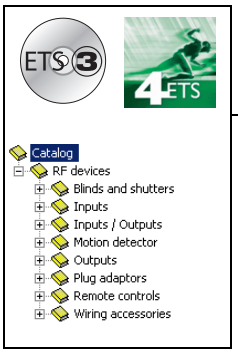
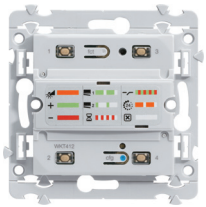


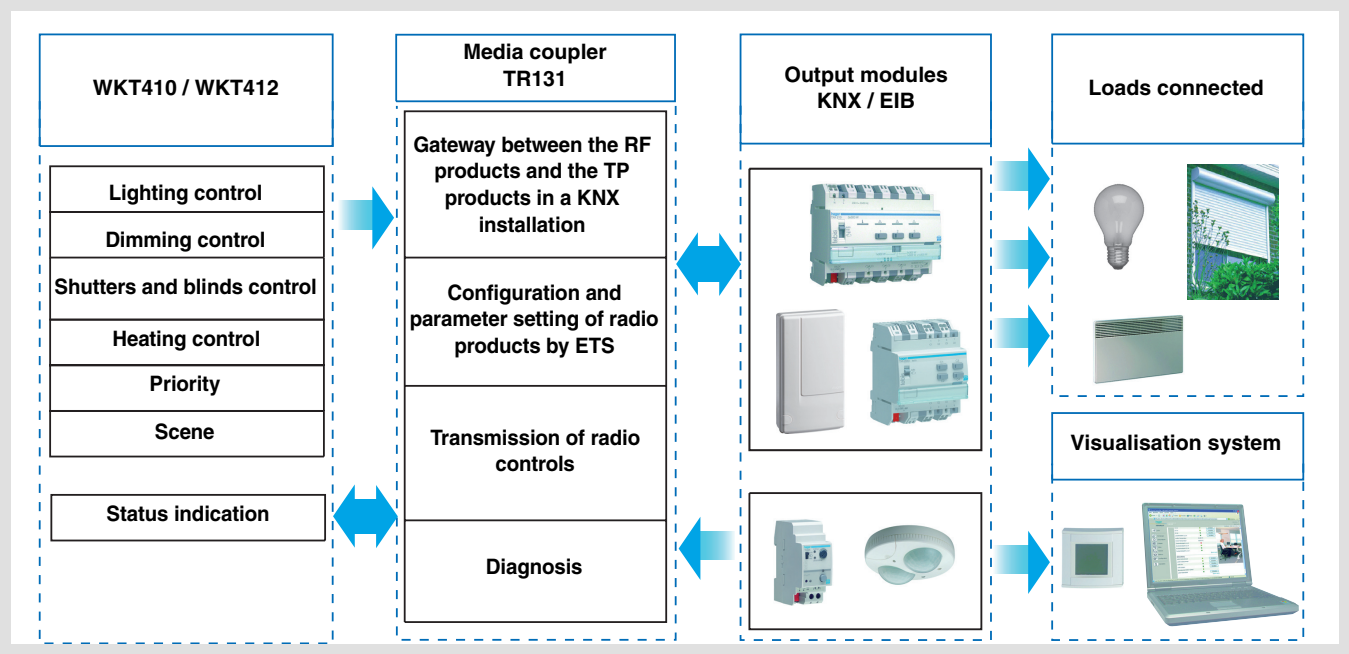
Tebis application software

quicklink radio dimmer input/output products

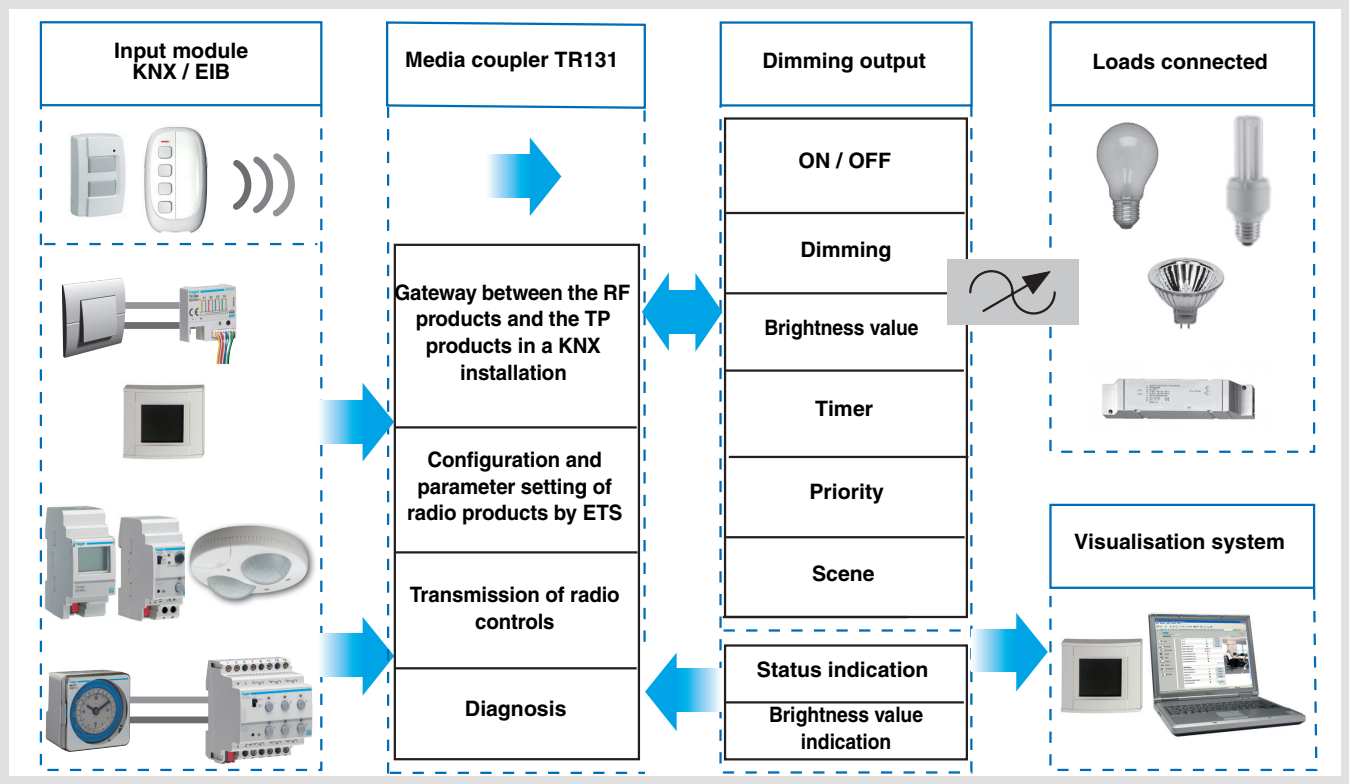
Electrical / Mechanical characteristics: see product information

	Product reference	Product designation	Application software ref.	TP device RF device
	WKT410	Wiring accessories dimmer	SWKT410	
	WKT412	Wiring accessories dimmer with repetition	SWKT412	

Inputs



Dimming output



Summary

1. Presentation

1.1 General points

All the radio emitters / receivers referred to in this document are quicklink RF devices. They can be recognised by the configuration **cfg** push button with which they are all equipped. Quicklink indicates the configuration without tools mode.

These products can also be configured to E mode by the TX100 or in S mode by ETS via the media coupler TR131.

