

CTS2 - Casambi tactile sensor coupler | Manual



<i>product number</i>	<i>product name</i>	<i>product description</i>	<i>Valid from version</i>
10.806	CTS2	Casambi tactile sensor coupler	H1 F1

Document version: 20231115

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1. Notes to the instruction . CTS2

1.1 Applicable documents

This document contains all the necessary information for using this product.
Please refer to this document in partial instructions (such as installation instructions).

1.2 Usage

This manual describes everything necessary for the safe and efficient use of the device. The manual is an integral part of the product and must be handed over to the end customer.

Please note that earlier versions of the product may differ in programming, operation and behavior and may not support all the features described here.

Before installation, commissioning and operation, read this manual and pay attention to the warnings for safe handling, which are marked as follows:

1.3 Safety information

DANGER



The signal word "DANGER" indicates an imminent danger. If not avoided, death or serious injury will result.

WARNING



The signal word "WARNING" indicates a possibly imminent danger. If it is not avoided, death or very serious injuries may result.

CAUTION



The signal word "CAUTION" indicates a possibly imminent danger. If it is not avoided, slight or minor injuries may result.

CAUTION







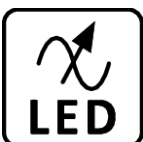
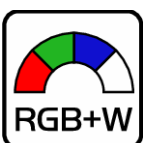



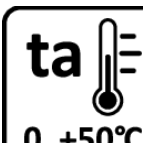
The signal word "CAUTION" indicates a situation that can lead to material damage. Either to the product itself or to other objects in the environment.


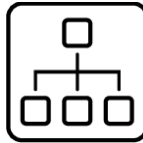
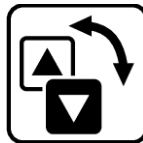








NOTE











The signal word "NOTE" indicates tips and recommendations to help you get the most out of the product.

1.5 Used symbols

Icon	Description
	The number indicates the number of output channels of the device
	The number indicates the number of equipped push-button inputs
	Max. output current per channel
	Dimmed channel
	LED dimmer
	RGB+W color mixing
	Dims RLC loads R = resistive loads L = inductive loads (conventional transformers) C = capacitive loads (electronic transformers)
	Zero-cross switch - Device powers up or down by zero crossing of the sinewave
	Weight in gramm
	Temperature ambient (ta)



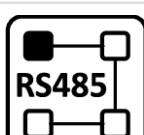








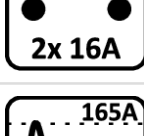
Icon	Description
	Astro function - control scenes through sunrise and sunset
	Group devices - create groups for joint control
	Logical inverting of channels. e.g. for a blind up - down or CH1 and CH2
	Timer function - execute time-controlled automated functions
	Scene control - save individual fixed images as scenes or create a chaser with an animation
	Type of protection
	Protection class II - protection through double insulation
	Protection class III - protection through supplied from a separated extra-low-voltage
	Wireless protocol Casambi
	DALI protocol interface
	DALI protocol interface with device type 6

	Temperature critical (tc)
	Powersupply AC - the voltage details either refer to a fixed voltage or a work ce e.g. 100 to 240 V AC
	Powersupply DC - the voltage details either refer to a fixed voltage or a working range e.g. +10 to 24 V DC
	Powersupply DC - battery possible
	Powersupply - powered from DALI
	The number indicates how much space (in TE) the device takes up on a DIN rail
	Flush mouted housing - in installation boxes or in devices of protection class II
	Installation housing - installation in ceiling, wall or luminaire

NOTE



The symbols explained here show the technical data of the devices. These symbols can be found in the technical documentation of the respective device.

	DMX protocol interface
	DMX protocol interface with RDM
	RS485 interface
	Push-button input on mains voltage 230V AC
	Push-button input
	Wireless push-button input
	Wireless controll
	Wireless controll with gateway / repeater function
	Rollers and blinds function
	changeover relay Number indicates the amount of relays
	Switch Relay (normally open contact) Number indicates the amount of relays and 16A the switch current of the relay
	Relay with high inrush current - current peaks up to 165A for 20mS

1.6 Storage

Electrical devices are stored constantly at 10 to 25 degrees Celsius in dry storage rooms.
The devices must be protected from dust, moisture, splashing and dripping water.

1.7 Warranty and liability

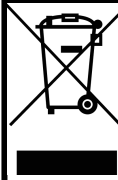
Even though this manual has been compiled with the greatest possible care, errors and mistakes cannot be completely avoided. MTC maintronic GmbH accepts no liability for personal injury or damage to property resulting from errors or mistakes in these operating instructions or the failure to observe safety instructions.
The rights to any third-party company names, brands, trademarks or logos mentioned are the property of their respective owners.

1.8 Service and support

If you need special support beyond the information provided here, contact your distributor or the address in the Manufacturer Contact section. [Contact details](#)

1.9 Disposal

Waste disposal



In accordance with European Directive 2002/96/EC (it`s) not longer usable electronic devices and defective or used batteries (European Directive 2006/66EG) must collected separately and disposed by an environmentally sound recycling.

This symbol indicates that electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Should these product are no longer be useable, the user is required by law to dispose of old appliances separately from their household waste e.g. at a local authority collection point or recycling center.

2. Safety . CTS2

2.1 General safety information

Qualified personnel

DANGER



The unit must only be installed and serviced by a proven electrician specialist, in accordance of all relevant regulations, safety and accident prevention directives of the country.

Be sure that the existing mains voltage corresponds with the specified operating voltage before operating the device.

Risk of electric shock. Do not operate the device without a cover. Even when switched off, voltage may be present at the outputs. When working on the device or connected loads, always disconnect the upstream fuse from the power supply.

Apply the "Five Safety Rules" (DIN VDE 0105, EN 50110):

1. Disconnect
2. Secure against being switched on again
3. Determine absence of voltage
4. Ground and short circuit
5. Cover or isolate nearby live parts

Only install the device in places with a good ventilation and without humidity or high temperatures. Do not expose the unit to rain or snow. Do not operate the unit near heat sources, e.g. radiators.

If any of the following occurs, do not operate the device without first checking it:

- if objects have fallen or liquid has been spilled into the unit.
- if the device has been exposed to rain.
- if the device does not operate normally or with altered characteristics. if the device has been dropped or has a broken housing.

For cleaning only use a dry, soft cloth, by no means liquids.

Working on electrical installations

WARNING



Dangerous voltages in live installations, cables, plugs ...

Device-specific notes

WARNING



There is a risk of dangerous voltages being applied to the device (DALI, not SELV). If a person touches live parts, an electric shock can cause serious injury or even death.

WARNING



For your own safety, read all instructions and information in this manual carefully before initial operation. Keep this manual for future reference.

The instructions are an integral part of the product and must be handed to the end customer.

All information and instructions in this manual must be observed completely and in detail. The manufacturer is not responsible for any direct or consequential damage that results from disregarding any information in this manual.

