

- Manufacturers
- Hager Electro
- RF devices
- Inputs / Outputs

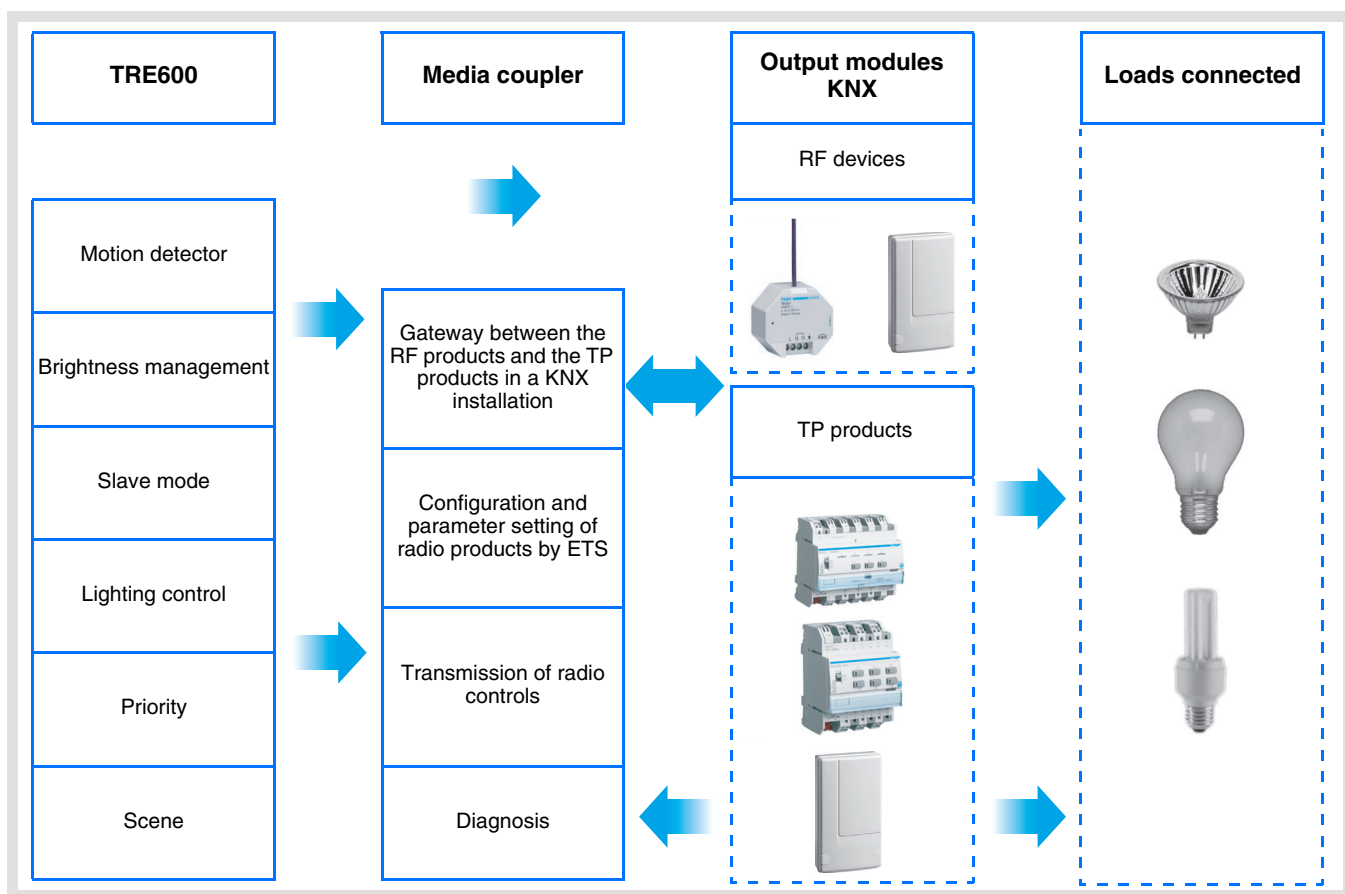
## Tebis application software

### LED projector with quicklink radio infrared detector

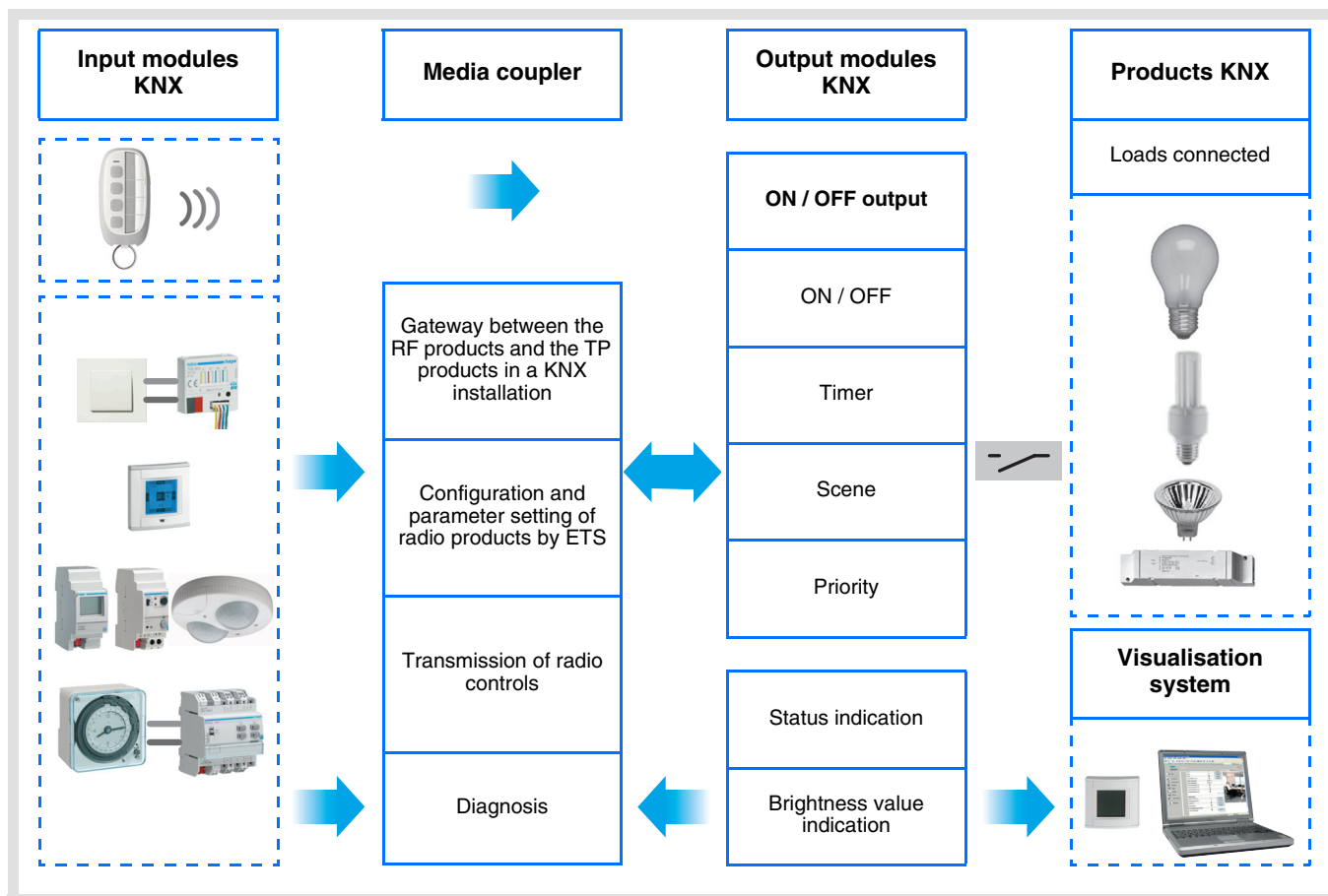
Electrical / Mechanical characteristics: see product user manual

	Product reference	Product designation	Application software ref.	TP device  RF device
	TRE600	LED projector with infrared detector	STRE600	

#### Inputs



ON / OFF output





## Summary

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# 1. Presentation

## 1.1 General points

All radio transmitters referred to in this document are radio quicklink  products. 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 in E mode by the USB configurer or in S mode by ETS via the media coupler.