In this case, the version of the TR131 must fulfill the following characteristics:

- Firmware: ≥ 1.2.5
- Plug in: ≥ 1.0.11

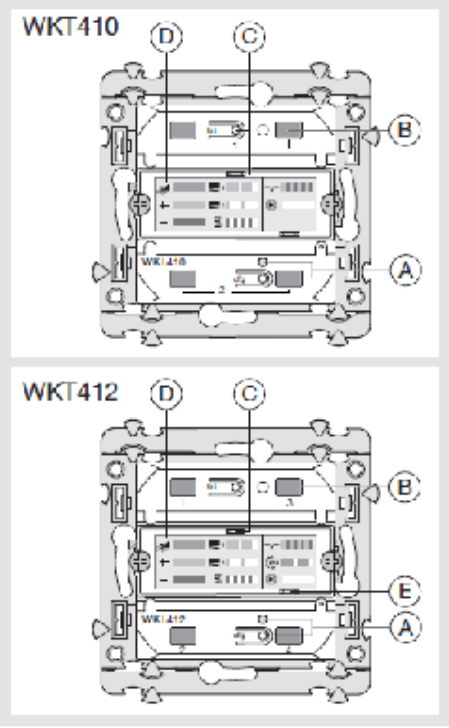
This document describes the configuration principle with the software ETS via the coupler TR131 and the functions available in this mode.

Within the same installation, a single configuration mode may be used.

To reuse a product that has already been programmed in another installation by TX100 or quicklink, with ETS, it is necessary to perform a factory reset for the product.

1.2 Function Description

The SWKT410 application software enables the 2 inputs (push button 1 and push button 2) and the output from the dimmer WKT410 to be configured.
The SWKT412 application software enables one input (push button 3 and the output of the dimmer WKT412 to be configured.



