## KNX push-button modules

Operating instructions


## System M



KNX push-button module, 1-gang Art. no. MTN625199

## Artec/Antik/Trancent



KNX push-button module, 1-gang Art. no. MTN626199

## System M

## KNX push-button module, 2-gang

 Art. no. MTN625299
## Artec/Antik/Trancent



## KNX push-button module, 2-gang

 Art. no. MTN626299
## For your safety

## DANGER

Risk of fatal injury from electrical current. All work carried out on the unit may only be performed by skilled electricians. Observe the regulations valid in the country of use, as well as the valid KNX guidelines.

## Getting to know the push-button module

The KNX push-button module provides you with two or four operating surfaces, two in the case of 1 -gang push buttons and four in the case of 2-gang push-buttons. The push-buttons can be set to perform various functions, allowing you, for example, to switch lighting on and off or dim it, control the blinds or retrieve stored scenes.

Connections, displays and operating elements

(A) Status LED

1-2 Numbering of the operating surfaces for 1-gang push-button
1-4 Numbering of the operating surfaces for 2-gang push-button

(A) Bus connection
(B) Programming LED
(C) Programming button

## How to install the push-button module

You need a frame System M or Artec/Antik/Trancent ranges to install the push-button module.The description which follows shows the installation of the 2-gang System $M$ push-button module. The installation of the 1gang push-button module and the Artec/Antik/Trancent push-button modules is carried out in the same way

(1) Assemble retaining ring on mounting box.

(2) Connect the red bus wire to the red terminal ( + ) and the black one to the dark grey terminal (A) $(-)$.
The screen and the stability wire, as well as the white and yellow cores of the bus line (B), are not required.
(3) Insulate the screen and stability wires and both cores and place them in the mounting box.
(4) Insert the bus terminal into the connection of pushbutton (A).

(5) Push the rockers (D) onto push-button module (C).
(6) Insert push-button module (C) into frame (B).
(7) Place push-button module (C) with its frame (B) onto retaining ring (A). Make sure that the push-button clicks into place.

## How to set up the push-button module

(1) Load the physical address into the push-button module from the ETS via the KNX.
(2) Set the desired configuration for the push-button module in the ETS, and transfer the configuration into the push-button module via the KNX.
Make a note of the assignment in the "Push-button assignment" table, last section.

## Technical data

Initialising:
Due to telegram rate limitations, at least 17 seconds must elapse after initialisation before a telegram can be generated.

Display elements:
MTN625199 and MTN626199

MTN625199 and MTN626199
Control elements:
MTN625199 and
1 keys/2 operating surfaces MTN626199

MTN625199 and
21 keys/4 operating surfaces MTN626199

Ambient -temperature

| Operation: | $-5^{\circ} \mathrm{C}$ to $+45^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Storage: | $-25^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ |
| Transport: | $-25^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ |
| Max. humidity: | $93 \%$ relative humidity, no <br> moisture condensation |
| Type of protection: | IP 20 |

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If you have technical questions, please contact the Customer Care Center in your country.
www.schneider-electric.com
This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations. As standards, specifications and designs develop from time to time, always ask for confirmation of the information given in this publication.

## Switch.Dim.Bli.Scene.Status 1911/1.0

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## General information

With this application, two objects are available per button.
The "push-button pair" concept is not applied here - in other words, you can parameterise each button in such a way that it functions independently of the other buttons. Previously, one switch object would appear in the ETS per "push-button pair" when a switching function was applied, for example. In order to realise the same function with this software, you must connect two switch objects belonging to the two buttons in question in the ETS.
Group addresses are managed dynamically. Maximum no. of group addresses and associations: 140.

## Device selection:

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First you must adapt the application to the hardware used (1-gang push-buttons or 2-gang push-buttons). When the device selection is toggled, parameter settings and connected group addresses are changed by the ETS. For this reason, you should set the device selection before parameterisation.