Waste disposal



In accordance with European Directive 2002/96/EC (it`s) not longer usable electronic devices and defective or used batteries (European Directive 2006/66EG) must collected separately and disposed by an environmentally sound recycling.

This symbol indicates that electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Should these product are no longer be useable, the user is required by law to dispose of old appliances separately from their household waste e. g. at a local authority collection point or recycling center.

CE-marking



The devices comply with the EU directives applicable at the time they are placed on the market.

2.2 Intended use

CTS2 combines a Casambi coupler and a Gira push button sensors to a highly responsive user interface.

Two additional isolated all-voltage inputs on the rear can be used for push-buttons, motion control and also for all kind of notification and alarm sensors. Each of the inputs can be mapped to any Casambi command. Status is indicated via the LEDs and synchronized with other CTS2

Module version	Installation type	Module description
UP	Flush-mounted	For installation in deep switch boxes or junction boxes

This device is intended for the following:

- operation according to the listed technical data
- installation in dry indoor areas
- use with the connection options available on the device

NOTE

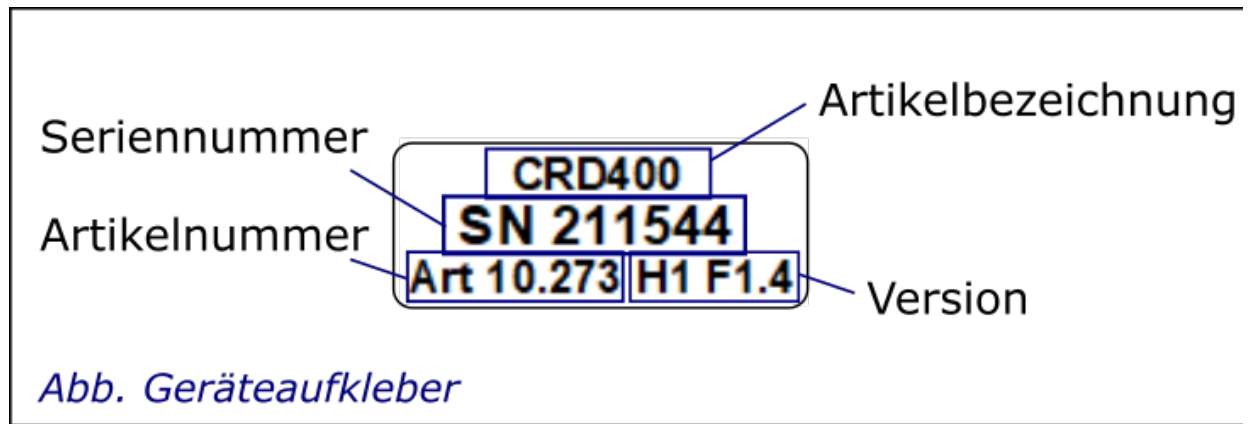


Intended use also includes compliance with all information in this user information.



Please note that previous versions of the product may differ in terms of programming, operation and behaviour or that not all functions described here are supported!

1. Check the supported device version in this manual (this user information) with the version indicated on the device sticker. The version information can be found on the bottom right of the device sticker:



2. if the version of your device does not match the version supported in the manual, obtain the relevant manual and follow the instructions there.

2.3 Not-intended use

Any other use is considered improper and can lead to personal injury and property damage, in particular:

- Any unauthorised modifications to the construction
- Repairs
- Use in outdoor areas
- Use in wet rooms

[MTC maintronic GmbH](#) is not liable for damage caused by improper use of the device. The user/operator is solely responsible for this risk.

3. Functions . CTS2

3.1 Characteristics

The device can be controlled via the Casambi app, available for iOS and Android. Another optional operation ist given by the push button input.


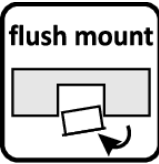








Casambi app automatically identifies the device and can be integrated into existing networks. All functions triggered by the buttons are individually configurable.

As soon as the device is added to your network, it can be operated. Groups can be formed, scenes and timers can be created.

You can find all Casambi app related help on the official Casambi support sites at: <https://support.casambi.com>.

For help with the configuration and operation of Casambi, please also refer to the official Casambi help at: <https://support.casambi.com/>.

3.2 Features

	 mains	 installation type		
Control				
Temp enviroment and electrical ...	 -10...+50°C	 +70°C	 Class II	 IP20
Assembly end Shipping	Scope of delivery 1x CTS2 module 1x Gira TS2 Aufsatz		weight 70g	dimensions 46,5 x 70(51) x 30cm

4. Technical data . CTS2

CTS2	Item no: 10.806
Power supply	100 ... 250V AC 50/60 Hz
Power consumption	< 0,15W
Inputs (Gira TS2 Sensor)	6 tactile buttons wall control with LED feedback; backlight switchable with timer
Inputs (Casambi enabled push-button input)	2x inputs 12..250 V (AC and DC) for System 55 mains voltage push-buttons, PLC or motion detector
Casambi	Bluetooth Low Energy (BLE); App available for Android and iOS
Terminals	push-in spring connectors
Wiring	single-wire / fine-wire: 0,5 ... 1,5 mm ² fine-wire with ferrule: 0,5 ... 0,75 mm ²
Stripping length	9 mm (+/- 0,5 mm)
LED indicator	LED feedback status, button backlight
Type of protection housing	IP20
Protection class	II
Temperature ambient (ta)	-20°C to +50°C
Temperature critical (tc)	+70°C
Applied standards	CE
Installation	flush-mounted
Dimensions (height; Ø)	h=32mm; Ø max.=55mm
Weight	0,056kg
Housing	fiber-reinforced plastic, white
Customs tariff number	85423190

5. Installation . CTS2

5.1 Considerations and planning

A Casambi network is a mesh network and every participant (dimmer, switches, etc.) extend the reach of the network.

Casambi is based on the energy-saving Bluetooth 4.0 standard. If a module is nearby, all luminaires within range of this module can be controlled.

Bluetooth has a range of up to 20 m. Plan your network in such a way that the radio coverage of the modules is guaranteed with each other and no dead spots arise.

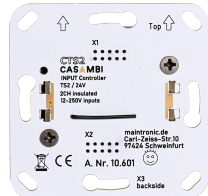


If there are gaps in the network or modules are positioned at the limit of the radio coverage, strange errors can sometimes occur.

Planning

The module requires a push button attachment from Gira to function properly. The CTS2 can either be ordered without the GIRA TS2 or as a bundle including the TS2.

Please check your content of delivery before first intential installation.

Scope of delivery (CTS2 bundle only!!!)

quantity	Item-No.	Item name	
1x	10.806	maintronic CTS2 - Casambi tactile sensor	
1x	2003 100 (GIRA item no.)	GIRA TS2, 3 rockers, white	
1x	0211 03 (GIRA item no.)	GIRA single frame	

Compatible GIRA sensors

One of the following GIRA pushbutton sensors is necessary for the CTS2.