A Button and LED configuration cfg
B Push button 1 and 2 (WKT410), 1 - 4 (WKT412)
C Button and LED function fct
D Functions label
E Orange memo LED (WKT412)
Reception function

1.2.1 Inputs

Emission of commands

The inputs allow commands for lighting, shutters and blinds, heating settings and scenes to be transmitted.
Emission of commands:

- Lighting control
  - Toggle switch, ON, OFF, ON / OFF, Timer
  - 1 button or 2 button dimmer
- Shutters / Blinds control
  - Up, Down, Stop, Slat angle
  - 1 button or 2 button control
- Set point selection (Heating)
  - Comfort, Night set-point, Frost protection, Auto, Standby

Scene

The Scene function sends group controls to different kinds of outputs to create ambiences or scenarios.
Example of scene 1: Leaving the house (centralised lighting control OFF, shutters on south side 3 / 4 closed, the other shutters open, heating switched over to Reduced mode).

1.2.2 Dimming output

The application software SWKT410 / SWKT412 enable the output of the Dimming applications to be configured.

The main functions are the following:

ON / OFF

The ON / OFF function is used to switch the output ON or OFF.
ON: switching on at the level of lighting active the last time the lighting was switched on.
OFF: switching OFF.
The control can come from push buttons.

Status indication

The Status indication function displays the status of the output contact. It allows a Toggle function to be created by sending the status indication to each push button of the group.

Relative or absolute dimming (Brightness value)

The relative dimming allows increasing or decreasing the lighting level as long as a push button is pressed down. The absolute dimming allows defining in % the lighting level to reach by means of the **Lighting level** object.

Timer

The Timer function is used to switch a lighting circuit ON or OFF for an adjustable time. Depending on the operation mode selected, the output may be delayed for ON or OFF switching. An adjustable cut-OFF pre-warning indicates the end of the delay time by dividing the lighting level by two. The Timer function can be interrupted via a long key press before the time delay expires.

Priority

The Priority function allows overriding an output to an adjustable lighting level. This command has the highest priority. No other command is taken into account if a priority is active. Only a priority end command re-enables the other commands.

Application: maintaining lighting ON for safety reasons.

Scene

The Scene function groups a set of outputs. These outputs can be set to an adjustable predefined status. Pressing a single push button activates a scene.
The Repetition function enables the user to activate the repetition control, which can be associated with any emitter. This function is available on emitters/receivers WKT412, WKT422, WKT423.

2. Configuration and settings

2.1 Inputs

2.1.1 Objects List

Function / Object	ON / OFF	Toggle switch	Timer	1-button dimmer*	2-button dimmer	1-button shutters / blinds*	2-button shutters / blinds	Heating	Scene
ON / OFF	X	X		X	X				
Status indication		X		X		X			
Timer			X						
Dimming				X	X				
Stop / Angle						X	X		
Up / Down						X	X		
Set point selection								X	
Scene									X

* The WKT412 only enables the dimming or the 1-button shutters / blinds control.

2.1.2 Parameter setting

■ Parameter setting: Channel function

The product allows to control lighting, blinds, shutters, heating and scenes.

➜ Parameter Setting screen

Parameter	Description	Value
Channel function	This parameter allows selecting the function associated with each input.	Not used Toggle switch ON / OFF 1-button dimmer 2-button dimmer Shutters / blinds Heating Scene Timer Default function: Not used

■ Channel function: Toggle switch

This function is used to switch the lighting circuit or any other load ON or OFF. Each new key-press modifies the output status.

Description: After pressing the connected pushbutton, depending on the **Status indication** object, an **ON or OFF** command will be sent to the bus via the **ON / OFF** object.

Channel function: ON / OFF

This function is used to switch the lighting circuit or any other load ON or OFF. The ON or OFF command will be transmitted to the bus via the **ON / OFF** object. The command to be sent (ON or OFF) can be defined in the parameters.

- ON: Emission of the ON command when the input contact is closed (or when the input push button is pressed),
- OFF: Emission of the OFF command when the input contact is closed (or when the input push button is pressed),
- ON / OFF: Emission of the ON command when the input contact is closed (or when the input push button is pressed) and emission of the OFF command when the input contact is opened (or when the input push button is released),
- OFF / ON: Emission of the OFF command when the input contact is closed (or when the input push button is pressed) and emission of the ON command when the input contact is opened (or when the input push button is released).

Channel function: Dimming

This function is used to control lighting circuits using one or two buttons.
The 1 button dimmer and 2 buttons dimmer functions send the **ON / OFF** object after a short press.
A long press send the **Dimmer** object.

There are 2 different function types: 1-button dimmer or 2-button dimmer.

Channel function: 1-button dimmer

This function allows ON / OFF or Increase / Decrease controls using one push button.