## Parameters

| General |  |
| :--- | :--- |
| Parameters | Setting |
| Push-button module | $\frac{1-\text { gang }}{2-\text { gang }}$ |

## - Push-button information

The push-button information lets you see which designations are used in the ETS for the buttons on the push-button module. The designations cannot be changed.

## Send $1 / 8$ bit switching commands

Depending on the parameterisation, one of the following will be sent via the switch/value object whenever a push-button is pressed:

- an ON or OFF telegram
- 1 byte values ( $0 \%-100 \%$ in steps)
- 1 byte values (0-255) infinitely
sent via the switch/value object


## Status response

The status LED may do one of the following:

- light up when buttons 1, 3 are activated,
- be switched on or off continuously,
- flash,
- display the status of the switch/value object. When a 1 byte object type is used, the LED lights up when the value is greater than zero.


## Communication objects

You can select the following communication objects:

## Per button:

| Function | Object name | Type | Prio | Flags | Behaviour |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Button X | Switch object A | 1 bit | low | WCT | Send/ <br> receive |
| Button X | Value object A | 1 byte | low | WCT | Send/ <br> receive |
| Button X | Status feedback <br> object | 1 bit | low | WC | Receive |

Parameters

| Button X |  |
| :---: | :---: |
| Parameters | Setting |
| Functional selection | Switching |
| Triggering of status LED | switched on |
|  | switched off |
|  | from switch/value object $A$ |
|  | from status feedback object |
|  | operation = ON / release = OFF |
|  | $\begin{aligned} & \text { prolonged operation }=\text { ON } / \\ & \text { release }=\text { OFF } \end{aligned}$ |
|  | flashes |
|  | flashes if switch/value object A not equal to 0 |
|  | flashes if switch/value object A equal to 0 |
|  | flashes if status feedback object equal to 1 |
|  | flashes if status feedback object equal to 0 |
|  | ```operation = flash / release = OFF``` |
|  | ```prolonged operation = flash / release = OFF``` |
| Object A | 1 bit |
|  | 1 byte in steps 0\%-100\% |
|  | 1 byte infinitely 0-255 |
| Value (only with "1 bit" object) | ON telegram |
|  | OFF telegram |
| Value (only with object "in steps 0 \% - 100 \%") | 100 \% |
|  | adjustable in steps of ten as well as $25 \%$ and $75 \%$ |
| Value (only with object "infinitely 0-255") | 255 |
|  | adjustable in single steps |

## - Dimming

You can use the dimming function for the following:

- dim brighter and darker via one button (singlesurface dimming)
- either dim brighter or darker. You need a second button to dim in the other direction (dual-surface dimming)


## Common parameters for single-surface and dualsurface dimming

You can use the corresponding button to switch the light on or off (press push-button briefly) or dim it (press push-button for a longer period, the exact period can be parameterised). When switching takes place, an ON/OFF telegram is sent via the switch object. When dimming, dimming up or dimming down is carried out via the 4-bit dimming object; the dimming levels can be parameterised. In addition, you can also transmit the corresponding dimming level cyclically for a period of time which can be set as required.

| Button X |  |
| :---: | :---: |
| Parameters | Setting |
| Functional selection | Dimming |
| from 100 ms * Factor (4-250) |  |
| Triggering of status LED | switched on |
|  | switched off |
|  | from switch/value object A |
|  | from status feedback object |
|  | operation $=$ ON / release = OFF |
|  | prolonged operation = ON / <br> release = OFF |
|  | flashes |
|  | flashes if switch/value object A not equal to 0 |
|  | flashes if switch/value object A equal to 0 |
|  | flashes if status feedback object equal to 1 |
|  | flashes if status feedback object equal to 0 |
|  | ```operation = flash / release = OFF``` |
|  | prolonged operation = flash / <br> release $=$ OFF |
| Dimming direction | brighter |
|  | darker |
|  | brighter and darker |
| Cyclical sending of the dimming levels | yes |
|  | no |
| only with cyclical sending of the dimming levels: <br> Base for cyclic interval | 0.1 second |
|  | 1 second |
|  | 1 minute |
|  | 1 hour |
|  | 1 day |
| only with cyclical sending of the dimming levels: <br> Factor for cyclic interval (3-255) | 3-255, 8 Default option |