Please check your local electrical retailers or your local market for suppliers.

item-No.	specification	version	picture
2003 100	clear/ pure white glossy	3-fold white	
2003 600	stainless steel	3-fold silver	
2001 100	clear/ pure white glossy	1-fold white	
2001 600	stainless steel	1-fold silver	



If you purchase your TS2 from your suppliers, there are a few parts within the delivery which are not needed.

Scope of delivery
of the GIRA TS2.
Item no. 2003 100.

Screws (not
needed)

Plastic housing
base (not needed)

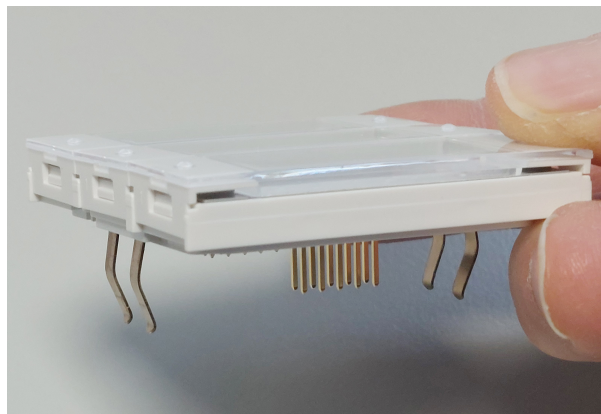
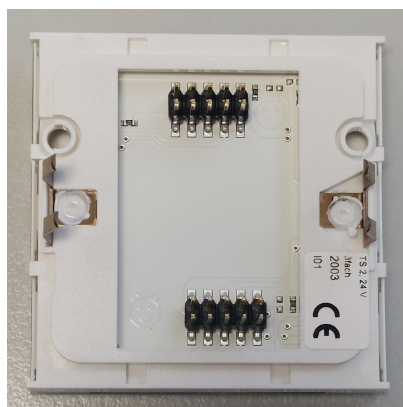


Remove the grey
terminal block
with PCB from the
TS2.

This terminal
board is not
needed for the
function with CTS2.



View of the GIRA TS2
single touch sensor

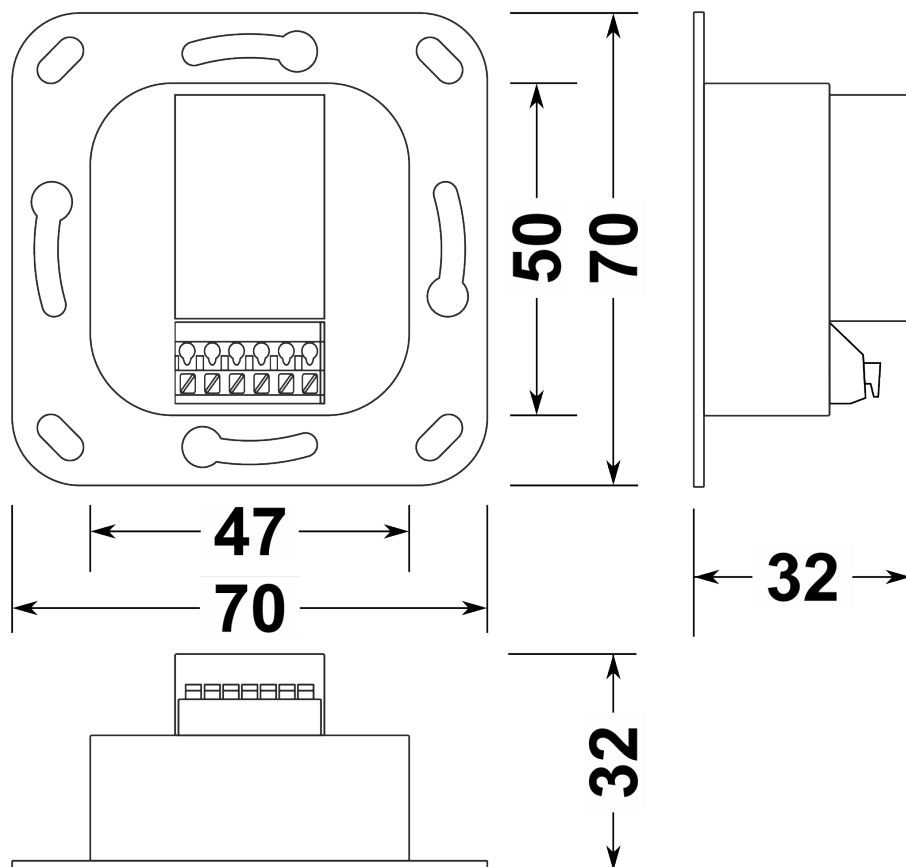


5.2 Mechanical installation

Dimensions

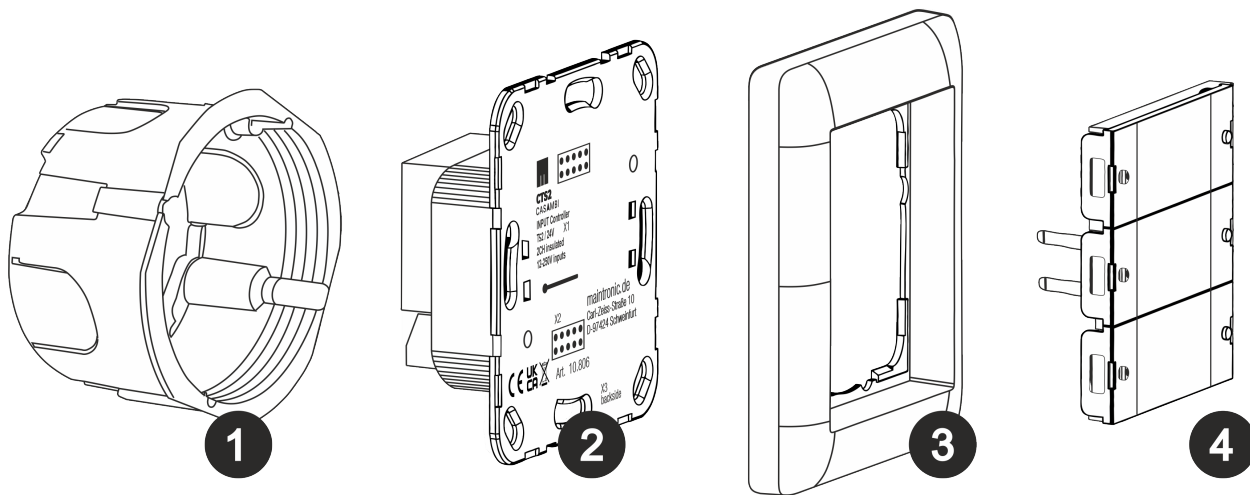
Flush-mounted housing for installation in switch boxes behind wall switches in combination with a GIRA TS2 pushbutton sensor.

Please make sure you have these extra item ready before commisioning.