Channel function: 2-button dimmer

This function allows ON or Increase controls using one push button, and OFF or decrease controls using a second push button.

Channel function: Shutters / blinds

This function controls shutters and blinds (Up, Down and slat angle adjustment for blinds).

There are 2 different functions:
- 1-button,
- 2-buttons,

Type of function: 1-button
This function controls shutters or blinds using one push buttons (Input).
Function change after each press (Down, Stop, Up, Stop). Slat angle adjustment is not possible here.

Type of function: 2-buttons
This function controls shutters or blinds using two push buttons (Input). One button for Up and one button for down.
The function transmit the **Up / Down** object (long key press) and the **Slat angle adjustment / Stop** object (short key press).

Channel function: Heating mode selection

This function is used select a heating setpoint. The operating modes are sent via the **Set point selection** object. The set point selection to be sent must be defined in the parameters.

- Comfort: Emission of the **Comfort** command when the input contact is closed (or when the input push button is pressed)
- Night set-point: Emission of the **Night set-point** command when the input contact is closed (or when the input push button is pressed),
- Frost protection: Emission of the **Frost protection** command when the input contact is closed (or when the input push button is pressed),
- Auto: Emission of the **Auto** command when the input contact is closed (or when the input push button is pressed),
- Standby: Emission of the **Standby** command when the input contact is closed (or when the input push button is pressed),

Channel function: Scene

The Scene function sends group controls to different kinds of outputs to create ambiences or scenarios (Panic switch, Television, etc.).
The value of the **Scene** object is defined by the **Scene number** parameter.
Scene 8 = Repetition

The **Repetition** finction enables the user to save the commands receives successively over a period of 24 h.
Once saved, the user can activate this function to have the sequence of stored commands repeated automatically, every 24 h period.
The command is sent by the object **Scene**. The recording of the daily sequence is activated or deactivated directly on the output module. To activate the **Repetition** function, link the scene number 8 from the emitter to the receiver object **Scene or Repetition**.

Channel function: Timer

This function operates like a staircase light function. The timer duration is set on the output module.

Feature:

- short key press (rising edge): Timer start,
- long key press (falling edge): Timer end.

The time is retriggered in the output by a recurrent short key press. Successive presses on the control button for the timer increase the timer's duration. The effective length will then be multiplied by the number of presses made during the 10 s following the first press.

2.2 Outputs

2.2.1 Objects List (Dimming function)

WKT410

12	Output	ON / OFF	1 bit	C	R	W	-	-	Low
13	Output	Dimming	4 bit	C	R	W	-	-	Low
14	Output	Brightness value	1 Byte	C	R	W	-	-	Low
15	Output	Timer	1 bit	C	R	W	-	-	Low
16	Output	Priority	2 bit	C	R	W	-	-	Low
17	Output	Scene	1 Byte	C	R	W	-	-	Low
18	Output	Status indication	1 bit	C	R	-	T	U	Low
19	Output	Brightness value indication	1 Byte	C	R	-	T	U	Low

WKT412

6	Output	ON / OFF	1 bit	C	R	W	-	-	Low
7	Output	Dimming	4 bit	C	R	W	-	-	Low
8	Output	Brightness value	1 Byte	C	R	W	-	-	Low
9	Output	Timer	1 bit	C	R	W	-	-	Low
10	Output	Priority	2 bit	C	R	W	-	-	Low
11	Output	Scene or repetition	1 Byte	C	R	W	-	-	Low
12	Output	Status indication	1 bit	C	R	-	T	U	Low
13	Output	Brightness value indication	1 Byte	C	R	-	T	U	Low

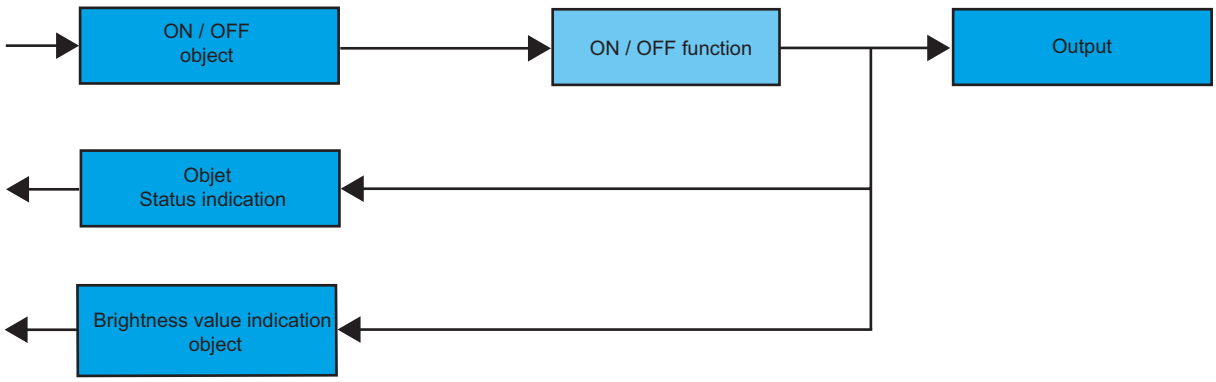
2.2.2 Parameter setting

ON / OFF, Status indication and Brightness value indication functions

The ON / OFF function is used to switch the output ON or OFF.

