Push button 4gang standard flush-mounted 751643xx

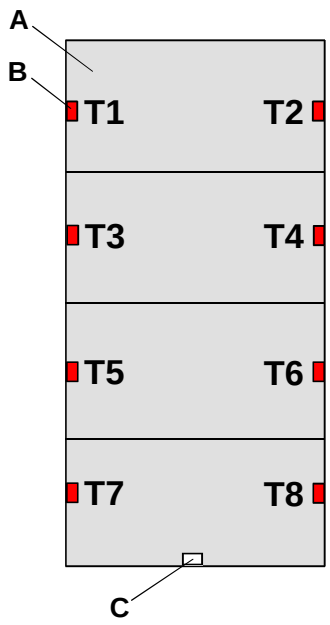
Technical Documentation

Product name:	push button standard 4gang
Design:	flush-mounted device (uP)
ETS search path:	Push button / Push button 4gang / Push button 4gang standard

Functional description:

The push button 4gang 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, pushbutton 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: 110 mm
Depth: 13 mm (without PEI)

Controls

A: 4 rockers or 8 push buttons (position: left / right)
B: 4 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 – 32 V 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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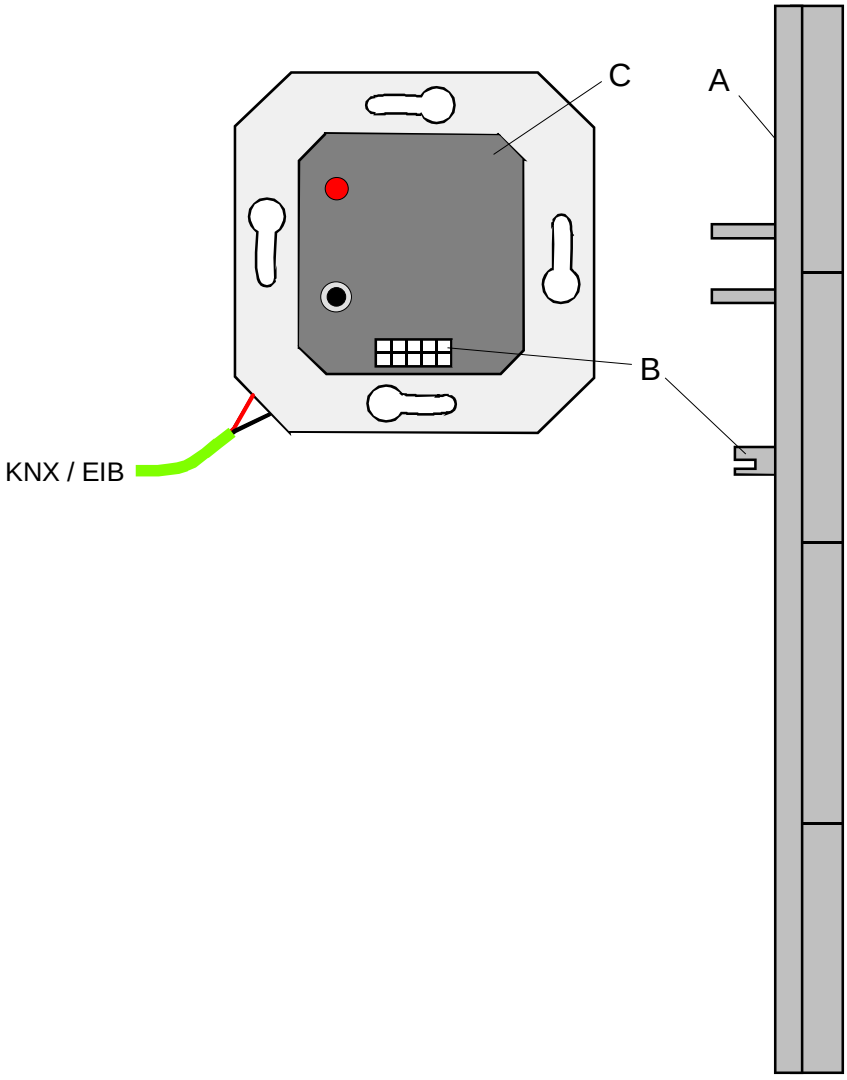
Response to bus voltage failure	
Bus voltage only:	object values are deleted, LEDs extinguished
Response on return of bus voltage:	
Bus voltage only:	no reaction
Input:	---
Output:	---

