JUNG HOME BTS1B2U Switch Actuator 1 Gang Mini with 2 Binary Inputs

JUNG HOME BTS1B2U Switch Actuator 1 Gang Mini with 2 Binary Inputs Instruction Manual

Contents

JUNG HOME BTS1B2U Switch Actuator 1 Gang Mini with 2 Binary Inputs

Specifications:

- Product Name: JUNG HOME switch actuator 1-gang mini with 2 binary inputs
- Art. no.: BTS1B2U
- Manufacturer: JUNG
- Website: www.jung.de

Product Information

Safety Instructions:
To avoid potential damage, follow these safety instructions:

- Installation should only be done by persons with relevant knowledge and experience.
- Avoid using the device with consumers that could pose a danger to life or property.
- The device is not suitable for disconnection from supply voltage; switch off all corresponding circuit breakers before working on it.
- Avoid using the device for safety engineering applications.

Device Components:
Components of the device include:

1. Prog. button
2. Status LED
3. Terminals

Intended Use:
The device is intended for specific use cases as outlined in the manual and should not be used for applications outside its intended purpose.

Product Characteristics:

The device retains settings and time programs after a mains voltage failure. Updates and additional information can be found on the manufacturer’s website.

Product Usage Instructions

Operation:
All settings and operations can be configured using the JUNG HOME app. The binary inputs and switching output can be used independently, allowing for versatile control options.

Operating instructions

JUNG HOME switch actuator 1-gang mini with 2 binary inputs Art. no. BTS1B2U

ALBRECHT JUNG GMBH & CO. KG Volmestraße 1 58579 Schalksmühle

GERMANY

- Telefon: +49 2355 806-0
- Telefax: +49 2355 806-204 **kundencenter@jung.de**
- **www.jung.de**

Safety instructions

To avoid potential damage, read and follow the following instructions:

Installation only by persons with relevant knowledge and experience in the following areas:

- – Five safety regulations and standards for the installation of electrical systems
- – Selection of suitable tools, measuring devices, installation materials and, if necessary, personal protective equipment
- – Installation of the installation material
- – Connection of devices to the building installation under consideration of local connection conditions

Improper installation endangers your own life and the lives of people using the electrical system and there is a risk of serious damage to property, e.g. through fire. You are at risk of personal liability for personal injury and damage to property. Consult an electrically skilled person. The device must not be used in connection with consumers that could lead to danger to life or limb or damage to property, e.g. heaters or electrical machines. Danger of electric shock. The device is not suitable for disconnection from supply voltage because mains potential even is applied on the load when the device is switched off. Before carrying out work on the device or load, switch off all corresponding circuit breakers. The device must not be used for applications from the field of safety engineering, such as emergency stop, emergency call or smoke extraction. Read the instructions in full, observe them and keep them for future reference.

You can find more information on JUNG HOME at **www.jung.de/JUNGHOME**

Device components

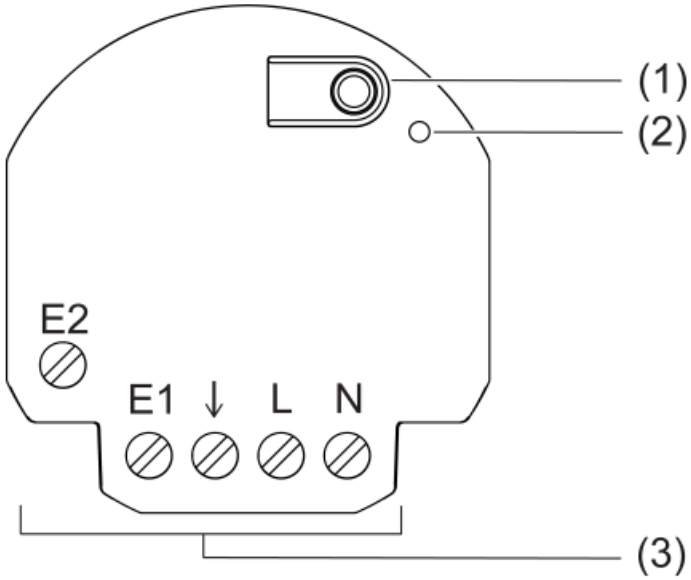

Image 1: Device components

1. Prog. button
2. Status LED
3. Terminals

LED indication during operation

Green*	Load is switched on
Orange*	Load is switched off
Red	Disabling function active, e. g. continuously on/off
Blue, triple flashing	Time has not been set, e. g. due to extended power failure
Flashing green/red	Device update is being performed

Intended use

- – Manual and automatic switching of lighting elements and common household devices
- – Control via binary inputs of the JUNG HOME actuator, JUNG HOME push-but-ton, JUNG HOME sensors and JUNG HOME app
- – Polling of conventional switching contacts and push-button contacts for report-ing states, triggering scenes, operating loads, etc.
- – Wireless connection to devices from the JUNG HOME system
- – Mounting in appliance box with dimensions according to DIN 49073
- – Mounting in false ceilings in the built-in housing (accessory)