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

- Firmware:  $\geq 1.2.5$
- Plug-in:  $\geq 1.0.11$

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

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

**To re-use a product which has already been programmed in another installation, whatever the configuration mode, a factory reset must be performed on the product.**

## 1.2 Function Description

### 1.2.1 Inputs

The main functions are the following:

#### ■ Movement detector and light measurement device

The radio detector senses the infrared radiation from the heat emitted by bodies in motion. It makes it possible to send commands for lighting, and scenes in case movement is detected (people present). A potentiometer makes it possible to limit the sensitivity of the detection so that it can be adapted to the environment. The light level can be set by a potentiometer located on the product.

#### ■ Lighting channel

The lighting channel makes it possible to control a charge in case movement is detected, when the ambient light is below an adjustable threshold.

#### ■ Lighting time delay

A setting potentiometer located on the product enables the turn off time to be set. The light turns off after the time delay for turning off if no movement has been detected.

#### ■ Slave Configuration

This mode enables the detection zone to be turned off by association one or more slave detectors with a master product. The master product manages the light level.

#### ■ Scene and Scene Presence / Absence functions

The Scene function sends group controls to different kinds of outputs to create ambiances or scenarios (scenario with movement present, scenario without, etc.). The Scene Presence / Absence function enables one scene to be activated when movement is present and another scene when there is no movement present.

#### ■ Master / Slave function

This mode enables the detection zone to be turned off by association one or more slave detectors with a master product. Two different relations are possible for this purpose:

- Master: The detector operates in its own detection zone according to presence and the level of light.
- Slave: The detector operates in its own detection zone according to presence and transmits the presence information to a master.

### 1.2.2 ON / OFF output

The application software allows you to configure individually the outputs.

The main functions are the following:

#### ■ ON / OFF

The ON / OFF function is used to switch a lighting circuit ON or OFF. The command may come from switches, pushbuttons or automatic controls.

#### ■ 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.

#### ■ 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. The timer can be interrupted before the end of the time delay.

#### ■ Priority

The Priority function allows overriding an output to a definite status, ON or OFF. 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 push button activates a scene. Each output can be integrated in 8 different scenes.

## 2. Configuration and settings

### 2.1 Inputs

#### 2.1.1 Objects List

Parameters	N°	Name	Function of the object	Length	C	R	W	T
ON / OFF, Timer, Brightness value, Brightness value Presence / Absence	0	Input	Status indication	1 bit	C	R	W	-
ON / OFF	1	Input	ON / OFF	1 bit	C	R	-	T
Timer	2	Input	Timer	1 bit	C	R	-	T
Brightness value	4	Input	Dimming	4 bits	C	R	-	T
Brightness value Presence / Absence	4	Input	Dimming	4 bits	C	R	-	T
Scene	5	Input	Scene	1 byte	C	R	-	T
Scene Presence / Absence	5	Input	Scene	1 byte	C	R	-	T

Remark: Link the input **ON / OFF** object (N°1) to the output **ON / OFF** object (N°7) to control lighting for the product.

#### 2.1.2 Setting parameters

When the Slave function is not used, the lighting channel parameters appear.

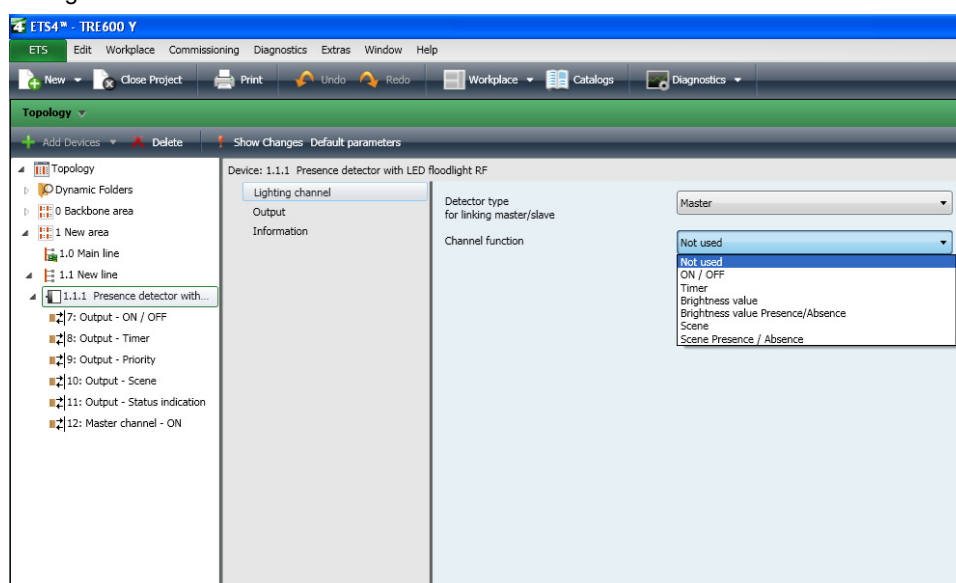
The Slave function enables a link to be established between a Master detector and a slave detector. The light level can be set by a potentiometer located on the product.