Installation

1. Install the CTS2 module (2) into the flush-mounted box in the wall (1)
2. Place GIRA design frame (3) over the module CTS2 (2)
3. Plug GIRA TS2 touch sensor rocker (4) into the module CTS2 (2)

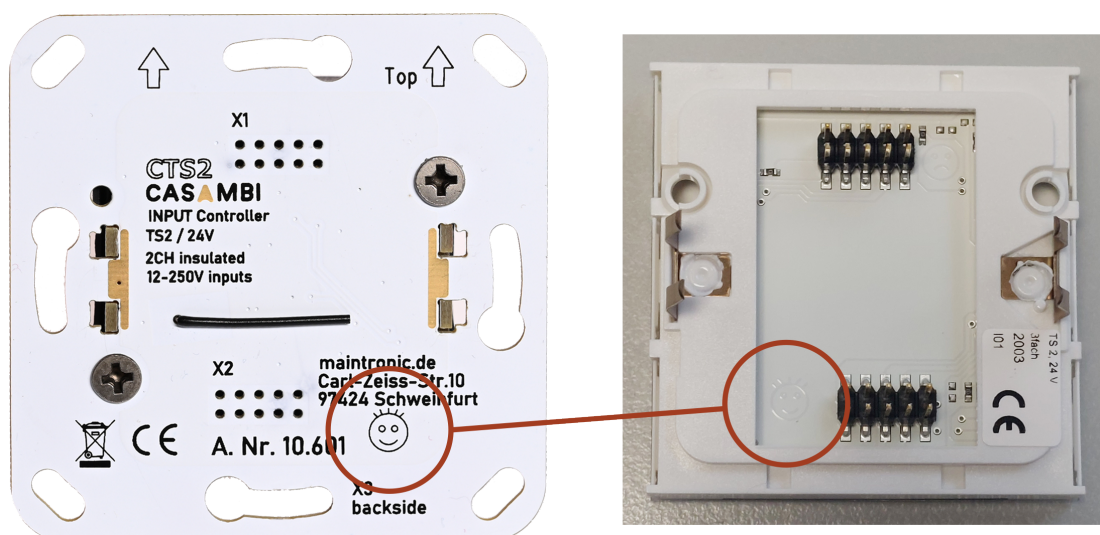


1	flush-mounted box
2	module CTS2 - Casambi tactile sensor
3	GIRA design frame
4	GIRA TS2 touch sensor rocker

Assembling the rocker with the module

Watch the asymmetric connectors/pins for correct orientation!

We have put smileys on each piece, bring the happy faces together and everything will fit perfectly.