Product characteristics

- – Commissioning and operation using JUNG HOME app on mobile end device (smartphone or tablet) via Bluetooth

- – Free linking of the 2 binary inputs with JUNG HOME actuators (local or wire-less)
- – Independent use of actuator function and binary inputs
- – Multi-coloured status display and Prog button for commissioning
- – Disabling of the Prog button
- – Integration of the load into areas (groups), main functions and scenes
- – Up to 16 time programs
- – Staircase lighting function (automatic switch-off) with switch-off warning
- – Run-on time, switch-on delay, switch-off delay
- – Activate/deactivate automatic functions with the JUNG HOME app
- – Automatic date and time update when connecting with smartphone
- – Bluetooth SIG Mesh for fully encrypted wireless communication and repeater function
- – Updating via JUNG HOME app

Available by update in the future:

- – Time programs with sunrise and sunset (astro timer)
- – Time programs with random time
- – Disabling function and restraint: continuously ON/OFF or ON/OFF for fixed time
- – Wind alarm by connecting conventional weather sensors to binary inputs
- – Triggering disabling functions via binary inputs, e.g. lock-out protection for awnings, shutters and venetian blinds, restraint guidance, etc.

You can find information on updates and dates at www.jung.de/JUNGHOME.

Behaviour after a mains voltage failure
All settings and time programs are retained. Missed switching times are not per-formed later. The load output is switched off, provided the parameter “Switching state after the mains voltage returns” is set to its default setting.
If the device was not previously added to a Bluetooth Mesh network (project) by means of the JUNG HOME app, it will switch to pairing mode for 2 minutes after the mains voltage returns and the status LED will flash slowly at a regular interval in blue.

Power failure shorter than power reserve (min. 4 hours)

- – Time and date are up to date
- – The following time programs are performed normally again

Power failure longer than power reserve (min. 4 hours)

- – If the LEDs flash three times repeatedly, the time is not up to date and must be updated by connecting to the app.
- – The time programs are not executed as long as the time is not set

Operation

- All settings and operations of the device can be configured individually using the JUNG HOME app.
- The binary inputs and the switching output of the device can be used independently of one another. For

example, a Multi push-button connected to the binary inputs can operate a venetian blind insert (combined with a JUNG HOME push-button), whereas the switching output is controlled only by means of the app and time programs.

Operation via binary inputs
If a push-button (e. g. 531 U or 505 TU) is connected to a binary input, its actuation will trigger different functions, depending on the duration of actuation (see table). Configuration in the JUNG HOME app: The push-button is connected either to input E1 or E2 to control a device, area or scene. The second input can then be used with another push-button for a different device or area or another scene. The link must be deactivated in the configuration view of the app for this purpose.

Type of operation	Brief press	Long press
Switching[1] (default setting)	Alternately ON/OFF	Alternately ON/OFF
Dimming[1]	Alternately ON/OFF	Alternately dim brighter / dim darker
Move venetian blind / shut- ter / aw ning[2]	Stop or adjust the slats	Alternately move upwards/ downwa rds
Operating the scene[1]	Calling up scene 1	Calling up scene 1

If a Multi push-button (e. g. 531-41 U) is connected to both binary inputs, operation of the upper or lower button area will trigger different functions, depending on the dura-tion of operation (see table).
Configuration in the JUNG HOME app: The two buttons of the Multi push-button are connected to input E1 and E2 to control a device, area or scene together. The link must be activated in the configuration view of the app for this purpose. If two different scenes 1 and 2 are called up via E1 and E2 with a Multi push-button, the link must be deactivated.

Type of operation	Brief press	Long press
Switching[1]	Top ON / bottom OFF	Top ON / bottom OFF
Dimming[1]	Top ON / bottom OFF	Top: dim brighter / bottom: dim dark er

Type of operation	Brief press	Long press
Move venetian blind / shut- ter / aw ning[2]	Stop at the top or adjust the slat po sition forwards / Stop at the bottom or adjust the slat position backward s	Top: move up / bottom: move down
Operating the scene[1]	Top: recall scene 1 / bot- tom: recall scene 1	Top: recall scene 1 / bot- tom: recall scene 1
Heating[1]	Increase the target temper- ature at the top by 0.5 °C / Decrease the tar get tem- perature at the top by 0.5 °C	–
Operating an area (group) 1/2	Depending on the unit, as described for switching, dimming, v enetian blinds and heating	Depending on the unit, as described for switching, dimming, v enetian blinds and heating
Disabling function (lock-out protecti on, restraint guid- ance) [1]	–	Top: activate / bottom: de- activate

If a venetian blind push-button (505 TU without locking recommended, for example, since mutual locking of the buttons is not necessary with binary inputs) is connected to both binary inputs, operating the left or right button will trigger different functions (see table).

Configuration in the JUNG HOME app: The two buttons of the venetian blind push-button are connected to input E1 and E2 to control a device or area together. The link must be activated in the configuration view of the app for this purpose.