#### ■ Functions of the Lighting channel

The **Channel function** makes it possible to select the command sent after valid movement detection ("presence" of person) and, if necessary, the command sent after the lighting time delay ("absence" of person).

- Detection of valid movement:  
For the lighting channel, detecting movement and ambient light below an adjustable light level.

#### → Parameter Setting screen



■ Channel function: ON / OFF, Timer

These functions are used to control switching a lighting circuit or any other load on or off. The ON / OFF function sends the **ON / OFF** object.

The Timer function sends the **Timer** object.

Parameter	Description	Value
ON / OFF channel function	This parameter defines the command sent after valid movement detection * and, if necessary, the end of the time delay.	OFF, ON, OFF / ON, ON / OFF, Default value: ON
Timer channel function	In the case of a timer, the time delay for turning on the light is managed by the output pilot.	

\* Detection of valid movement (Presence):

For the lighting channel: movement detected and ambient light below the threshold.

■ Brightness value channel function, Brightness value Presence / Absence

These functions enable commands to be sent to dim the lighting on 1 or 2 levels: A value after movement has been detected and another value at the end of the lighting time delay.

The Lighting value functions send the **Dimming** object.

The output status commanded is received on the object **Status indication**.

→ Parameters

Parameter	Description	Value
Brightness value (Presence)	Defines the absolute level of variation of the output after a valid movement detection.	0% to 100% in 1% steps Default value: 100%
Brightness value (Absence)	Defines the absolute level of variation of the output at the end of the time delay.	0% to 100% in 1% steps Default value: 0%

■ Scene channel function and Scene Presence / Absence

The Scene function can be used to send group commands to different sorts of outputs to create atmospheres or scenarii (leave scenario, reading atmosphere, etc.).

The Scene function sends an object **Scene**.

→ Parameters

Parameter	Description	Value
Scene number (Presence)	This parameter defines the number of the scene after detection of a valid movement.	Scene 1 to Scene 8 Default value: Scene 1
Scene number (Absence)	This parameter defines the number of the scene at the end of the time delay.	Scene 1 to Scene 8 Default value: Scene 2

Scene learning must be done from another transmitter.

### 2.1.3 Master / Slave function

This function extends the presence detector's detection zone by combining it with other detectors.

#### ■ Master detector

The lighting channel of the master detector activates as soon as a slave detector indicates a presence in the detection zone. The level of light in the master detector's detection zone must be lower than the threshold configured for activation.

#### ■ Slave detector

The slave detector informs the master detector of a presence in its zone.

N°	Name	Function of the object	Length	C	R	W	T
12	Master Channel	ON	1 bit	C	R	W	-
6	Slave channel	ON	1 bit	C	R	-	T

## 2.2 ON / OFF output

### 2.2.1 Objects List

N°	Name	Function of the object	Length	C	R	W	T
7	Output	ON / OFF	1 bit	C	R	W	-
8	Output	Timer	1 bit	C	R	W	-
9	Output	Priority	2 bit	C	R	W	-
10	Output	Scene	1 byte	C	R	W	-
11	Output	Status indication	1 bit	C	R	-	T