- ON: switching on at the level of lighting active the last time the lighting was switched on.
- OFF: switching OFF.

The output status and the lighting level are indicated on the bus by the **Status indication** object and **Brightness value indication** object.

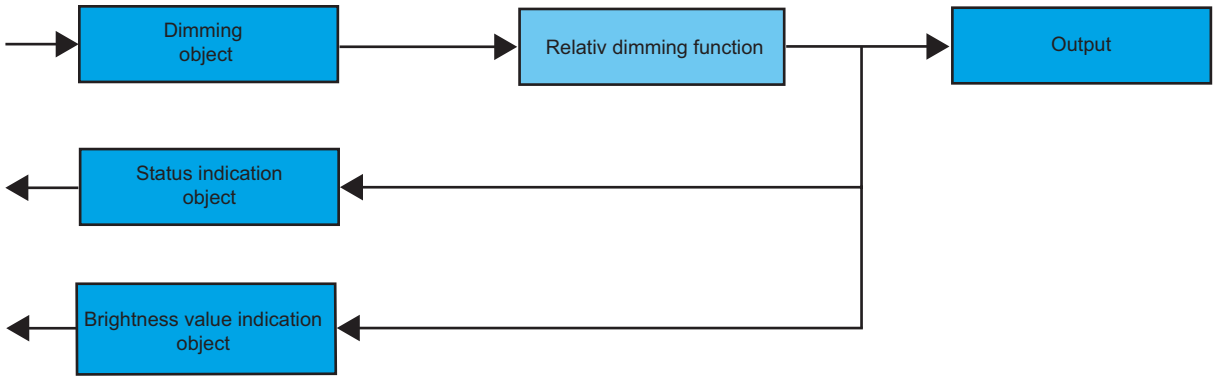


Dimming function

The dimming can be relative or absolute.

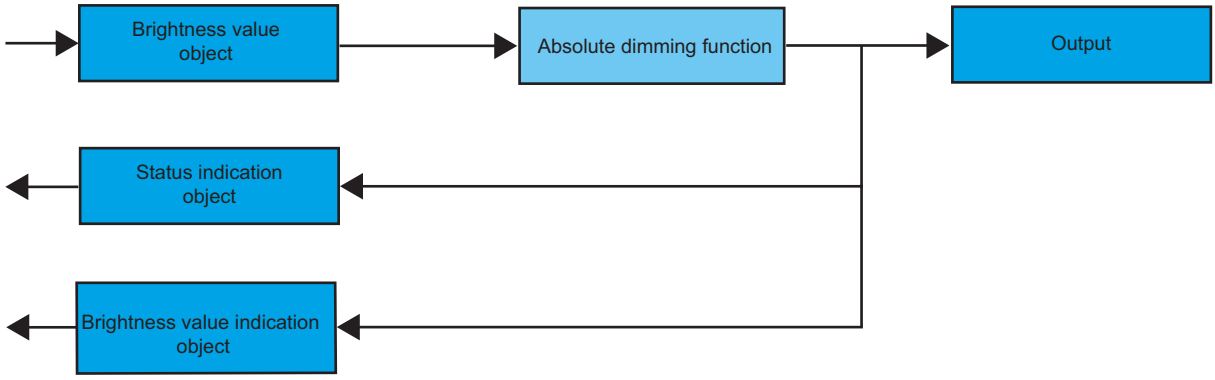
- Relative dimming

The relative dimming allows increasing or decreasing the lighting level of the lighting circuit as long as a push button is pressed down.
The relative dimming function is started by the **Dimming** object.