Connection and terminals:



A: push button standard 4gang
B: physical external interface (PEI)
C: bus coupling unit (BCU)

Hardware remarks

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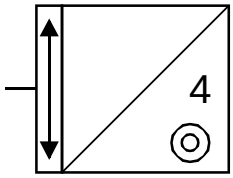
Software description			
ETS search path Push button / Push button 4gang / Push button 4gang standard			**ETS symbol** 
PEI type	04 $_{Hex}$	4 $_{Dez}$	2 inputs / 2 outputs

Applications:

No.	Summarized description:	Name:	Version:
1	Switching, status	Switching, status 102E03	0.3
2	Switching, acknowledge	Switching, acknowledgement 102F03	0.3
3	Dimming	Dimming 102D03	0.3
4	Shutter	Shutter 102C03	0.3
5	Value transmitter	Value transmitter 101D03	0.3

Application:	1. Switching, status 102E03		
Executable from mask version:	1.0		
Number of addresses (max):	13	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	13	**maximum length of table:**	26
Communication objects:	4		

Object	Function	Name	Type	Flag
0	Switching	Push buttons 1 and 2	1 bit	C, W, T
1	Switching	Push buttons 3 and 4	1 bit	C, W, T
2	Switching	Push buttons 5 and 6	1 bit	C, W, T
3	Switching	Push buttons 7 and 8	1 bit	C, W, T

Object description

Objects:

0 - 3 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 operating LED	OFF **ON**	Defines the status of the operation LED.
Function of status LEDs	OFF **ON**	Defines the status of the status LED.
Command at operation the left push buttons 1/3/5/7	OFF **ON**	Defines the command transmitted on pressing of left push buttons 1/3/5/7.
Command at operation the right push buttons 2/4/6/8	**OFF** ON	Defines the command transmitted on pressing of right push buttons 2/4/6/8.

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, but the corresponding status LED is not lit up.

Application:	2. Switching, acknowledge 102F03		
Executable from mask version:	1.0		
Number of addresses (max):	10	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	10	**maximum length of table:**	20
Communication objects:	4		

Object	Function	Name	Type	Flag
0	Switching	Push buttons 1 and 2	1 bit	C, W, T
1	Switching	Push buttons 3 and 4	1 bit	C, W, T
2	Switching	Push buttons 5 and 6	1 bit	C, W, T
3	Switching	Push buttons 7 and 8	1 bit	C, W, T

Object description

Objects:

0 – 3 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 operating LED	OFF **ON**	Defines the status of the operation LED.
Function of status LEDs	OFF **ON**	Defines the status of the status LED.
Light duration of the status LEDs	0.75 s 1.5 s 2.25 s **3.0 s** 4.5 s 6.0 s 10 s 15 s	Defines the time during which the status LED is on in case of a positive acknowledgement of receipt from an addressed actuator.
Command at operation the left push buttons 1/3/5/7	OFF **ON**	Defines the command transmitted on pressing of left push buttons 1/3/5/7.
Command at operation the right push buttons 2/4/6/8	**OFF** ON	Defines the command transmitted on pressing of right push buttons 2/4/6/8.