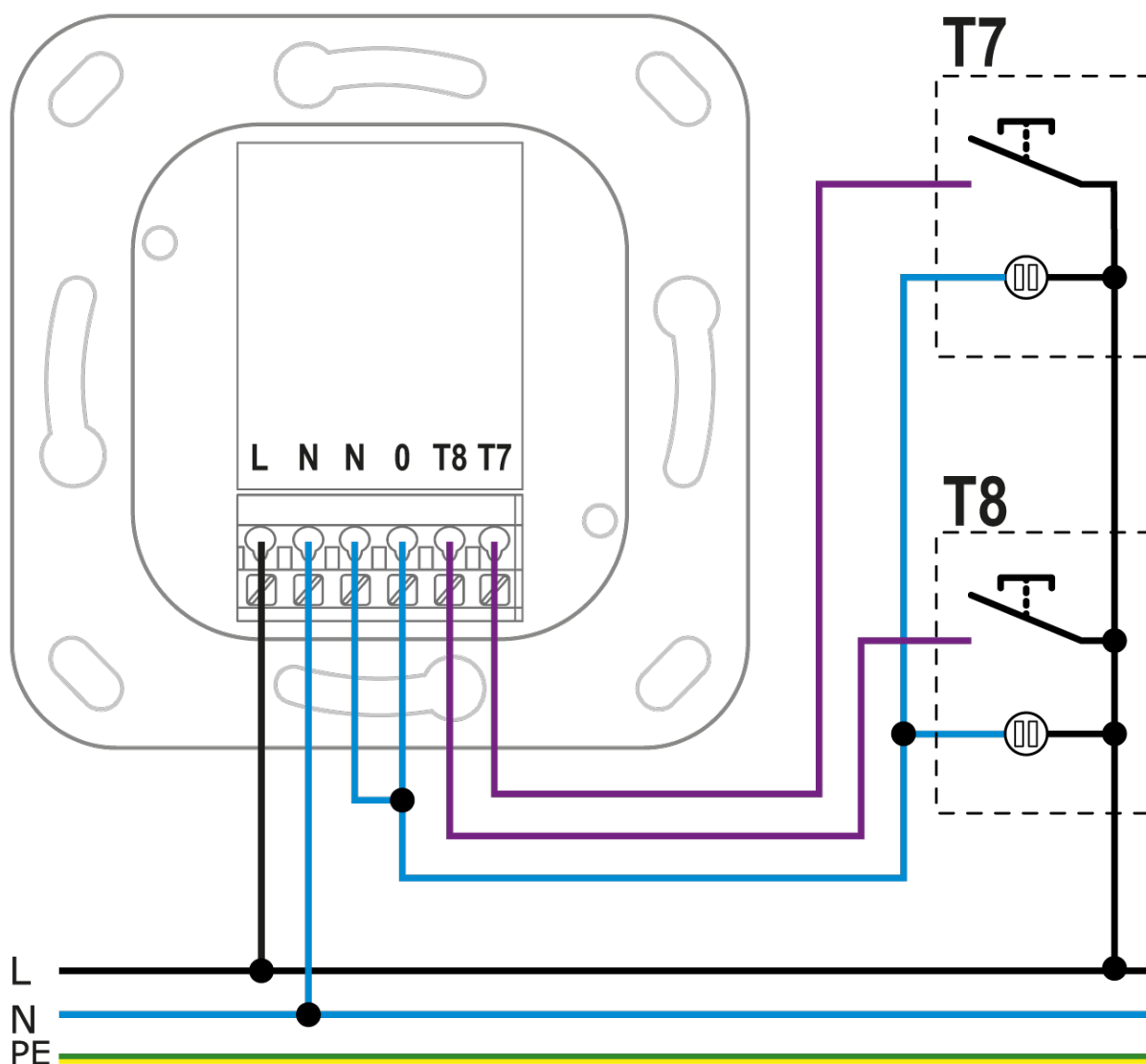
5.3 Electrical installation

Terminals

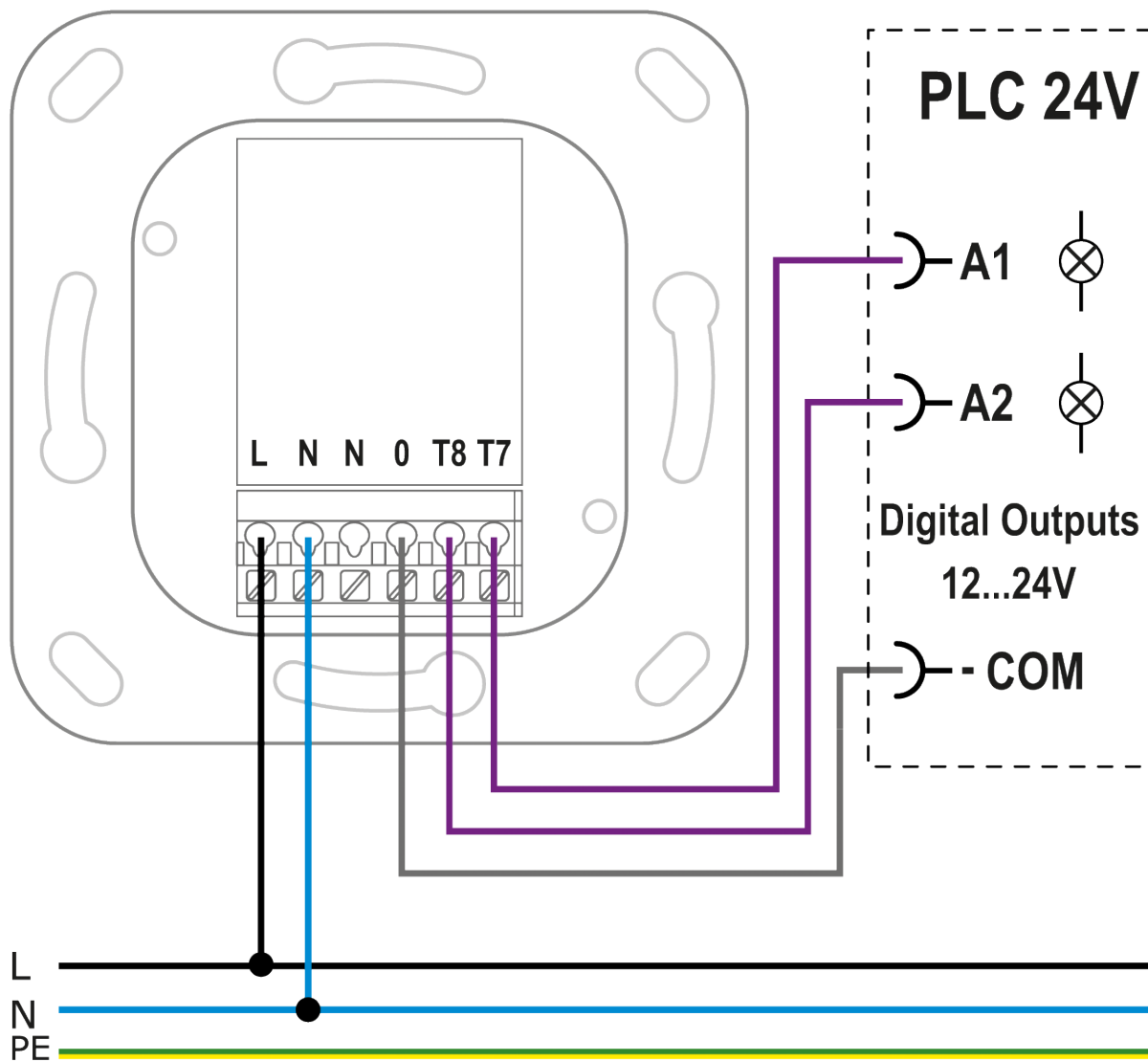
1	L	Input mains, phase 230V AC
2	N	Neutral conductor
3	N	Neutral conductor
4	0	COM (Common potential)
5	8	Push-button input 2 (T2)
6	7	Push-button input (T1)

Connection diagram

Connection and wiring additional pushbutton-inputs



Connection and wiring with PLC Inputs



Wiring

	1,5mm ² Solid conductor
	1,5mm ² Fine-stranded conductor
	8mm

6. Commissioning . CTS2

6.1 Operation with Casambi

The device can be controlled via the Casambi app, available for iOS and Android. Another optional operation is given by the push button input.

Casambi app automatically identifies the device and can be integrated into existing networks. All functions triggered by the buttons are individually configurable.

As soon as the device is added to your network, it can be operated. Groups can be formed, scenes and timers can be created.

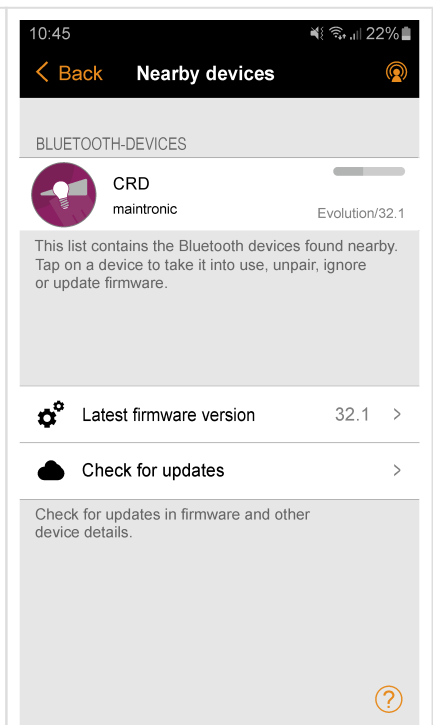
You can find all Casambi app related help on the official Casambi support sites at: <https://support.casambi.com>.

6.2 Commissioning

To make sure that the functionality of the device is up to date, first of all you have to check if a new firmware is available.

Update firmware

1. Open Casambi App
2. Go to nearby devices
3. Scroll down
4. Check for updates
5. If an update is available, please install

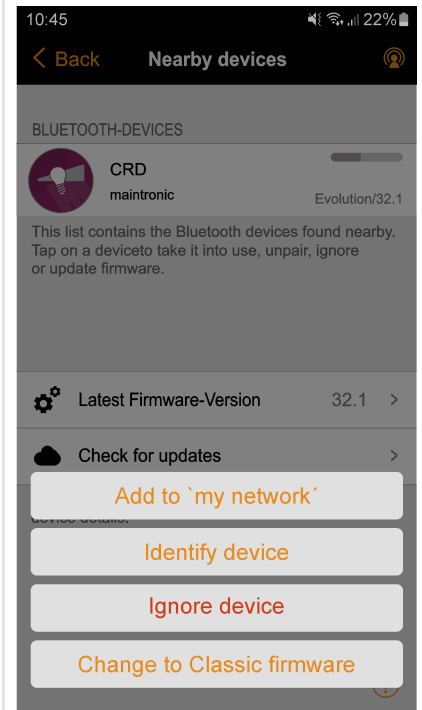


Add a device to a network

Casambi App automatically identifies the device and can be integrated into existing networks. All functions triggered by the buttons are individually configurable.