- Absolute dimming

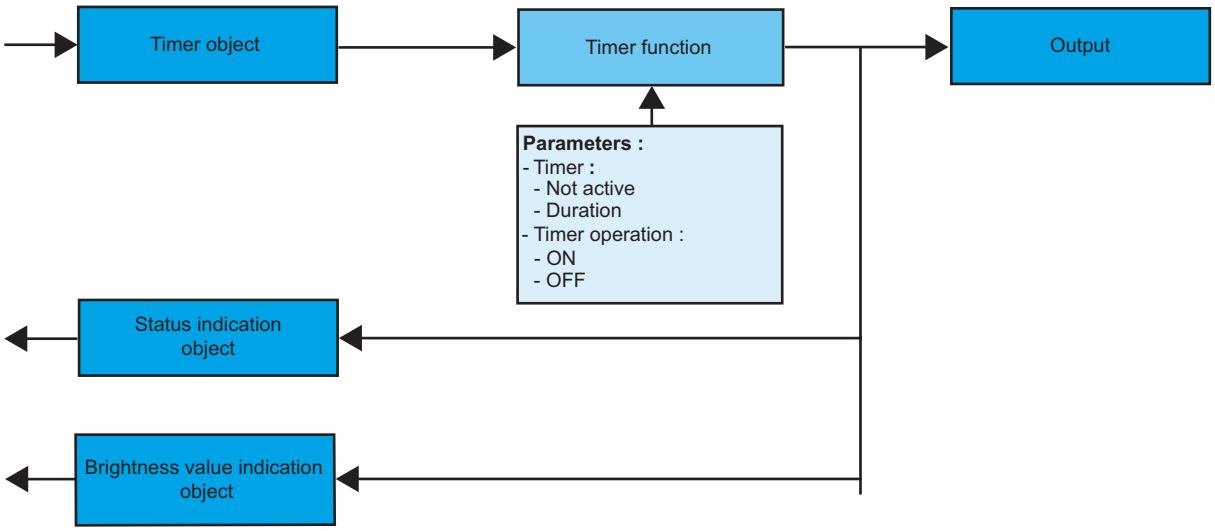
The Absolute dimming function allows applying a brightness level to the lighting circuit when switching it ON or OFF.
The absolute dimming function is started by the **Brightness value** object.



Timer function

The Timer function is used to switch a lighting circuit ON or OFF for an adjustable time. The function is started by the **Timer** object.

➜ Parameter



Designation	Description	Values
Timer	This parameter defines the length of the delay time.	Not active Range [1 s - 24 h]* Default value: 3 min
Timer operation	This parameter defines whether the delay time triggers an ON or an OFF status.	ON OFF Default value: ON

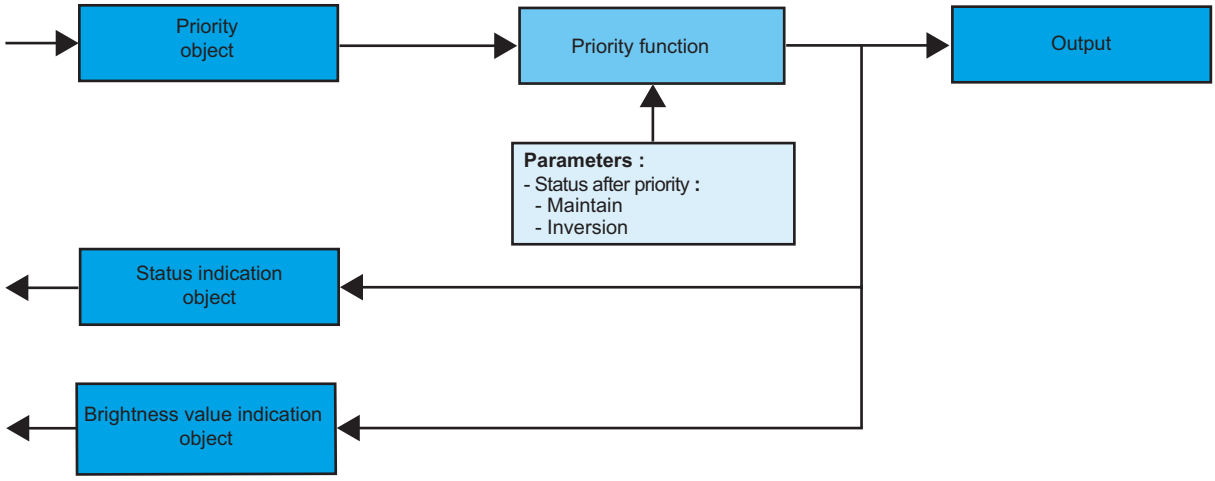
* Setting range [1 s 24 h]
1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 40 s, 45 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 5 min,15 min, 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h.

Priority function

The Priority function allows the outputs to be forced and maintained at a definite ON or OFF status imposed by the input. This function is started by the **Priority** object.
Priority is the function with the highest priority. Only a cancellation command for the priority can end the priority and authorise other commands to be followed again.