Type of operation	Brief press	Long press
Move venetian blind / shut- ter / aw ning[2]	Stop on the left or adjust the slat po sition forwards / Stop on the right or adjust the slat position backwards	Move up on the left / move down on the right
Operating an area (group) [2]	Stop on the left or adjust the slat po sition forwards / Stop on the right or adjust the slat position backwards	Move up on the left / move down on the right

1. brief push-button action < 0.4 s < long push-button action
2. brief push-button action < 1 s < long push-button action

Wireless operation
Wireless operation is carried out with linked JUNG HOME devices or via the JUNG HOME App, which is also used to link JUNG HOME devices (see ‘Commissioning with app’).

Mounting and electrical connection

The communication of the JUNG HOME devices and linked mobile end devices is carried out in wireless mode within the range of the Bluetooth Mesh network.

Wireless signals can be affected in their range through:

- – Number, thickness, position of ceilings, walls and other objects
- – Material type of these objects
- – High-frequency interfering signals

Observe the following fitting instructions to maximise the range:

- – Plan the positions and number of JUNG HOME devices to keep the number of ceilings and walls between two devices as low as possible
- – If JUNG HOME devices are installed on both sides of a solid wall, they should be positioned as close as possible to each other on the opposite sides of the wall. This keeps the attenuation of the wireless signal through the wall as low as possible
- – When planning, observe that the number of building materials and objects that attenuate the wireless signal strongly (e. g. concrete, glass, metal, insulated walls, water tanks, pipelines, mirrors, book cabinets, storage rooms and refrigerators) on the connection line between JUNG HOME devices is as low as possible
- – Keep a distance of at least 1 m from devices that emit high-frequency signals (e. g. microwave, motors) or run with wireless signals at 2.4 GHz (e.g. WLAN router, baby monitor, IP cameras, wireless loudspeakers etc.)

DANGER!

- Electric shock when live parts are touched.
- Electric shocks can be fatal.
- Always disconnect before carrying out work on the device or load. For this, switch off all corresponding circuit breakers, secure against being switched on again and check that there is no voltage. Cover up adjacent live parts.

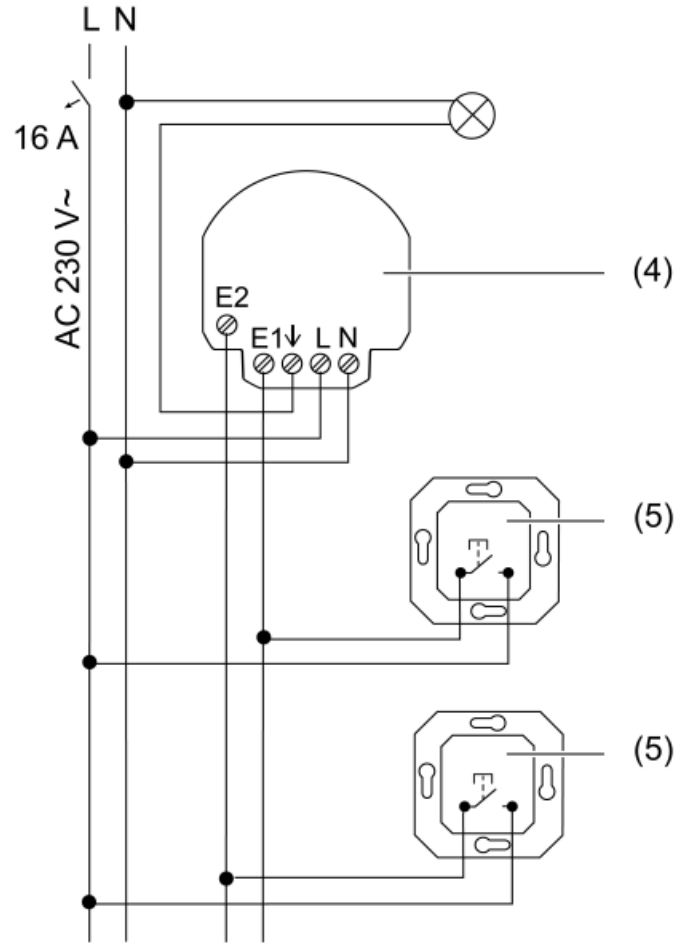

Image 2: Connection example with 2 push-buttons (5)

