Push button 2gang standard flush-mounted 751623xx

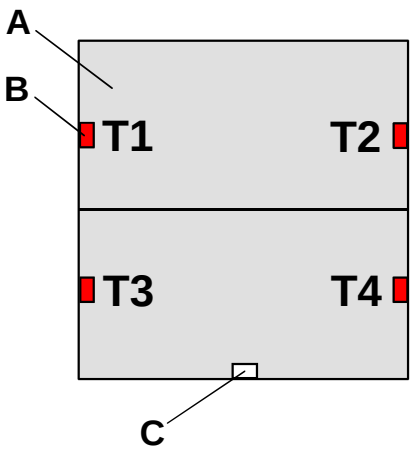
Technical Documentation

Product name:	Push button 2gang standard
Design:	flush-mounted device (uP)
ETS search path:	Push button / Push button 2gang / Push button 2gang standard

Functional description:

The push button 2gang standard is plugged onto a flush-mounted bus coupling unit (BCU) (cf. connection diagram). After a press on the key, the push button sensor will transmit software-dependent telegrams to the KNX / EIB. These may be telegrams for switching, push button operation, dimming or for shutter control. It is also possible to program value transmitter functions such as dimming value transmitter or light-scene extension units. A white operation LED can serve as orientation lighting.

Layout



Dimensions

Width: 70 mm
Height: 55 mm
Depth: 13 mm (without PEI)

Controls

A: 2 rockers or 4 push buttons
(position: left / right)
B: 2 x 2 status-LED (red)
C: 1 x operation-LED (white)

Technical Data

Type of protection	IP 20
Safety class	III
Mark of approval	KNX / EIB
Ambient temperature:	-5 ℃ ... +45 ℃
Storage / transport temperature	-25 ℃ ... +70 ℃ (storage above +45 ℃ reduces the lifetime)
Mounting position	any
Minimum distances:	none
Type of fastening	plugging onto flush-mounted BCU
KNX / EIB supply	
Voltage	21 – 32V DC (SELV) via flush-mounted BCU
Power consumption:	typically 150 mW
Connection:	2 x 5 pole pin contact strip
External supply	---

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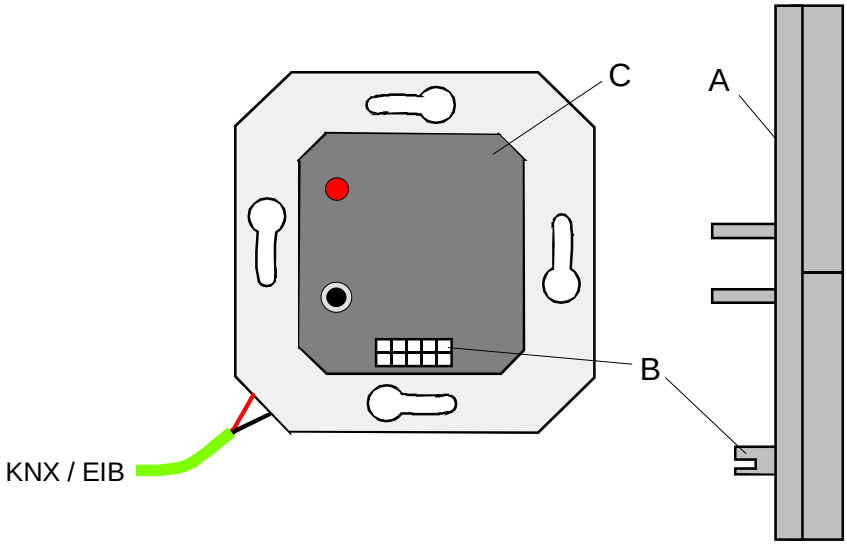
(Subject to prior change)

Response to bus voltage failure	
Bus voltage only:	object values are deleted, LEDs extinguished
Response on return of bus voltage:	
Bus voltage only:	no reaction
Input:	---
Output:	---

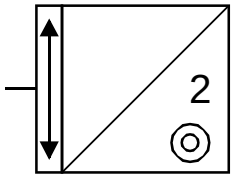
Connection and terminals:



A: push button standard 2gang
B: physical external interface (PEI)
C: bus coupling unit (BCU)

