LED</i>	<i>1 bit</i>	<i>Auto</i>	<i>C W T</i>
<input type="checkbox"/>	3*	<i>Indication</i>	<i>Right status LED</i>	<i>1 bit</i>	<i>Auto</i>	<i>C W T</i>

* *dynamic objects*

Objects 0; Switching: when the appropriate rocker is pressed sends a switch telegram (1 bit) with the group address. This controls allocated actuator and switches it on.

Objects 1; Dimming: Controls the brightness of the connected dimming actuators through a 4-bit control function.

Object 2,3; Indication (dynamic objects):

If the parameter "**Function of l/r status LED for object n**" is selected, corresponding objects are opened that enable allocation with group addresses (typically one group address/object). In this case, the LED only follows the status of the corresponding object and is independent of the push-button operation.

Parameter description for function: Dimming with stop telegram

Push button	
Function of the push buttons	Switching Shutter control Dimming with stop telegram Dimming with telegram repetition
Command operating the push buttons	left = brighter (ON), right = darker (OFF) left = brighter (TOG), right = darker (TOG)
Time between switching and dimming	300 ms, 400 ms, 500 ms , 600 ms....6s, 7s
Function of the N status LED	always OFF always ON for object 0 for object 2 or 3
Status LED indication	Left normal, right normal Left inverted, right inverted Left normal, right inverted Left inverted, right normal

 **Command operating the push buttons:** The push button BCU enables manual brightness controls of a group of actuators / dimmer actuators. The parameter enables a customer-oriented setting of the control interface. Two operating concepts are supported: separate ON and OFF and/or brighter/darker on a different rocker, and a changeover function in combination with ON / OFF for each rocker with separate controls for brightness.

 **Time between switching and dimming:** with manual controls for dim actuators we differentiate between two operating modes (sub-functions) as follows: 1. Switching mode ON / OFF (1 bit) and brightness controls BRIGHTER / DARKER (4 bits). Each operating mode is supported through separate objects. The control function decides on the telegram to be sent by means of the activation duration: if the activation during is less than 500 ms (standard value), a "Switching mode" telegram is sent. A longer activation generates a telegram with the contents "Dim by 100%". If the activation is then released, another telegram is sent that is evaluated by the dimmer actuators as "Stop dimming process".

Parameter description for function: Dimming with stop telegram

 **Function of the N status LED:** the two status LEDs enable individual settings: always ON for orientation lighting (rockers with lenses) or always (rocker without lens). Depending on the parameters, the status LEDs can also be allocated directly to the communications objects.

A function of the status LEDs independent of the buttons is possible by setting the parameters "for object 2 or 3". In this case, only the correspondingly received group address has an effect on the LED.

 **Status LED indication:** normal means that LEDs are on if object value = 1.



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Parameter description for function: Dimming with telegram repetition:

Parameter: push button	
Function of the push buttons	Switching Venetian blind Dimming with stop telegram Dimming with telegram repetition
Dimming brighter / darker by	1.5 %, 3%, 6%, 12.5% , 25 %, 50 %, 100 %
Command operating the push buttons	left = brighter (ON), right = darker (OFF) left = brighter (TOG), right = darker (TOG)
Time between switching and dimming	300 ms, 400 ms, 500 ms, 600 ms...6s, 7s
Time between two telegrams	300 ms, 400 ms, 500 ms , 600 ms...6s, 7s
Function of the N status LED	always OFF always ON for object 0 for object 2 or 3
Status LED indication	left normal, right normal left inverted, right inverted left normal, right inverted left inverted, right normal

 **Dimming brighter / darker by:**  **Time between two telegrams:** dimming with telegram repeat is mainly used where several actuators are controlled in different lines. Because of the coupler feature of placing telegrams in a buffer, it would not otherwise be possible to guarantee an even setting of the actuators. The actuator in the adjacent line would receive the stop telegram later and would therefore interrupt the dimming process in the corresponding actuator later.

The multiple transmission of the dimming range telegram (e.g. every 500 ms by 12.5 %) during activation ensures troublefree setting of the equipment in line-overlapping data exchange.

The smaller the selected range (min. 1.5 %), the more precise the setting quality. However, in this case we recommend keeping the time between two telegrams relatively short (e.g. 300 ms). This leads to an increased bus load, but this can in general be neglected.