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:	3. Dimming 102D03		
Executable from mask version:	1.0		
Number of addresses (max):	12	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	12	**maximum length of table:**	24
Communication objects:	8		

Object	Function	Name	Type	Flag
0	Switching	Push buttons 1 and 2	1 bit	C, W, T
1	Switching	Push buttons 3 and 4	1 bit	C, W, T
2	Switching	Push buttons 5 and 6	1 bit	C, W, T
3	Switching	Push buttons 7 and 8	1 bit	C, W, T
4	Dimming	Push buttons 1 and 2	4 bit	C, T
5	Dimming	Push buttons 3 and 4	4 bit	C, T
6	Dimming	Push buttons 5 and 6	4 bit	C, T
7	Dimming	Push buttons 7 and 8	4 bit	C, T

Object description

Objects:

0 – 3	Switching:	1-bit object for the transmission of switching telegrams (ON, OFF)
4 – 7	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 perating LED	OFF **ON**	Defines the status of the operating LED.
Function of status LEDs	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:	4. Shutter 102C03		
Executable from mask version:	1.0		
Number of addresses (max):	12	**dynamic table handling:**	Yes ☒ No ☐
Number of assignments (max):	12	**maximum length of table:**	24
Communication objects:	8		

Object	Function	Name	Type	Flag
0	Step operation	Push buttons 1 and 2	1 bit	C, W, T
1	Step operation	Push buttons 3 and 4	1 bit	C, W, T
2	Step operation	Push buttons 5 and 6	1 bit	C, W, T
3	Step operation	Push buttons 7 and 8	1 bit	C, W, T
4	Move operation	Push buttons 1 and 2	1 bit	C, W, T
5	Move operation	Push buttons 3 and 4	1 bit	C, W, T
6	Move operation	Push buttons 5 and 6	1 bit	C, W, T
7	Move operation	Push buttons 7 and 8	1 bit	C, W, T

Object description

Objects:

0 – 3 Step operation: 1-bit object for step (short-time) operation of a shutter

4 – 7 Move operation 1-bit object for move (long-time) operation of a shutter

Important: Unused communication objects must be projected with dummy group addresses. Otherwise risk of malfunctions.

Scope of functions

- Function of operation LED parameterizable
- Time between two telegrams (time between STEP and MOVE) presettable

Parameters		
Description:	**Values:**	**Remarks:**
General		
Function of operating LED	OFF **ON**	Defines the status of the operating LED.
Push buttons 1 and 2		
Time between two telegrams, base	**130 ms (fixed)**	Defines the time base between two telegrams. (Time between STEP and MOVE) Time = base • factor
Time between two telegrams, factor (3...127)	3...127; **3**	Defines the time factor between two telegrams. (Time between STEP and MOVE) Time = base • factor Presetting: 130 ms·• 3 = 390 ms
Push buttons 3 and 4		
See push buttons 1 and 2		
Push buttons 5 and 6		
See push buttons 1 and 2		
Push buttons 7 and 8		
See push buttons 1 and 2		

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Application:	5. Value transmitter 101D03		
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 transmitter / light scene extension	Push buttons	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 memory function) freely selectable
- Values (1 byte) or light-scene numbers (1...8) for all keys individually parameterizable

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

Right push button value (0...255)	0 ... 255; **4**	Defines the value transmitted when the right push button 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; **1**	Defines the value transmitted when the left push button is pressed.
Right push button Light scene (1...8)	1 ... 8; **4**	Defines the value transmitted when the right push button is pressed.
Push buttons 5 and 6 with "Operating mode = value transmitter"		
Left push button value (0...255)	0 ... 255; **2**	Defines the value transmitted when the left push button is pressed.
Right push button value (0...255)	0 ... 255; **5**	Defines the value transmitted when the right push button is pressed.
Push buttons 5 and 6 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 the left push button is pressed.
Right push button Light scene (1...8)	1 ... 8; **5**	Defines the value transmitted when the right push button is pressed.
Push buttons 7 and 8 with "Operating mode = value transmitter"		
Left push button value (0...255)	0 ... 255; **2**	Defines the value transmitted when the left push button is pressed.
Right push button value (0...255)	0 ... 255; **5**	Defines the value transmitted when the right push button is pressed.
Push buttons 7 and 8 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 the left push button is pressed.
Right push button Light scene (1...8)	1 ... 8; **5**	Defines the value transmitted when the right push button 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.