Hardware remarks

- ---

Software description			
ETS search path Push button / Push button 2gang / Push button 2gang standard			**ETS symbol** 
PEI type	04 $_{Hex}$	4 $_{Dez}$	2 inputs / 2 outputs

Applications:

No.	Summarized description:	Name:	Version:
1	Switching, acknowledge	Switching, acknowledge 100A03	0.3
2	Dimming	Dimming 102A03	0.3
3	Shutter	Shutter 102B03	0.3
4	Dimming / shutter	Dimming / shutter 103A03	0.3
5	Switching / dimming	Switching / dimming 103C03	0.3
6	Switching / shutter	Switching /shutter 103B03	0.3
7	Switching / pushing	Switching / pushing 103403	0.3
8	Value transmitter	Value transmitter 101C03	0.3

Application:	1. Switching, acknowledge 100A03		
Executable from mask version:	1.0		
Number of addresses (max):	8	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	9	**maximum length of table:**	17
Communication objects	2		

Object	Function	Name	Type	Flag
0	Switching	Push button 1 and 2	1 bit	C, W, T
1	Switching	Push button 3 and 4	1 bit	C, W, T

Object description

Objects:

0 - 1 Switching: 1-bit object for the transmission of switching telegrams (ON, OFF)

Scope of functions

- Function of operating LED and of status LED parameterizable
- Command on key-press parameterizable (ON, OFF)

Parameters

Description:	Values:	Remarks:
General		
Function of the operation LED	OFF **ON**	Defines the status of the operation LED.
Light duration of the status LED at operation indication	0.75 s 1.5 s 2.25 s **2.7 s** 3.0 s 4.5 s 6.0 s 10s 15 s 20 s	Defines the time during which the status LEDs of rockers 1 and 2 are on in case of a positive acknowledgement from an addressed actuator.
Command at operation of the left push button	OFF **ON**	Defines the command transmitted on pressing of push button 1/3.
Command at operation of the right push button	**OFF** ON	Defines the command transmitted on pressing of push button 2/4.
Push button 1 and 2		
Function of status LED	OFF **ON**	Defines the status of the status LED.
Push button 3 and 4		
Function of status LED	OFF **ON**	Defines the status of the status LED.

Software remarks

- The status LED is on for a parameterizable time in case of a positive acknowledgement from an addressed actuator. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated, but the corresponding status LED is not lit up.

Application:	2. Dimming 102A03		
Executable from mask version:	1.0		
Number of addresses (max):	6	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	6	**maximum length of table:**	12
Communication objects	4		

Object	Function	Name	Type	Flag
0	Switching	Push button 1 and 2	1 bit	C, W, T
1	Switching	Push button 3 and 4	1 bit	C, W, T
2	Dimming	Push button 1 and 2	4 bit	C, T
3	Dimming	Push button 3 and 4	4 bit	C, T

Object description

Objects:

0 - 1 Switching: 1-bit object for the transmission of switching telegrams (ON, OFF)
2 - 3 Dimming: 4-bit object for change of relative brightness between 0 and 100 %

Scope of functions

- Function of operating LED and of status LED parameterizable

Parameters		
Description:	**Values:**	**Remarks:**
General		
Function of the operation LED	OFF **ON**	Defines the status of the operation LED.
Function of the status LED	OFF **ON**	Defines the status of the status LED.

Software remarks

- The status LED indicates the current status of the switching object. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated and the corresponding status LED is lit up.

Application:	3. Shutter 102B03		
Executable from mask version:	1.0		
Number of addresses (max):	8	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	8	**maximum length of table:**	16
Communication objects	4		

Object	Function	Name	Type	Flag
0	Step operation	Push button 1 and 2	1 bit	C, W, T
1	Step operation	Push button 3 and 4	1 bit	C, W, T
2	Move operation	Push button 1 and 2	1 bit	C, W, T
3	Move operation	Push button 3 and 4	1 bit	C, W, T

Object description

Objects:

0 – 1	Step operation	1-bit object for step (short-time) operation of a shutter
2 - 3	Move operation	1-bit object for move (long-time) operation of a shutter

Scope of functions

- Function of operation LED parameterizable

Parameters

Description:	Values:	Remarks:
General		
Function of the operation LED	OFF **ON**	Defines the status of the operation LED.