## Additional parameters for single-surface dimming

You can dim lighter or darker and also switch on or off using a single button.
The current switching or dimming direction is always dependent on the previous action, i.e. if switched off, a brief push of the button will switch the light on and vice versa, and if the light has been dimmed up, prolonged operation of the button will dim the light down again. On release after prolonged operation, a stop telegram will be sent via the 4-bit dimming object, thus terminating the dimming procedure in the dimming actuator.
An update or change to the switch/object value is possible via the bus when another sensor switches or dims the actuator (e.g. via a two-way circuit or a central command). To prevent the "wrong" switching/dimming activity, you must load the status of the actuator in the push-button. To do this, connect the group address of the second sensor to the switch/dimming object of the push-button module.
A single command is sufficient to cycle through the dimming range. This dimming procedure can be used for most applications. The other possible dimming

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levels (1/2-1/64 brighter or darker) dim brighter or darker by the level set. For example, to dim from min. to max. brightness, you would need to push the button for a prolonged period four times in succession if the level set is $1 / 4$.

| Dimming |  |
| :--- | :--- |
| Parameters | Setting |
| Dimming direction | brighter and darker |
| dimming levels (brighter) | $\frac{\text { to max. brightness }}{1 / 2 \text { brighter }}$ |
|  | $\frac{1 / 4 \text { brighter }}{1 / 8 \text { brighter }}$ |
|  | $\frac{1 / 16 \text { brighter }}{1 / 32 \text { brighter }}$ |
|  | $1 / 64$ brighter |
| dimming levels (darker) | to min. brightness |
|  | $1 / 2$ darker |
|  | $1 / 4$ darker |
|  | $1 / 8$ darker |
|  | $1 / 16$ darker |
|  | $1 / 32$ darker |
|  | $1 / 64$ darker |

## Additional parameters for dual-surface dimming

These are used to dim either brighter or darker and to either switch on or off using a single button. Therefore, you must parameterise a second button for the opposite direction.
You can set whether a stop telegram is to be sent when the button is released. When you have enabled the sending of a stop telegram, a stop telegram will be sent via the 4-bit dimming object after prolonged operation of the button, thus terminating the dimming procedure in the dimming actuator.
A single command is sufficient to cycle through the dimming range. This dimming procedure can be used for most applications. The other possible dimming levels ( $1 / 2-1 / 64$ brighter or darker) dim brighter or darker by the level set. For example, to dim from min. to max. brightness, you would need to push the button for a prolonged period four times in succession if the level set is $1 / 4$.

| Dimming |  |
| :---: | :---: |
| Parameters | Setting |
| Dimming direction | brighter |
|  | darker |
| only in the dimming direction | to max. brightness |
| "brighter": <br> dimming levels (brighter) | 1/2 brighter |
|  | 1/4 brighter |
|  | 1/8 brighter |
|  | 1/16 brighter |
|  | 1/32 brighter |
|  | 1/64 brighter |
| Only in the dimming direction | to min. brightness |
| dimming levels (darker) | 1/2 darker |
|  | 1/4 darker |
|  | 1/8 darker |
|  | 1/16 darker |
|  | 1/32 darker |
|  | 1/64 darker |
| Stop telegram after release | enabled |
|  | disabled |

## Status response

The status LED may do one of the following:

- display the status of the switch object,
- light up when buttons 1, 3 are activated,
- be switched on or off continuously,
- flash,
- display the status of the status feedback object.