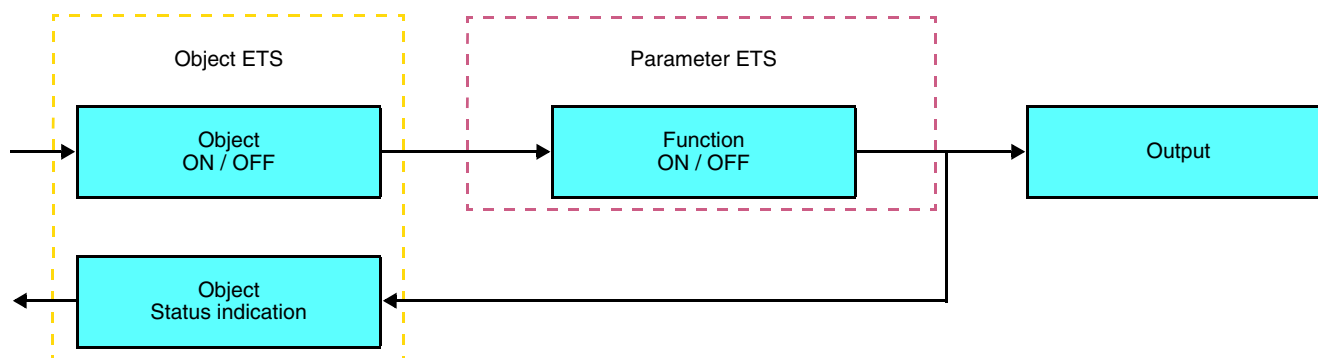
Remark: Link the input **ON / OFF** object (N°1) to the output **ON / OFF** object (N°7) to control lighting for the product.

### 2.2.2 Setting parameters

#### ■ Function ON / OFF, Status indication

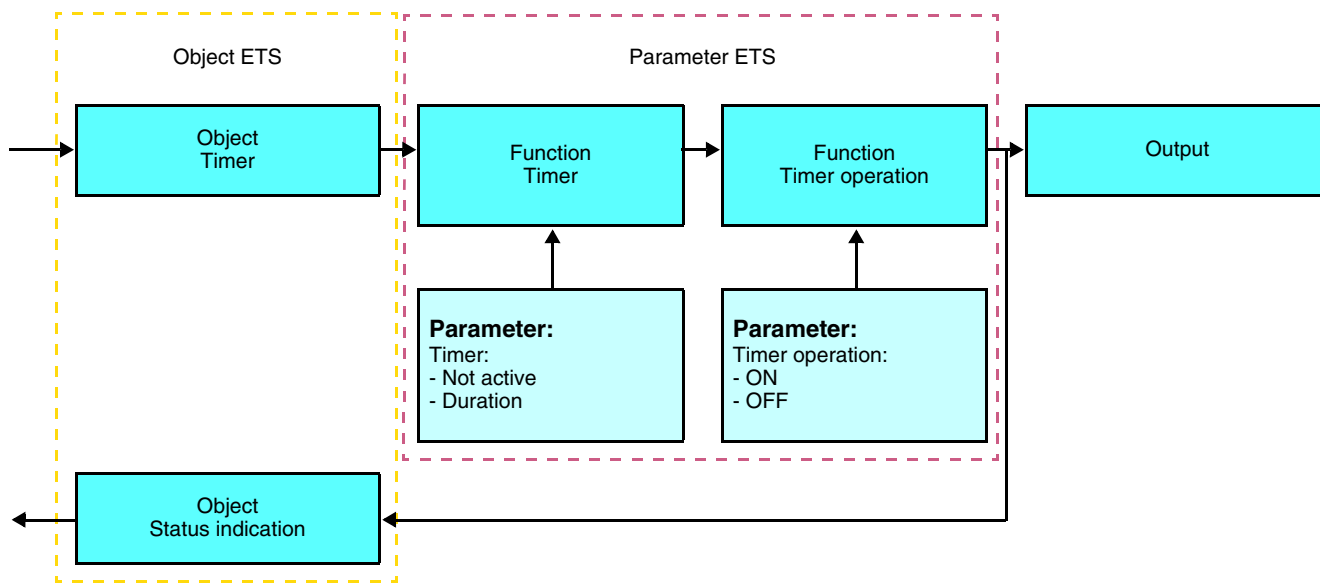
The ON / OFF function is used to switch the output ON or OFF. The status of the output depends on the activation of other functions and of the associated parameters: priority, timer or scene.