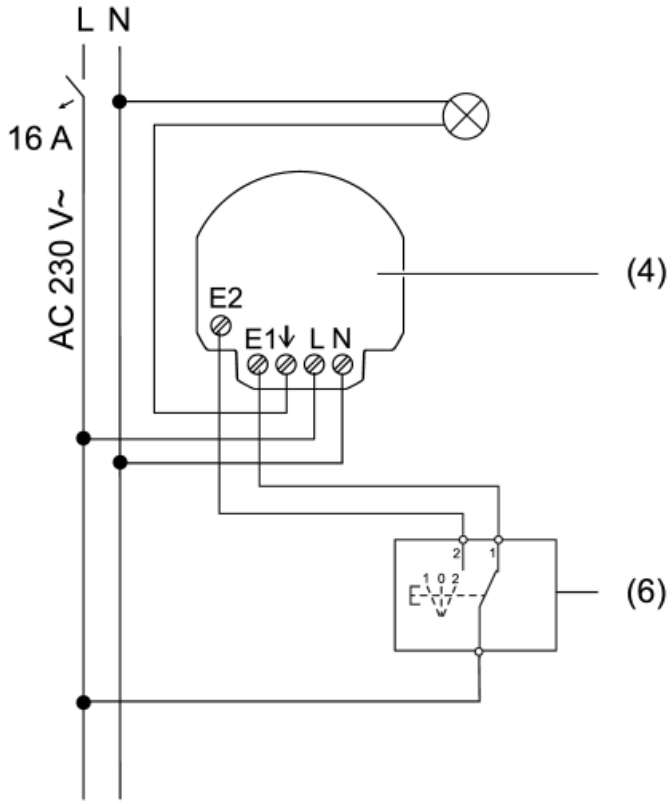

Image 3: Connection example with Multi push-button (6)

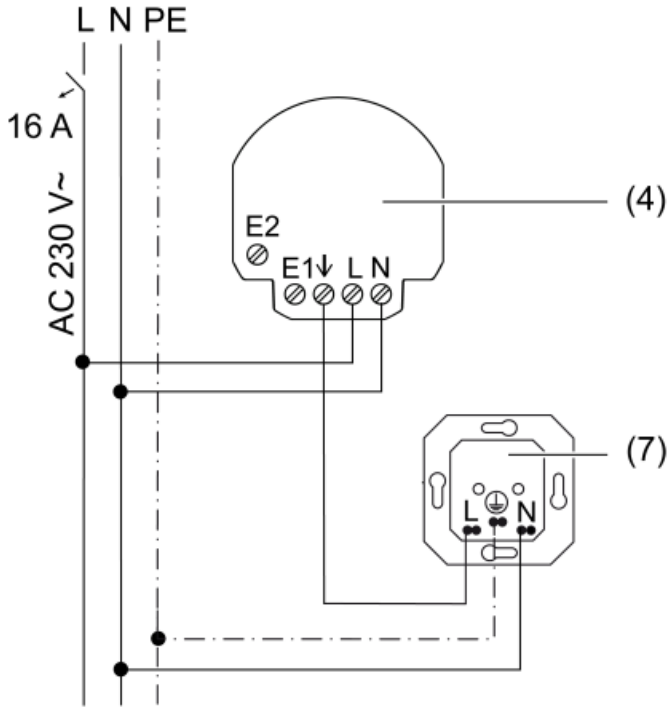

Image 4: Connection example with power socket (7)

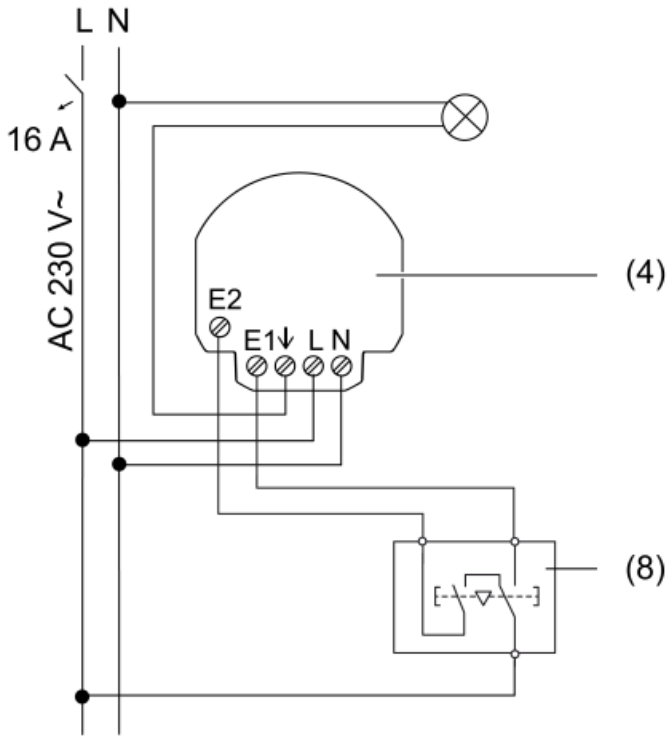

Image 5: Connection example with venetian blind push-button (8)