The following steps are necessary for this purpose:

1. Open Casambi App
2. Choose existing network or create a new network
3. Go to nearby devices
4. Add found maintronic device to a network




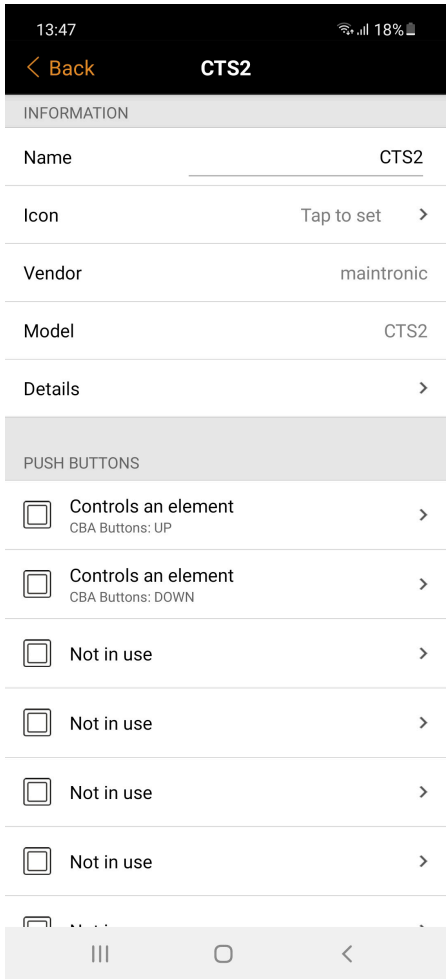
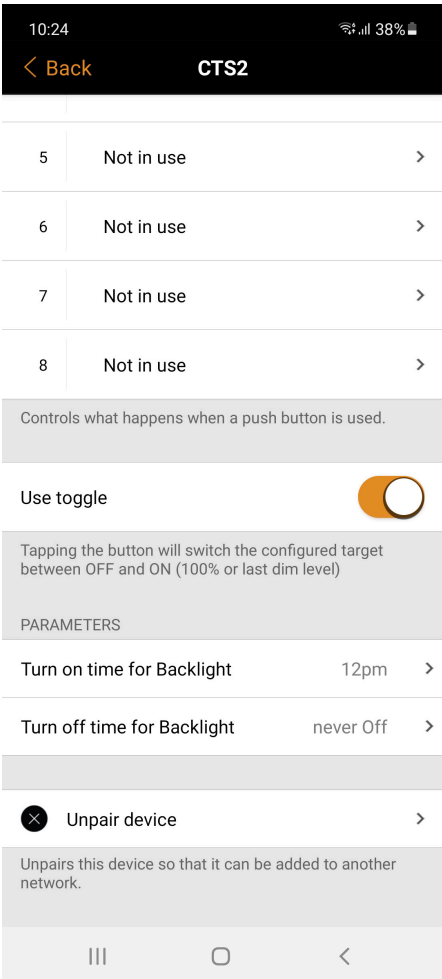
6.3 Select an operating mode

The device has different operating modes (so-called Casambi profiles), with the profiles the functionality and the parameters of the device are determined.

Before programming, a Casambi profile must be selected (by default the profile - CTS2 is set).

Select a suitable profile for your application:


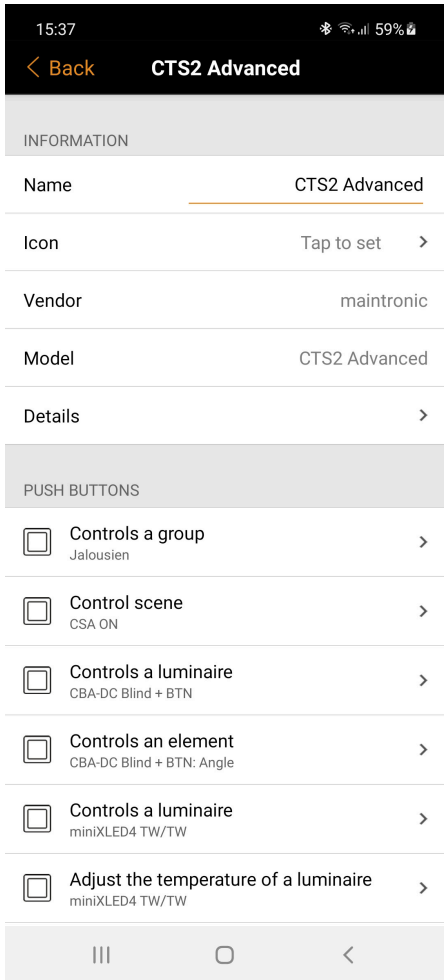
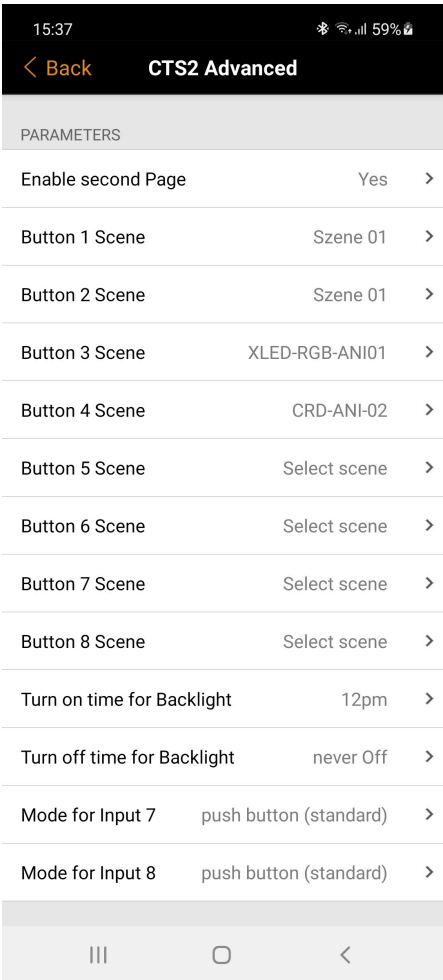
Casambi Profile - CTS2 - Fixture ID 25102

App Icon	Assign push-buttons	Parameter
		

Application

Push-buttons 1 ... 8 - Standard Casambi push-button input

Casambi Profile - CTS2 Advanced - Fixture ID 28222

App Icon	Assign push-buttons	Parameter
		

Application

Default operating layer - Push-buttons 1 ... 8 - Standard Casambi push-button input

Second operating layer - Scene control push-buttons 1 ...8 - assign scenes or animations

6.4 Change operating mode

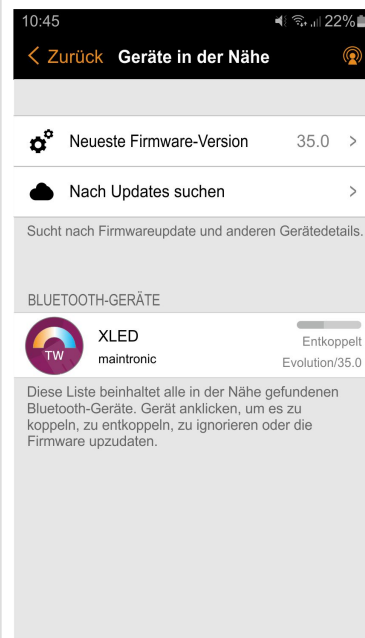
Once the application has been defined and a profile has been selected from the list above, this profile can be assigned to the device.