The status of the output is indicated on the bus by the **Status indication** 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.



#### → Parameters

Parameter	Description	Value
Timer	This parameter defines the length of the delay time.	Not active, [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

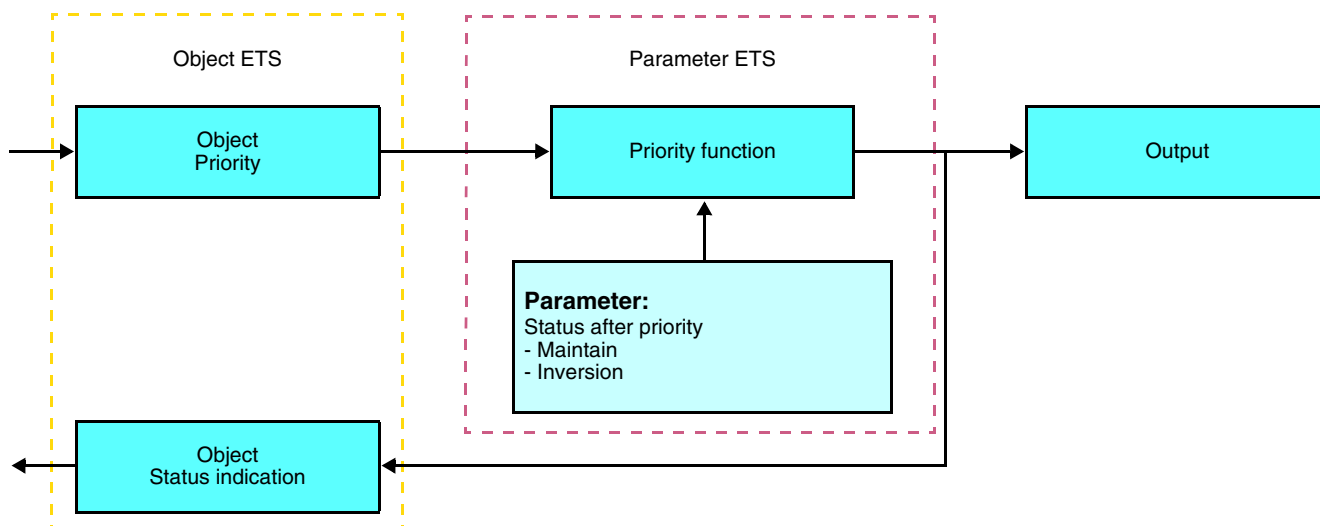
\* Setting range [1 s - 24 h]

1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 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

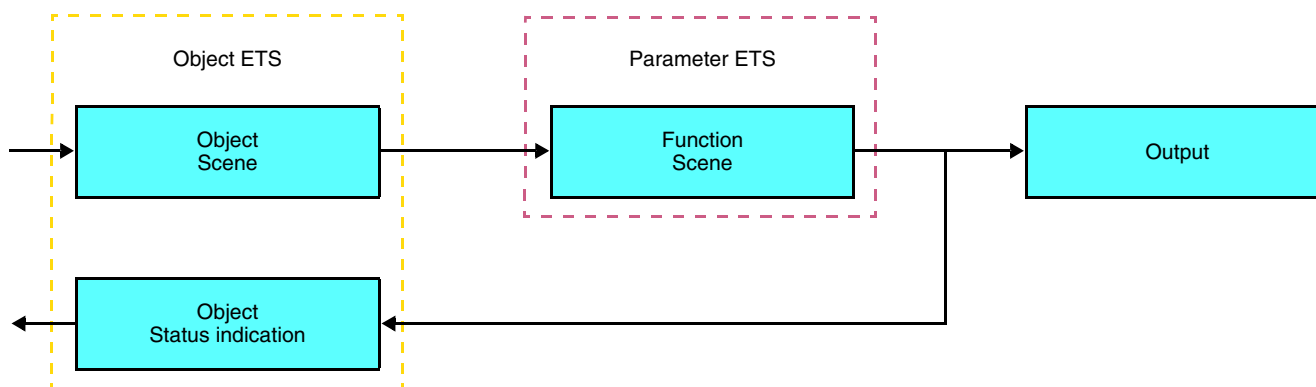
→ Parameters

Parameter	Description	Value
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

■ Scene function

A scene is used to control a group of outputs. Each of the outputs in the group will be set to a status pre-defined for the scene. A scene has been initiated by the object **Scene**.