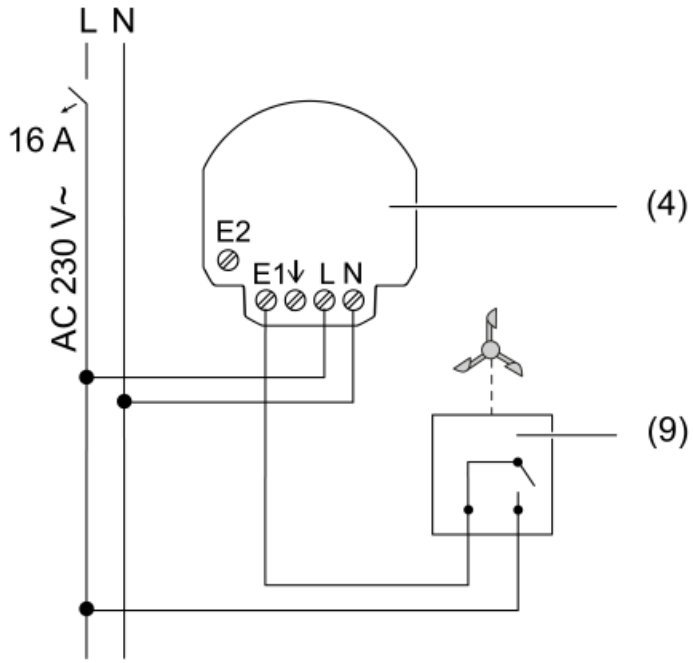

Image 6: Connection example with wind sensor interface (9)

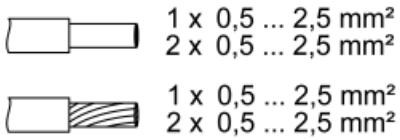

Image 7: Clampable conductor cross-section

- Connect the switch actuator (4) according to connection examples (see figure 2) to (see figure 6). Observe the clampable conductor cross-sec-tions (see figure 7).
- Connect the push-button (5) (see figure 2) or venetian blind push-button (8)(see figure 5) to the switch actuator (4) according to the connection examples.
  Lit push buttons must have a separate N connection terminal. If the lighting is to be used as switching status feedback for a load linked wirelessly to the bin-ary input, the switch actuator can be used to control the push-button lighting.
- Insert the actuator in the appliance box in such a way that the Prog button and status LED are visible.
- Switch on mains voltage. The load can be switched as a test by briefly pressing the button Prog (1).
- Mount the cover.

Commissioning with app

- Prerequisite: the JUNG HOME device has not yet been made a participant in a Bluetooth Mesh network; otherwise reset the device to factory defaults.
- If a Bluetooth Mesh network (project) does not yet exist, start by creating a new pro-ject for the first JUNG HOME device in the JUNG HOME app.
- If a Bluetooth Mesh network already exists, the project file for this network must be opened in order to pair the new device.
- After switching on the mains voltage, the device is automatically in pairing mode for 2 minutes.

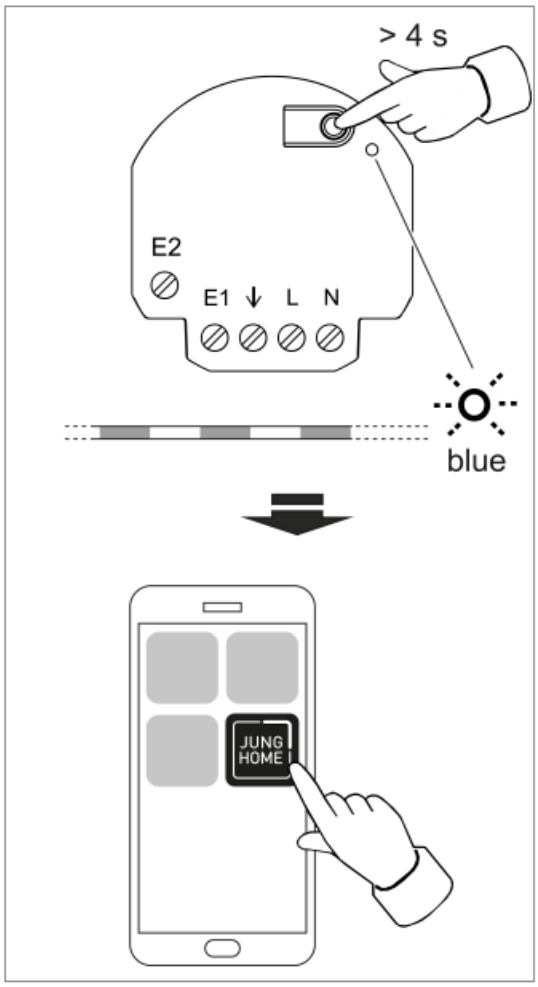

Image 8: Commissioning

- Activate pairing mode manually:
  Press the Prog. button (1) for more than 4 seconds. The status LED flashes slowly in blue. Pairing mode is active for two minutes.
- Start the JUNG HOME app. The app shows all devices in pairing mode.
- Select a device in the app. To identify the selected device, its status LED flashes more quickly in blue.
- Add the device to the project.
  The status LED lights up in blue for five seconds to confirm that pairing was successful. If the status LED flashes red very fast, pairing has failed and needs to be re-tried.

The JUNG HOME app can then be used to link devices wirelessly and configure the parameters and operation (see list of functions and parameters). Once the commissioning has been completed, hand over the project file to the customer.