➜ Description of the **Priority** object

Value	Output behaviour
00	Priority end
01	Priority end
10	Priority ON
11	Priority OFF



➜ Parameter

Designation	Description	Values
Status after priority	This parameter defines the level of lighting applied at the end of the priority	Maintain, Inversion • Maintain: The output is maintained in the status which was active before the priority. • Inversion: Inversion of the output's status with regards to the status active during Priority (ON to OFF and OFF to ON). Default value: Maintain.

2.3 Configuration with TR131 (ETS version ≥ 3.0f)

Configuration principle

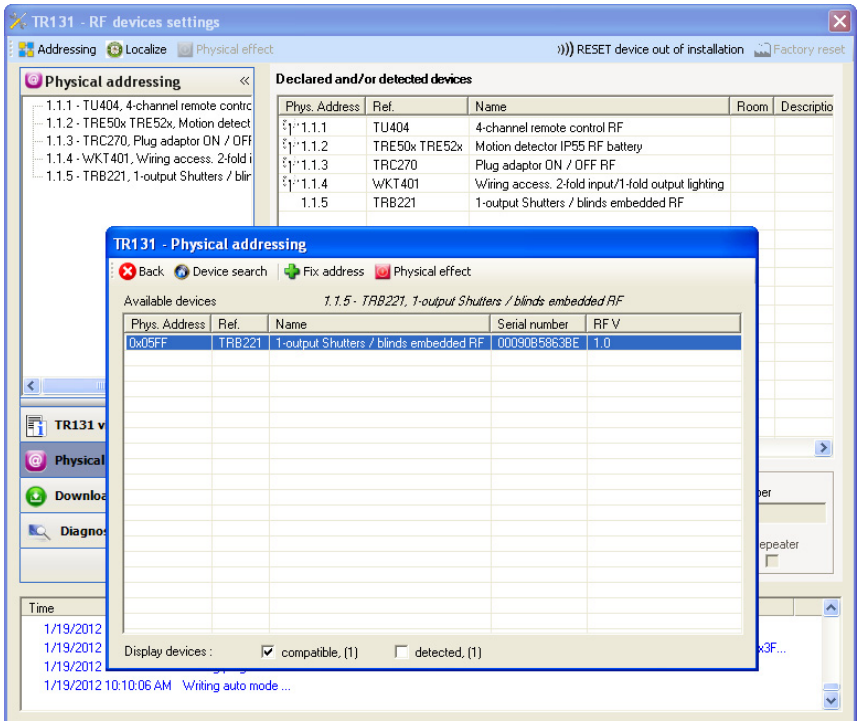
The TR131 media coupler enables confuguration by ETS of RF devices for a KNX radio installation or a mixed KNX installation including RF devices and wired buses. The radio emitters / receivers always function in bidirectional mode.

Procedure:

- Create a line reserved for RF devices in your ETS plan. First add the TR131 coupler to this line, then add the other RF devices to this line,
- Perform programming, parameter setting and group addressing for all the RF devices except for the TR131,
- Download the physical address of the TR131, which should be of the type 1.1.0. (should always end in zero),
- Install the Plug in for TR131: Right-click on the product in the ETS tree structure, then select **edit the parameters**. Windows Administrator rights are necessary to install the plug in.

Physical addressing of the radio transmitters:

- Click on the button **Physical addressing** to display the physical addressing screen for the plug in,
- Choose a product from the list and click on the **Addressing** button in the menu line at the top of the window,
- Click on **Product search**, the list of compatible products within radio range will be displayed. If the product is not found by the search, perform a **RESET device out of installation**. The factory reset may also be performed manually on a product by pressing the cfg button for >10 s,
- Select the desired product from the list generated by the search, then click the button **Fix address**,
- The physical addressing of the product is performed. The product is now part of the installation.



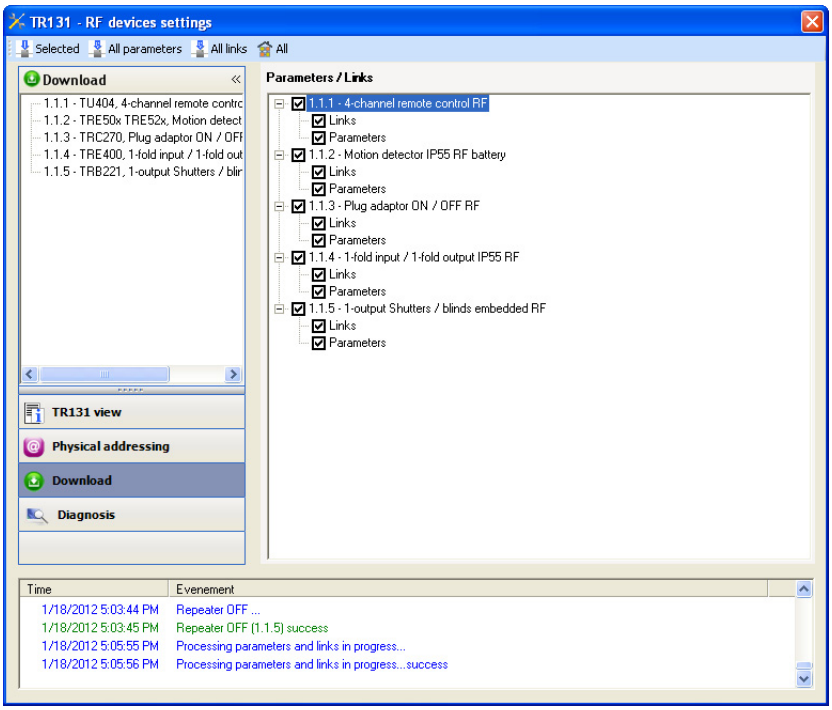
The **Physical effect** button enables the selected product to be identified and located.