The group of outputs is created in advance by establishing the link between the outputs that are to be part of the scene and the push button which initiates the scene. Each output can be integrated in 8 different scenes.



→ Description of the **Scene** object (1 byte)

7	6	5	4	3	2	1	0
Learn	x	Scene number					

**Learning and storing in the room**

This procedure modifies and stores a scene by local action on the push buttons located in the room:

- Activate the scene by pressing briefly on the room push button that triggers the scene,
- Set the outputs to the desired status using the push buttons that control them individually,
- Store the output statuses by pressing the room push button that triggers the scene for longer than 5 s.

Storage is indicated by the inversion of the status of the outputs concerned for 3s.

## 2.3 Configuration with media coupler (ETS version > 3.0f)

### ■ Configuration principle

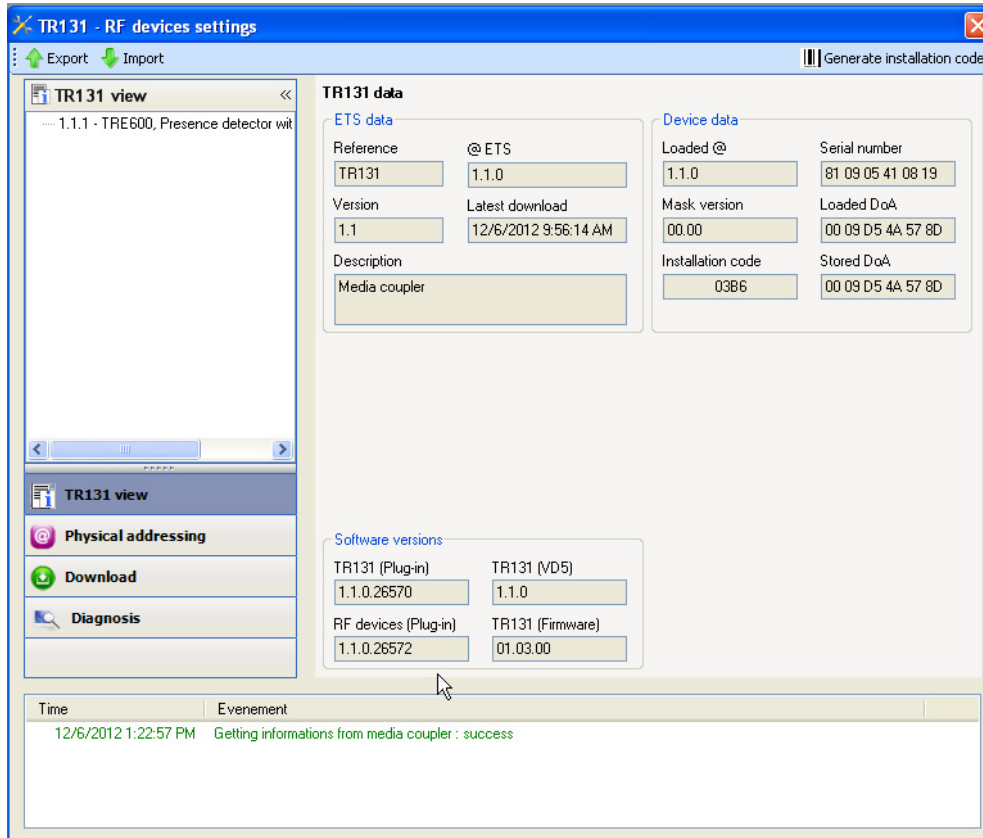
The TR131 media coupler enables configuration by ETS of RF devices for a KNX radio installation or a mixed KNX installation including RF devices and wired buses. For normal operation, the radio transmitters operate in a one-direction mode. Configuration takes place in bi-directional mode.