Besides basic commissioning, the JUNG HOME app enables device updates and convenient operation of further individual configuration options:

- – Link: A button, binary input or motion sensor can be controlled by linking it to a load (e. g. dimmer, socket, switching output, shutter, etc.). Several loads can be controlled together by linking them to an area or scene.
- – Area: Different loads (e. g. dimmer, socket, switching output, shutter, etc.) can be grouped in an area to allow them to be controlled together.
- – Scene: Different loads (e. g. dimmer, socket, switching output, shutter, etc.) can be grouped in a scene so that, by calling up a scene, each load assumes the load status stored in the scene.

- – Automatic function: An automatic function can be used to control the locally connected load (no wireless link) by means of time programs. Depending on the device type, there are further automatic functions in JUNG HOME, such as hotel function, night light function, holiday program or switching thresholds.

Resetting the device to the factory setting

- If the button Prog. (1) is disabled with the “operating lock” parameter, the de-fault setting can be reset to only within 2 minutes after switching on the mains voltage.
- If the device has already been added to a project with the JUNG HOME app, it can be reset also to the default setting in one step with the “Delete device” function from the app.

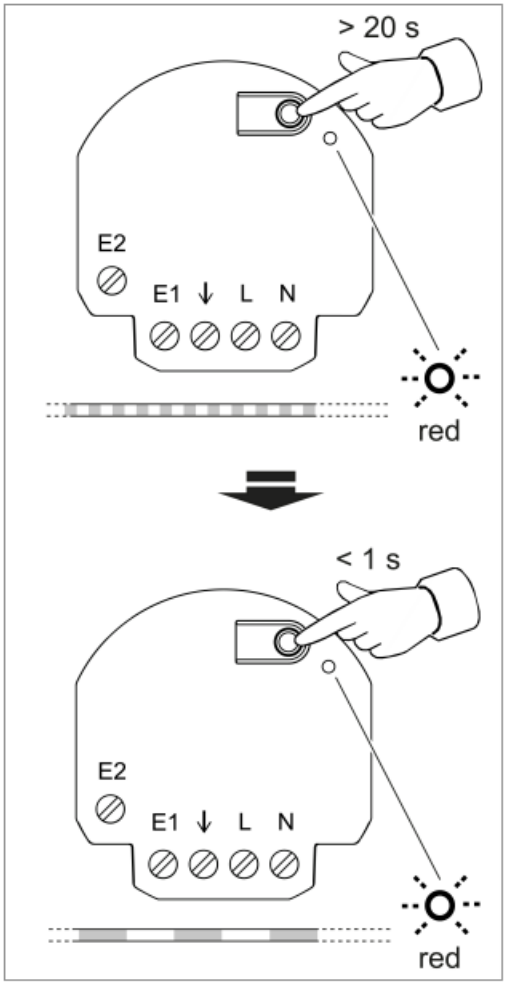

Image 9: Factory reset

- Press the button Prog. (1) for more than 20 seconds until the status LED (2) flashes quickly in red.
- Release the Prog. (1) button and press briefly once again within 10 seconds. The status LED flashes in red more slowly for approx. 5 seconds. The device has been reset to the default setting.
  After resetting the device to the default setting, it must be removed from the JUNG HOME app provided it has not already been deleted from the app.

Technical data

- Rated voltage AC 230 V ~
- Mains frequency 50 / 60 Hz
- Input voltage AC 230 V~
- Standby power max. 0.2 W

- Power loss max. 4 W
- Ambient temperature -5 … +45°C
- Storage temperature -5 … +45°C
- Transport temperature -25 … +70°C
- Relative humidity 20 … 70% (no moisture condensation)
- Switching current at 35 °C
- Ohmic (DIN EN IEC60947-4-1) 16 A (AC1)
- Motors 6 A

  For a switching current >10 A, use a conductor cross-section of 2.5 mm^2.
- Installation depth 20 mm
- Accuracy per month ± 13 s
- Power reserve min. 4 h

  The time is updated with every connection to the app.
- Connected load at 35 °C
- Incandescent lamps 2300 W
- HV halogen lamps 2300 W
- Electronic transformers 1500 W
- Inductive transformers 1000 VA
- HV-LED lamps typ. 400 W
- Compact fluorescent lamps typ. 400 W
- Fluorescent lamps, uncompensated 920 VA
- Power reduction per 5 °C in excess of 35 °C -5%
- when installed in wooden or dry construction walls -15%
- when installed in multiple combinations -20%
- Cable length Power cable Max. 100 m
- Binary input Max. 50 m
- Dimensions (LxWxH) approx. 48 x 51 x 20 mm
- Radiofrequency 2.402 … 2.480 GHz
- Transmission capacity max. 10 mW, Class 1.5
- Transmission range (inside building) typ. 30 m

This device includes an integrated battery. At the end of its useful life, dispose of the device together with the battery in accordance with the environmental regulations. Do not throw device into household waste. Consult your local authorities about environmentally friendly disposal. According to statutory provisions, the endconsumer is obligated to return the device. JUNG HOME switch actuator 1-gang mini with 2 binary inputs

List of functions and parameters

The JUNG HOME app can be used to configure all functions of the JUNG HOME device and its behaviour in the Bluetooth Mesh project for the respective individual purposes.