## Communication objects

You can select the following communication objects:

| Function | Object name | Type | Prio | Flags | Behaviour |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Button X | Switch object | 1 bit | low | WCT | Send/ <br> receive |
| Button X | Dimming object | 4 bit | low | WCT | Send/ <br> receive |
| Button X | Status feedback <br> object | 1 bit | low | WC | Receive |

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## - Blind control

With the blind control function, you can raise the blinds / adjust the slats using a single button and lower the blinds / adjust the slats using a second button (dual-surface blind operation).

| Button X |  |
| :---: | :---: |
| Parameters | Setting |
| Functional selection | Blinds |
| Triggering of status LED | switched on |
|  | switched off |
|  | from status feedback object |
|  | when activated On /when released Off (default setting for direction of movement with positioning values) |
|  | only with the direction of movement up, down, or up and down: <br> ON after movement telegram |
|  | flashes |
|  | flashes if status feedback object equal to 1 |
|  | flashes if status feedback object equal to 0 |
|  | ```operation = flash / release = OFF``` |
|  | $\begin{aligned} & \text { prolonged operation = flash } / \\ & \text { release = OFF } \end{aligned}$ |

## Blind function "up" or "down" with one button (dual-surface blind operation)

After the corresponding button is pressed for a short time, a stop/step telegram will be sent; after the button is pressed for a prolonged period (exact period can be parameterised), a movement telegram will be sent. In the case of this function, you must parameterise a second button with the corresponding settings for blind movement in the opposite direction. Both push-buttons must be given the same group addresses.
$\left.\begin{array}{|l|l|}\hline \text { Blinds } & \\ \hline \text { Parameters } & \text { Setting } \\ \hline \begin{array}{l}\text { Detection of prolonged operation } \\ \text { from } 100 \mathrm{~ms} \text { * }\end{array} \text { Factor (4-250) }\end{array}\right)$

## Status response

The status LED may do one of the following:

- flash,
- light up when buttons 1, 3 are activated and be extinguished when they are released,
- be switched on or off continuously,
- light up when a movement telegram is sent,
- display the status of the status feedback object.


## Communication objects

You can select the following communication objects:

| Function | Object name | Type | Prio | Flags | Behaviour |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Button $X$ | Stop/step object | 1 bit | low | WCT | Send/ <br> receive |
| Button X | Movement <br> object | 1 bit | low | WCT | Send/ <br> receive |
| Button X | Status feedback <br> object | 1 bit | low | WC | Receive |

## - Retrieve scenes

Retrieving scenes by push-buttons enables external access to the bus via communications objects.
With the standard scene function, a scene is called up by pressing the button briefly while prolonged operation of the button is used to save a scene. You merely have to set the time after which a push-button action is detected as a long operation, the triggering of the status LED and the scene number.

| Button X |  |
| :---: | :---: |
| Parameters | Setting |
| Functional selection | Scene |
| Detection of prolonged operation from 100 ms * Factor (4-250) | 4-250 in single steps, 30 default setting |
| Triggering of status LED | switched on |
|  | switched off |
|  | from status feedback object |
|  | operation $=$ ON / release $=$ OFF |
|  | $\begin{aligned} & \text { prolonged operation = ON } / \\ & \text { release = OFF } \end{aligned}$ |
|  | flashes |
|  | flashes if status feedback object equal to 1 |
|  | flashes if status feedback object equal to 0 |
|  | ```operation = flash / release = OFF``` |
|  | $\begin{aligned} & \text { prolonged operation = flash } / \\ & \text { release = OFF } \end{aligned}$ |
| Scene value (0-63) | 0-63 in single steps |

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## Status response

The status LED may do one of the following:

- flash,
- light up when buttons 1,3 are activated for a longer period and be extinguished when they are released,
- be switched on or off continuously,
- display the status of the status feedback object.


## Communication objects

You can select the following communication objects:

| Function | Object name | Type | Prio | Flags | Behaviour |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Button X | Object A | 1 byte | low | WCT | Send/ <br> receive |
| Button X | Status feedback <br> object | 1 bit | low | WC | Receive |

## - Behaviour when bus voltage is applied/restored

 or fails
## Behaviour when bus voltage is applied/restored

Depending on the setting,

- the status LEDs may be switched on or may flash.


## Behaviour on failure of the bus voltage

Any status LEDs which were lit will be switched off.