To change the operating mode and change the Casambi profile, proceed as follows:

Preparation

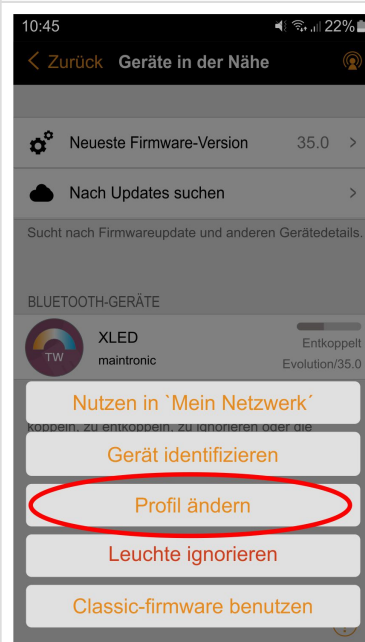
Device must be unpaired:

1. Open Casambi App and select „... More“
2. Open "Nearby Devices"



Change Profile

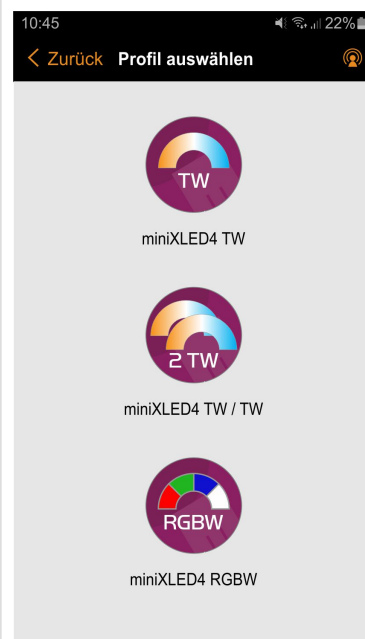
1. Tap on the desired device
2. Select "Change Profile"



Select desired operating mode (Casambi Profile)

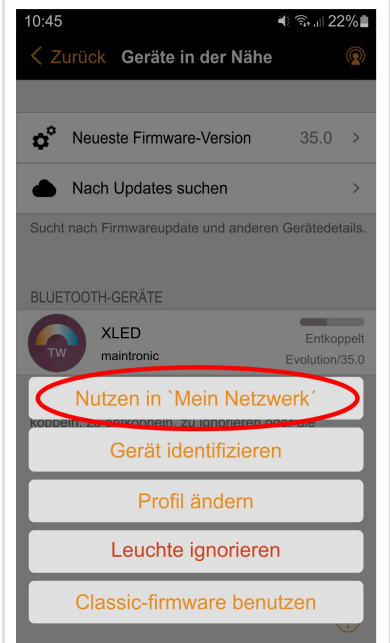
For more information about the operating modes, refer to the manual in the "Commissioning" section.

1. Select a desired profile from the list provided
2. Tap on the desired profile
3. Select "Start Update"



Add the device to a network

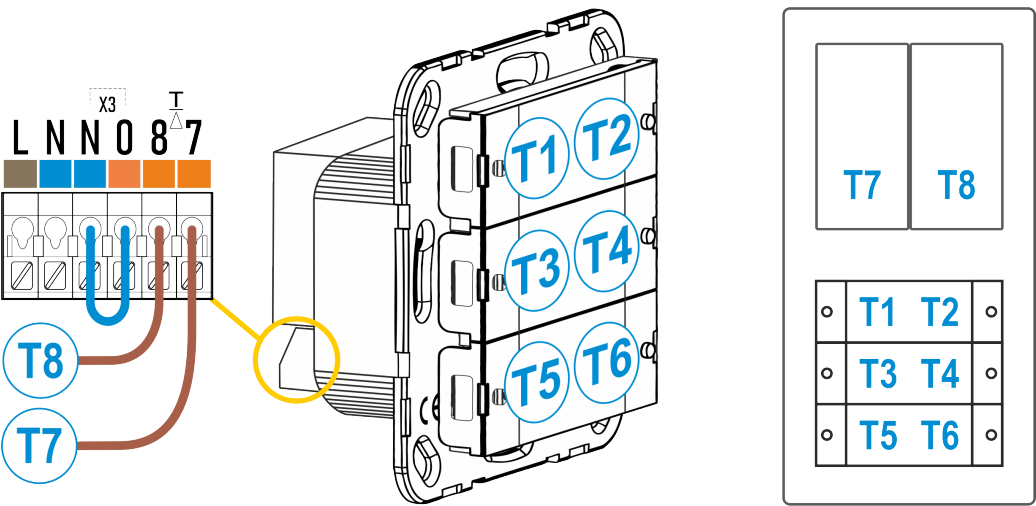
1. Wait for the update to complete successfully
2. Select "Use in my network"
3. Device is now connected to your network



7. Operation . CTS2

7.1 Notes for operation

Definition of the Push-buttons and the assigned Push-buttons inputs (T1 and T2)



T1	Push-button T1 with GIRA TS Rocker
T2	Push-button T2 with GIRA TS Rocker
T3	Push-button T3 with GIRA TS Rocker
T4	Push-button T4 with GIRA TS Rocker
T5	Push-button T5 with GIRA TS Rocker
T6	Push-button T6 with GIRA TS Rocker
T7	Insulated all-voltage push-button inputs (8) on the backside of the CTS2 device
T8	Insulated all-voltage push-button inputs (8) on the backside of the CTS2 device

7.2 Sensors and parameters

NOTE



In the Casambi world they are the terms **sensors**, **parameters** and **information**. Each of the terms stands for a specific type of value.
Here is the explanation:

Name	Meaning	Examples	Type
Sensors	display static values or technical-physical values of the environment	Consumption / Number of switching cycles	read only
Parameters	settings to achieve the desired functions or behavior	State after switching on: last value	writeable
Information	show values like manufacturer, model, or even detailed operating states of the device	RSSI: 78 dBm (radio reception quality)	read only

Parameter

Parameter Name	Description	Values	Notes	Default
Enable second page	Assign the availability of the second layer	Yes No yes, without back Buttons	enable the second layer disable the second layer enable the second layer, without T7 and T8 configuration	Yes
Button 1 Scene	Assign a Scene to Button (T1)	any scene		
Button 2 Scene	Assign a Scene to Button (T2)	any scene		
Button 3 Scene	Assign a Scene to Button (T3)	any scene		
Button 4 Scene	Assign a Scene to Button (T4)	any scene		
Button 5 Scene	Assign a Scene to Button (T5)	any scene		
Button 6 Scene	Assign a Scene to Button (T6)	any scene		
Button 6 Scene	Assign a Scene to Button (T7)	any scene		
Button 8 Scene	Assign a Scene to Button (T8)	any scene		
Turn on time for Backlight	Set the time for turning on the backlight of the GIRA rocker	set time		
Turn off time for Backlight	Set the time for turning off the backlight of the GIRA rocker	set time		
Mode for Input 7		push button (standard) switch		
Mode for Input 8		push button (standard) switch		