Two devices are created in the app when commissioning with the app:

- – A device that maps the two binary inputs and includes its functions and parameters.
- – A device that maps the switch actuator and its load control with all the corresponding functions and

parameters.

All devices created in the JUNG HOME app can be used independently and set separately.

Settings of binary inputs and prog. button

Parameters	Setting options, Default setting	Explanations
Operating concept	E1/E2 combined, E1/E2 separately Default setting: E1/E2 separately	E1/E2 combined: corresponds to the “rocker” operating concept for the JUNG HOME push-button. Inputs E1 and E2 op- erate together a device, area or disabling function. Switching edges at E1 or E2 usually lead to directly opposite reactions (e. g. light ON/OFF, brighter/darker, up/ down).
		E1/E2 separately: corresponds to the “button” operating concept for the JUNG HOME push-button. Inputs E1 and E2 can be used separately and each operate a device or area or activate a scene. When controlling loads or areas, a re- newed switching edge at the same input leads to opposite reactions (e. g. light ON/OFF, brighter/darker, up/stop/down).

Parameters	Setting options, Default setting	Explanations
Input behaviour E1 Input behaviour E2	Rising edge: no reac- tion, swit ch on / dim up / move up / stop, switch off / dim down / move do wn / stop, switch over Default setting: switch over Falling edge: no reac- tion, swit ch on / dim up / move up / stop / in- crease target temperat- ure, switch off / dim down / move do wn / stop / reduce target tem- p erature, switch over Default setting: no reac- tion	The input behaviour can be configured for a rising edg e (voltage at input is switched on) and for a falling edge (voltage at input is switched off) independently of one an- other. The effect of the setting depends on the function of the linked load. The “no reaction” option has the effect that the linked device does not change it s status if the selected edge is detected at the bin- ary input.
Operating lock	No lock, factory reset lock, oper ating lock Default setting: no lock	Factory reset lock: prevents resetting on the device an d hence the removal from a project and pairing again b y unauthorised persons. After the mains voltage return s, the factory reset lock is deactivated for 2 minutes. Operating lock: prevents normal opera- tion on the device and hence the load from being controlled. This l ock can be used, for example, to restrict manual ac- ce ss temporarily. Operation via the app remains possible. The operating lock cannot be deactivated on the device.

** Available by update in the future: You can find notes on updates and dates at www.jung.de/JUNGHOME

Load control settings

Settings for automatic functions

Parameters	Setting options, Default setting	Explanations
Time programs	Load status, time and weekdays	The load status can be changed at defined times (wee kdays and time).

Parameters	Setting options, Default setting	Explanations
Astro timer**	Off, sunrise or sunset Default s etting: Off	The astro timer shows the sunrise and sunset times in the course of a calendar year. Depending on the locati on, load statuses can be changed with the position of t he sun, for example to switch on the outdoor lighting at sunset and switch it off again at sunrise.
Astro timer** time sh ift	0 (off) … 120 minutes before or after sunrise and sunset Default setting: Off	Astro times represent the sunrise and sunset times in t he course of a calendar year. If you want the time program to be ex- ecuted in the ea rly morning before the start of twilight or only at full brig htness, this can be implemented with the “sun- rise” shi ft. If you want the time program to be ex- ecuted in the ev ening at the start of twi- light or only at full darkness, th is can be implemented with the “sunset” shift. Dis- plac es the load actuation time by the set value.
Astro timer** limit ra nge	Off, earliest time, latest time def ault setting: off	To narrow the time range of an astro timer down to an earliest and/or latest ex- ecution time. For example, the garden lighting can be switched off at the latest at 9:00 pm even if the sun does not set until 10:00 pm.
Set location**	Geographic location	The astro timer in the JUNG HOME devices needs the geographic location of the project to calculate the sunri se or sun- set time. The astro timer is calculated once a week for the localised place.

Available by update in the future: You can find notes on updates and dates at **www.jung.de/JUNGHOME**

Switch actuator settings

Parameters	Setting options, default setting	Explanation
Switch-on delay	0 s (off) … 240 min Default setti ng: Off	Switches on the load after a switch-on command, dela yed by the value. Re- peated switch-on commands dur ing the current delay do not start the delay again. If the load has not yet been switched on due to the delay, the load remains switched off when a switch-off command arrives.
Switch-off delay	0 s (off) … 240 min Default setti ng: Off	Switches off the load after a switch-off command, dela yed by the value. A switch-off command during the cur rent delay immediately switches the load off. If the load has not yet been switched off due to the delay when a switc h-on com- mand comes, then the load will remain on.
Switch-off warn- ing	Off, On Default setting: Off	If the switch-off warning is switched on, the light is not i mmediately switched off after the run-on time (load) el apses. Triple flashing at an interval of 10 seconds sho ws that the light will be switched off soon. The run-on ti me is thereby pro- longed by approx. 30 seconds. If a move- ment is detected by a linked JUNG HOME sens or cover or the load switched on again by operating an extension or by a linked JUNG HOME operating cover during the switch-off warning, the run-on time is restart ed and the light remains on.