Application:	4. Dimming/shutter 103A03		
Executable from mask version:	1.1		
Number of addresses (max):	6	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	4	**maximum length of table:**	10
Communication objects:	4		

Object	Function	Name	Type	Flag
0	Switching	Push buttons	1 bit	C, W, T
1	Dimming	Push buttons	4 bit	C, T
2	Step operation	Push buttons	1 bit	C, W, T
3	Move operation	Push buttons	1 bit	C, W, T

Object description

Objects:

0	Switching:	1-bit object for the transmission of switching telegrams (ON, OFF)
1	Dimming:	4-bit object for change of relative brightness between 0 and 100 %
2	Step operation	1-bit object for step (short-time) operation of a shutter
3	Move operation	1-bit object for move (long-time) operation of a shutter

Scope of functions

- Function of operation LED and ON-time of status LED in case of operation indication and "Dimming" function parameterizableStatus indication with "Dimming" function possible
- Push button 1and 2 as a function of push button 3and 4 (or vice versa) parameterizable as dimming or shutter sensor
- Key functions (ON/brighter OFF/darker or UP / DOWN) can be parameterized
- Time between switching and dimming, dimming step and transmission of stop telegrams possible with dimming sensor
- Time between two telegrams and number of steps before continuous run (slat adjustment) presettable in shutter operation

Parameters

Description:	Values:	Remarks:
General		
Function of the operation LED	OFF **ON**	Defines the status of the operation LED.
Configuration of push buttons	**Upper buttons: dimming, lower buttons: shutter** Upper buttons: shutter, lower buttons: dimming	Defines the function of the individual rockers.
Function: dimming		
Function of the status LED		Defines the operation of the status LED.
	Status indication	The status LED indicates the status of the switching object.
	Operation indication	The status LED light up when a key is pressed.
	Permanently OFF	The status LED is always off.
	Permanently ON	The status LED is always on

Light duration of the status LED at operation indication	0.75 s; 2.25 s; **3 s**, 4.5 s; 6 s; 10 s; 15 s	Defines the time during which the status LED is on when a key is pressed. Only if "Status LED function = Operation indication
Function of push buttons	**left = brighter (ON)** **right = darker (OFF)** left = darker (OFF) right = brighter (ON)	Defines the command transmitted on pressing of the keys.
Time between switching and dimming, base	**130 ms**; 260 ms; 520 ms; 1 s; 2.1 s; 4.2 s; 8,4 s; 17 s; 34 s 1.1 min; 2.2 min; 4.5 min; 9 min; 18 min; 35 min; 1.2 h	Defines the time base for a key-press to send a telegram Time = base • factor
Time between switching and dimming, factor (2...127)	2 ... 127; **3**	Defines the time factor for a key-press to send a dimming telegram Time = base • factor Presetting: 130 ms • 3 = 390 ms
Dimming brighter by	**100 %** 6 % 50 % 3 % 26 % 1.5 % 12.5 %	Defines the maximum dimming step performed on reception of a relative dimming telegram (brighter).
Dimming darker by	**100 %** 6 % 50 % 3 % 26 % 1.5 % 12.5 %	Defines the maximum dimming step performed on reception of a relative dimming telegram (darker).
Send stop telegram ?	**YES** NO	Defines whether a dimming procedure in progress is to stop when the key is released (YES).
Function: shutter		
Function of push buttons	**left = UP, right = DOWN** left = DOWN, right = UP	Defines the command transmitted on pressing the keys.
Number of steps before move operation (1...30)	1 ... 30; **1**	A step (short-time) telegram permits adjusting the slats of a shutter. This parameter defines how many short-time telegrams are transmitted before a continuous run (MOVE) after a long key-press.
Time between two telegrams, base	0.5 ms; 8 ms; **130 ms** 2.1 s; 33 s	Defines the time base between two telegrams. (Time between STEP – STEP or between STEP – MOVE) Time = base • factor

Time between two telegrams, factor (2...255)	2 ... 255; **10**	Defines the time factor between two telegrams. (Time between STEP – STEP or between STEP – MOVE) Time = base • factor Presetting: 130 ms • 10 = 1.3 ms

Software remarks

- For editing all of the parameters, the access must be set to "full access".
- The status LED indicates either the current status of the switching object or a key-press. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated and the corresponding status LED is lit up.