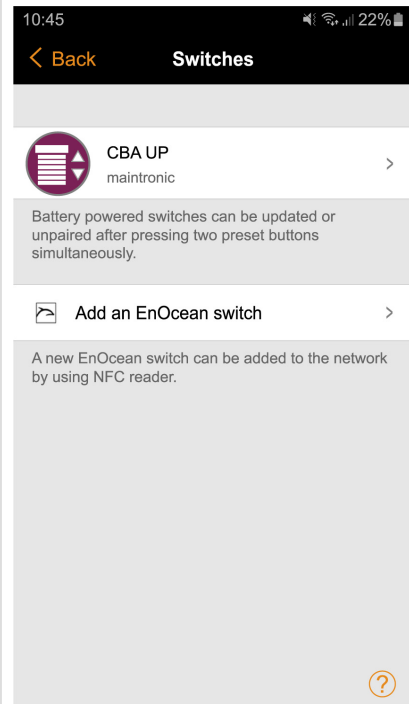
*1 only profiles for Shutter

7.3 Operation with Push-button input

Function switch

Push-button inputs can be individually assigned with desired functions. In order to do this, the following steps are necessary:

1. Open Casambi app and tap on „... More“
2. Open item „Switch“
3. Select device
4. Scroll down do push-buttons
5. Choose your maintronic module with push-button inputs
6. For example program switch with single function
 - a. Select the item "Controls a luminaire"
 - b. Tap on "Luminaire"
 - c. Choose a device

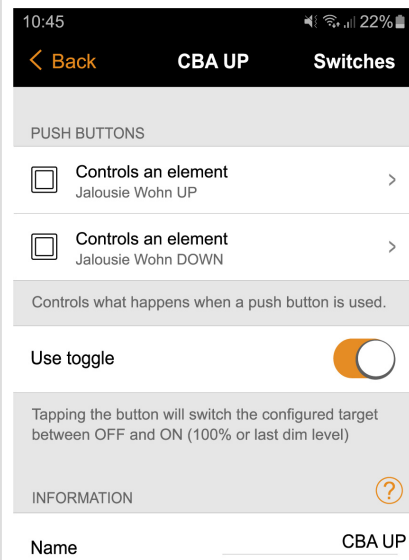


Configure a button for a device

By default, the push-button is configured to itself.

If another device or scene should be controlled, proceed as follows:

1. Proceed step 1-5 above
2. Select the item
 - a. controls an element for an element of any device
 - b. or controls a luminaire for direct control of a luminair
 - c. or controls a scene
3. Open an element
4. Open the "Element" item
5. Select the desired element



7.4 LED feedback

A very important and useful feature is the status LED feedback, which shows the status of each function if its switched on or off.

Blink pattern

#	Pattern	Description	Appearance	Notes
1	LEDs switch on one after the other at 100ms intervals (from top left to bottom right) and then switch off again one after the other	Test pattern for the LEDs, failure and short circuit of two LEDs can be determined	once when starting the paired device in a continuous loop when the device is unpaired	
2	One or more LEDs illuminate permanently	Normal operation: the LEDs indicate the status of the destinations of their associated buttons	Target of the associated button has level > 0% → LED on Level = 0% → LED off	
3	All LEDs change their state briefly twice every 2 seconds for 100ms each time	Second operating level: the LEDs display the status of their associated scenes (configured in the parameters)	Second operating layer is activated by pressing buttons T5 and T6 simultaneously Associated scene is active → LED on inactive → LED off	After one minute has elapsed without operation, the device switches back to normal operation Pressing buttons T5 and T6 simultaneously switches back to normal operation
4	LED top right flashes quickly (100ms on/off)	The device is in bootloader mode and is waiting for an update. When the update is active, LEDs 3-6 indicate the progress: LED 3 turns on at 20%, 4 at 40%, 5 at 60% and 6 at 80%. At 100%, pattern #1 occurs.	A firmware update has been initiated by Casambi, or the device has unsuccessfully attempted to boot the application (application image is corrupted)	A boot attempt can be forced by pressing and holding the button (T1) at the top left (opposite the flashing LED) for 1 second

LED-Sync on multiple devices

Also the status is synchronized with other CTS2, and if the same function is assigned to a different CTS2.

If a lamp, group or scene is turned on, the LED will indicate with a switched on LED. And if the status goes to turned off, the LED will indicate with a switched off LED.

It doesn't matter which push-button the same function is mapped to.

NOTE



Please note, there could be a delay of a few seconds in the synchronisation of the different devices.

8. Troubleshooting . CTS2

8.1 Failure causes and solutions

8.2 Unpair devices from network

Unpair a device from an existing network

A device that is integrated into a Casambi network can be removed from the network again with the function "unpair device".

Ein Gerät, dass in ein Casambi Netzwerk eingebunden ist, kann über die Funktion Gerät entkoppeln wieder aus dem Netzwerk entfernt werden.

1. Devices nearby
2. Select device
3. Unpair device

A successful unpairing is indicated in the app.

By unpairing from a network, the parameters and settings of the device are removed.

Unpair device from a network to which you no longer have access

To unpair a device to which you have physical access to from a network, you can use the function flick-unpairing.

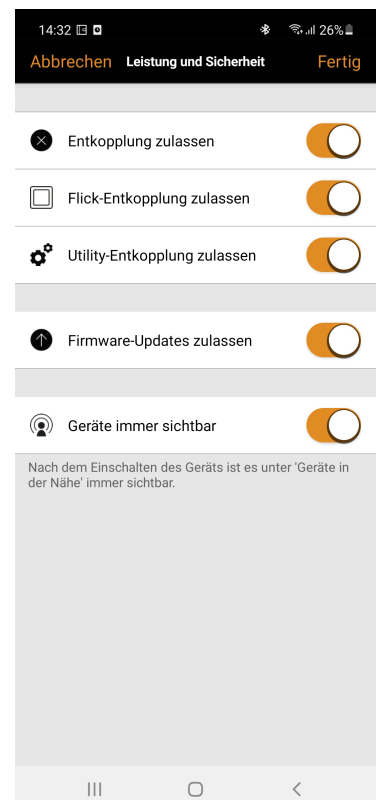
To do this, the function "Allow flick-unpairing" must be activated.

1. Settings
2. Performance and safety
3. Activate "Allow flick-unpairing"

If the function is activated, proceed as follows to unpair the device from the network:

1. Devices nearby
2. Select device
3. Choose flick-unpairing

Either switch the device on and off for the duration of the unpairing or briefly disconnect the voltage.



Unpair device from a network when flick-unpairing is disabled

In the case that you no longer have access to the network and the security option "flick-unpairing" is disabled, the device must be unpaired with the utility app and thus removed from the network.

Security option flick-unpair and allow utility pairing disabled

If all network security options such as "Allow unpairing", "Allow flick-unpairing" and "Allow utility unpairing" are disabled and you have no access to the network, then the only option is to contact the network admin and to log into the network.

NOTE



Without access to the network, there is no way of making changes to the device or removing it from a network.

9. Service and maintenance . CTS2