Parameters	Setting options, default setting	Explanation
Run-on time (load)	0 s (off) … 240 min Default setti ng: Off	Ensures that the load is switched off after the set run-o n time expires instead of re- maining permanently swit ched on after a switch-on command. If a movement is detected by a linked JUNG HOME se nsor cover during the run-on time or the operating cov er is switched on again by operating an exten- sion or a linked JUNG HOME operating cover, the run-on time is restarted and the light remain s on. The load can be switched off early during a running run -on time only if the “Manual switch-off during run-on ti me” parameter is set to “On” or a disabling function (co n- tinuous OFF) is started.
Manual switch- off d uring run- on time	Off, On Default setting: On	If this parameter is set to “On”, it is pos- sible to switch off the load manually dur- ing a current “run-on time (lo ad)”. For an automatic staircase lighting con- trolled by JUN G HOME operating and/or sensor covers, this paramet er should be set to “Off” to prevent the light from being switched off by a second person.

Parameters	Setting options, default setting	Explanation
Presentation functio n**	Off, On Default setting: Off	The presentation function is used in com- bination with a linked JUNG HOME pres- ence detector. The presentation function can be switched on or off with the app or a linked JUNG HOME push-button. With the presentation function switched on, the light is switched off and move- ments detected by a JUNG H OME pres- ence detector are prevented from switch- in g on the light for a defined locking time. Not only sensor signals from JUNG HOME presence d etectors, but also sensor signals from JUNG HOME m otion detectors, switch-on and switch-off com- mands via extensions, wireless control with the app and other JUNG HOME devices restart the locking time. The presentation function is automatically ended at the end of the locking time. Al- ternatively, the presentation function can be switched off manually.
Locking time presen tation function**	3 … 240 min Default setting: 3 min	Defines the locking time during which the light remains off with the “presentation function” switched on. Sensor signals from JUNG HOME pres- ence detector s and JUNG HOME motion detectors, switch-on and s witch-off com- mands via extensions, wireless control with the app and other JUNG HOME devices restart th e locking time.
Invert switching outp ut	Off, On Default setting: Off	Inverts the switching output from NO con- tact function (on = switching output closed) to NC contact function (On = switching output open). This parameter only inverts the behaviour of the load o utput. Neither the switching commands from the JUNG HOME operat- ing or sensor covers nor the display of t he switching statuses in the app are taken into account .

Parameters	Setting options, default setting	Explanation
Minimum switching r epeat time**	100 ms … 10 s Default setting: 100 ms	Limits the switching speed of the device by increasing t he value, in order to pro- tect the connected load, for e xample. Only when the set time has elapsed is switching possible again. The last com- mand during the blockin g time is ex- ecuted after a delay. The switching repeat time starts after each switching operation.
Behaviour after mai ns voltage return	Switched off, switched on, previ ous status Default setting: Off	Behaviour of the load output after the mains voltage re turns. Note: Do not use the “switched on” set- ting in combina tion with consumers that could lead to danger to life or limb or damage to property.
Disabling func- tion (restraint guidance)**	Deactivated, continu- ously ON, continuously OFF, for fixed time ON/ OFF Default setting: deactiv- ated	The disabling function switches the load output to the desired status and blocks it against control by the moti on sensor, ex- tension operation, time programs and wi reless control with the app and other JUNG HOME dev ices. The lock applies for an adjustable time or until th e dis- abling function is deactivated again.

** Available by update in the future: You can find notes on updates and dates at www.jung.de/JUNGHOME

Accessories

Mounting adapter for mini housing FM-EBG

Conformity

Albrecht Jung GmbH & Co. KG hereby declares that the radio system type art. no. BTS1B2U meets the directive 2014/53/EU. You can find the full article number on the device. The complete text of the EU Declaration of Conformity is available under the Internet address: www.jung.de/ce

Warranty

The warranty is provided by the specialist trade in accordance with statutory requirements.

Volmestraße 1 58579 Schalksmühle

GERMANY

- Telefon: +49 2355 806-0
- Telefax: +49 2355 806-204
- kundencenter@jung.de
- www.jung.de

FAQ

Q: Can the device be used for safety engineering applications?
A: No, the device must not be used for applications from the field of safety engineering such as emergency stop or smoke extraction.

Documents / Resources

	JUNG HOME BTS1B2U Switch Actuator 1 Gang Mini with 2 Binary Inputs [pdf] Instruction Manual BTS1B2U Switch Actuator 1 Gang Mini with 2 Binary Inputs, BTS1B2U, Switch Actuator 1 Gang Mini with 2 Binary Inputs, 1 Gang Mini with 2 Binary Inputs, 2 Binary Inputs

References

- JUNG - Switches and systems
- JUNG - JUNG HOME New Items
- User Manual