Application:	7. Switching / dimming 103C03		
Executable from mask version:	1.1		
Number of addresses (max):	7	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	8	**maximum length of table:**	15
Communication objects:	4		

Object	Function	Name	Type	Flag
0	Switching	Key left	1 bit	C, W, T
1	Switching	Key right	1 bit	C, W, T
2	Switching (dimming)	Rocker	1 bit	C, W, T
3	Dimming	Rocker	4 bit	C, T

Object description

Objects:

0 - 2	Switching:	1-bit object for the transmission of switching telegrams (ON, OFF)
3	Dimming:	4-bit object for change of relative brightness between 0 and 100 %

Scope of functions

- Function of operation LED and ON-time of status LED in case of operation indication parameterizable
- Status indication possible
- Rocker 1 as a function of rocker 2 (or vice versa) parameterizable as switching or dimming sensor
- Key functions (ON / OFF / TOGGLE or ON/brighter OFF/darker can be parameterized
- Time between switching and dimming, dimming step and transmission of stop telegrams possible with dimming sensor

Parameters

Description:	Values:	Remarks:
General		
Function of the operation LED	OFF **ON**	Defines the status of the operation LED.
Configuration of push buttons	**Upper buttons: dimming lower buttons: switching** Upper buttons: switching lower buttons: dimming	Defines the function of the individual rockers.
Function: switching		
Function of status LED		Defines the operation of the status LED.
	Status indication	The status LED indicates the status of the switching object.
	Operation indication	The status LED light up when a key is pressed.
	Permanently OFF	The status LED is always off.
	Permanently ON	The status LED is always on.
Light duration of the status LED	0.5 s; 1 s; **2.1 s**; 4.2 s; 8.4 s	Defines the time during which the status LED is on when a key is pressed. Only if "Status LED function = Operation indication").

Command at operation left push button	push = ON, release = ON push = ON, release = OFF **push = ON, release = ---** push = OFF, release = ON push = OFF, release = OFF push = ON, release = --- push = TOGGLE, release = TOGGLE push = TOGGLE, release = --- push = ---, release = ON push = ---, release = OFF push = ---, release = TOGGLE push = ---, release = ---	Defines the command transmitted on pressing or on releasing of left keys.
Command at operation right push button	push = ON, release = ON push = ON, release = OFF push = ON, release = --- push = OFF, release = ON push = OFF, release = OFF **push = OFF, release = ---** push = TOGGLE, release = TOGGLE push = TOGGLE, release = --- push = ---, release = ON push = ---, release = OFF push = ---, release = TOGGLE push = ---, release = ---	Defines the command transmitted on pressing or on releasing of right keys.
Function: dimming		
Function of status LED		Defines the operation of the status LED.
	Status indication	The status LED indicates the status of the switching object.
	Operation indication	The status LED light up when a key is pressed.
	Permanently OFF	The status LED is always off.
	Permanently ON	The status LED is always on
Light duration of the status LED	0.5 s; 1 s; **2.1 s**; 4.2 s; 8.4 s	Defines the time during which the status LED is on when a key is pressed. Only if "Status LED function = Operation indication").
Key function	**left = brighter(ON)** **right = darker(OFF)** left = darker(OFF) right = brighter(ON)	Defines the command transmitted on pressing of the keys.

Time between switching and dimming, base	**130 ms**; 260 ms; 520 ms; 1 s; 2.1 s; 4.2 s; 8.4 s; 17 s; 34 s 1.1 min; 2.2 min; 4.5 min; 9 min; 18 min; 35 min; 1.2 h	Defines the time base for a key-press to send a telegram Time = base • factor
Time between switching and dimming, factor (2...127)	2 ... 127; **3**	Defines the time factor for a key-press to send a dimming telegram Time = base • factor Presetting: 130 ms • 3 = 390 ms
Dimming brighter by	**100 %** 6 % 50 % 3 % 26 % 1.5 % 12.5 %	Defines the maximum dimming step performed on reception of a relative dimming telegram (brighter).
Dimming darker by	**100 %** 6 % 50 % 3 % 26 % 1.5 % 12.5 %	Defines the maximum dimming step performed on reception of a relative dimming telegram (darker).
Send stop telegram ?	**YES** NO	Defines whether a dimming procedure in progress is to stop when the key is released (YES).

Software remarks

- For editing all of the parameters, the access must be set to "full access".
- The status LED indicates either the current status of the switching object or a key-press. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated and the corresponding status LED is lit up.