Downloading the program and the parameters:

This operation is performed on the **Download** screen of the plug in:

- Click on **Download** and follow the instructions on the screen.

To test the radio KNX functions and communication, return to normal use mode and wait 15 s before executing a command.

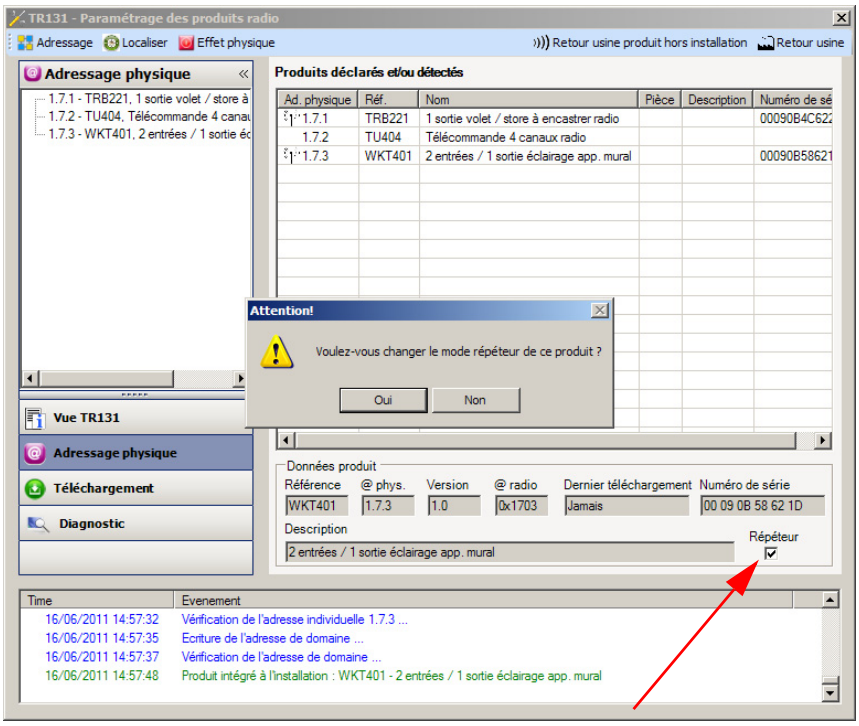


NB:For more information, refer to the description for the TR131 application software.

Caution: The plug in for TR131 must be deactivated during functional testing.

Repeater Function

It increases the radio range of the system by re-sending the messages received by the product.



To activate the Repeater function, tick the repeater box on the physical addressing screen of the product concerned.

3. Factory reset

This function enables the device to be returned to its initial configuration (configuration when it came out of the factory). After a device reset, the device can be re-used in a new installation. The factory reset can either be performed directly on the device, or via the TR131 plug in. The latter solution is recommended if the product is part of the installation configured by ETS, which erases the product from the project.

3.1 Factory reset by ETS via TR131

- For a device that is part of the installation (known by the TR131): In the **Physical addressing** menu, select **Factory reset** and then follow the instructions which appear on the screen,
- For a device that is not part of the installation (not known by the TR131): In the **Physical addressing** menu, select **RESET device out of installation**, then select **Bi-directional product**.

3.2 Factory reset on the product

It is always possible to perform the factory reset directly on the device.

Factory reset on the product:

- Do a long key press (> 10 seconds) on the **cfg** push button, release the button when the **cfg** LED blinks,
- Wait for the **cfg** LED to switch off, indicating that the factory reset has been completed.

Remark:

To reuse a product that has already been programmed in another installation by TX100 or quicklink, with ETS, it is necessary to perform a factory reset for the product.

4. Main characteristics

Product	WKT410	WKT412
Max. number of group addresses	85	86
Max. number of links	91	91