Application:	6. Switching /shutter 103B01		
Executable from mask version:	1.1		
Number of addresses (max):	9	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	11	**maximum length of table:**	20
Communication objects:	4		

Object	Function	Name	Type	Flag
0	Switching	Key left	1 bit	C, W, T
1	Switching	Key right	1 bit	C, W, T
2	Short-time operation	Rocker	1 bit	C, W, T
3	Long-time operation	Rocker	1 bit	C, W, T

Object description

Objects:

0 - 1	Switching:	1-bit object for the transmission of switching telegrams (ON, OFF)
2	Step operation	1-bit object for step (short-time) operation of a shutter
3	Move operation	1-bit object for move (long-time) operation of a shutter

Scope of functions

- Function of operation LED and ON-time of status LED in case of operation indication parameterizable
- Status indication possible
- Rocker 1 as a function of rocker 2 (or vice versa) parameterizable as switching or shutter sensor
- Key functions (ON / OFF / TOGGLE or UP / DOWN) can be parameterized
- Time between two telegrams and number of steps before continuous run (slat adjustment) presettable in shutter operation

Parameters

Description:	Values:	Remarks:
General		
Function of the operating LED	OFF **ON**	Defines the status of the operating LED.
Configuration of push buttons	Upper buttons: shutter lower buttons: switching **Upper buttons: switching** **lower buttons: shutter**	Defines the function of the individual rockers.
Function: switching		
Function of status LED		Defines the operation of the status LED.
	Status indication	The status LED indicates the status of the switching object.
	Operation indication	The status LED light up when a key is pressed.
	Permanently OFF	The status LED is always off.
	Permanently ON	The status LED is always on.
Light duration of status LED	0.75 s; 2.25 s; **3 s**; 4.5 s; 6 s; 10 s; 15 s	Defines the time during which the status LED is on when a key is pressed. Only if "Status LED function = key-press indicator").

Command at operation left push button	**push = ON, release = ---** push = OFF, release = --- push = TOGGLE, release = --- push = ---, release = ON push = ---, release = OFF push = ---, release = TOGGLE push = ON, release = OFF push = OFF, release = ON push = ON, release = ON push = OFF, release = OFF push = TOG, release = TOG push = ---, release = ---	Defines the command transmitted on pressing or on releasing of left keys.
Command at operation right push button	push = ON, release = --- **push = OFF, release = ---** push = TOGGLE, release = --- push = ---, release = ON push = ---, release = OFF push = ---, release = TOGGLE push = ON, release = OFF push = OFF, release = ON push = ON, release = ON push = OFF, release = OFF push = TOG, release = TOG push = ---, release = ---	Defines the command transmitted on pressing or on releasing of right keys.
Function: shutter		
Function of push button	**left = UP, right = DOWN** left = DOWN, right = UP	Defines the command transmitted on pressing of the keys.
Number of steps before move operation (1...30)	1 ... 30; **1**	A step (short-time) telegram permits adjusting the slats of a shutter. This parameter defines how many short-time telegrams are transmitted before a continuous run (MOVE) after a long key-press.
Time between two telegrams, base	0.5 ms; **8 ms**; 130 ms; 2.1 s; 33 s	Defines the time base between two telegrams. (Time between STEP – STEP or between STEP – MOVE) Time = base • factor
Time between two telegrams, factor(2...255)	2 ... 255; **46**	Defines the time factor between two telegrams. (Time between STEP – STEP or between STEP – MOVE) Time = base • factor Presetting: 8 ms • 46 = 368 ms

Software remarks

- For editing all of the parameters, the access must be set to "full access".
- The status LED indicates either the current status of the switching object or a key-press. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated and the corresponding status LED is lit up.

Application:	7. Switching / pushing 103403		
Executable from mask version:	1.0		
Number of addresses (max):	11	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	11	**maximum length of table:**	22
Communication objects:	6		

Object	Function	Name	Type	Flag
0	Switching	Key 1	1 bit	C, W, T
1	Switching	Key 2	1 bit	C, W, T
2	Switching	Key 3	1 bit	C, W, T
3	Switching	Key 4	1 bit	C, W, T
4	LED control	Status LED 1	1 bit	C, W, T
5	LED control	Status LED 2	1 bit	C, W, T

Object description

Objects:

0 - 3 Switching: 1-bit object for the transmission of switching telegrams (ON, OFF)
4 - 5 LED control: 1-bit object for status LED control

Scope of functions

- Function of operation LED can be parameterized and status indication controlled by means of objects
- Key functions (ON / OFF / TOGGLE) can be parameterized

Parameters		
Description:	**Values:**	**Remarks:**
General		
Function of the operating LED	OFF **ON**	Defines the status of the operating LED.
Upper push buttons (1 – 2)		
Function of status LED		Defines the operation of the status LED.
	ON	The status LED indicates the object status of the LED control object.
	LED permanently ON	The status LED is always on.
	LED permanently OFF	The status LED is always off.
Command at operation left push button	push = ON, release = ON push = ON, release = OFF **push = ON, release = ---** push = OFF, release = ON push = OFF, release = OFF push = OFF, release = --- push = TOGGLE, release = --- push = ---, release = ON push = ---, release = OFF push = ---, release = TOGGLE push = ---, release = ---	Defines the command transmitted on pressing or on releasing of key 1.

Command at operation right push button	push = ON, release = ON push = ON, release = OFF push = ON, release = --- push = OFF, release = ON push = OFF, release = OFF **push = OFF, release = ---** push = TOGGLE, release = --- push = ---, release = ON push = ---, release = OFF push = ---, release = TOGGLE push = ---, release = ---	Defines the command transmitted on pressing or on releasing of key 2.
Lower push buttons (3 - 4)		
See upper push buttons		

Application:	8. Value transmitter 101C03		
Executable from mask version:	1.0		
Number of addresses (max):	1	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	1	**maximum length of table:**	2
Communication objects:	1		

Object	Function	Name	Type	Flag
☐ | 0	Value / light-scene	Rockers	1 byte	C, T

Object description

Objects:

☐ | 0 Value / light-scene 1-byte object for transmitting value telegrams of for recalling light-scenes

Scope of functions

- Function of operating LED and of status LED parameterizable
- Mode of operation (value transmitter / light-scene recall with / without storage function) freely selectable
- Values (1 byte) or light-scene numbers (1...8) for all keys individually parameterizable

Description:	Values:	Remarks:
General		
Function of the operating LED	OFF **ON**	Defines the status of the operating LED.
Function of the status LEDs	OFF **ON**	Defines the status of the status LED.
Operating mode	Value transmitter **Recall light-scene without memory function** Recall light-scene with memory function	Defines the function of the push button sensor.
Push buttons 1 and 2 with " Operating mode = value transmitter"		
Left push button value (0...255)	0 ... 255; **1**	Defines the value transmitted when push button 1 is pressed.
Right push button value (0...255)	0 ... 255; **3**	Defines the value transmitted when push button 2 is pressed.
Push buttons 1 and 2 with " Operating mode = recall light-scene with / without memory function"		
Left push button Light scene (1...8)	1 ... 8; **1**	Defines the value transmitted when push button 1 is pressed.
Right push button Light scene (1...8)	1 ... 8; **3**	Defines the value transmitted when push button 2 is pressed.
Push buttons 3 and 4 with " Operating mode = value transmitter"		
Left push button value (0...255)	0 ... 255; **2**	Defines the value transmitted when push button 1 is pressed.

Right push button value (0...255)	0 ... 255; **4**	Defines the value transmitted when push button 2 is pressed.
Push buttons 3 and 4 with " Operating mode = recall light-scene with / without memory function"		
Left push button Light scene (1...8)	1 ... 8; **2**	Defines the value transmitted when push button 1 is pressed.
Right push button Light scene (1...8)	1 ... 8; **4**	Defines the value transmitted when push button 2 is pressed.

Software remarks

- Light-scene extension unit:

  When a key is pressed for more than 1 s, the parameterized light-scene is recalled and the pertaining status LED switched on for about 1 s. If a key is pressed during a light-scene recall with storage function for more than 5 s, a storage telegram corresponding to the parameterized light-scene will be transmitted and the status LED is lit up for 4 s. Pressing a key with storage function for a time between 1 s and 5 s is without effect.
  The status LED lights up after a key-press only in conjunction with a positive acknowledgement (IACK) from an addressed actuator.

- Value transmitter:

  The status LED lights up after a key-press only in conjunction with a positive acknowledgement (IACK) from an addressed actuator.