### ■ Implementation recommendations

1. The Media coupler must remain in place after configuration. It sends the commands between the radio products and the wired products in auto mode.
2. The coupler must be at the head of the line: **x.y.0** type physical address.
3. The coupler must be in a different line than the USB / series / IP interface.
4. Use of old generation media couplers (TR130A / B) is not authorised in an installation containing a new media coupler (TR131A / B).
5. Separate the radio and TP lines:
  - The radio line must not contain TP products: the views of the line in ETS and in the plug-in would contain inconsistencies.
  - The TP lines must not contain radio products: it would be impossible to configure these radio products.
6. Only use the plug-in to program the physical addresses and download the products. As ETS cannot program radio products, it is not possible to use the usual configuration menus.
7. The product copy function must not be used in ETS for radio products. It causes inconsistencies in the projects leading to plug-in malfunctions.
8. Copying projects which already contain a configured media coupler leads to plug-in malfunctions.
9. The use of the "default" button in the ETS parameter setting window is not recommended. This results in:
  - The loss of the parameters of a product which has already been configured.
  - Desynchronisation between the plug-in data and the radio products which have already been configured.
10. During the physical addressing, the download or the factory reset procedures of unidirectional radio products, several attempts may be needed for a successful completion of the procedure.
11. Changing the line of a media coupler which is already configured leads to plug-in malfunctions.
12. Do not use ETS Software function **Unload / Unload application**.

■ Installation procedure

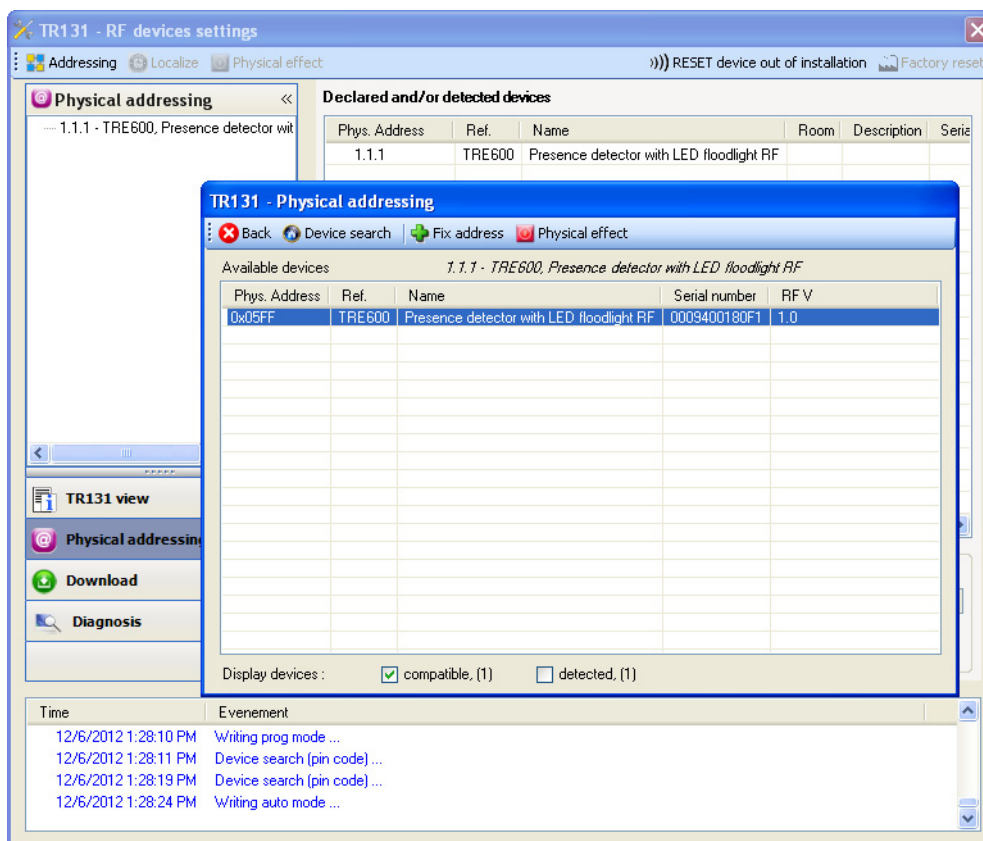
- Create a line reserved for RF devices in your ETS plan. First insert the media coupler into this line, then insert the other RF devices into this line.
- Perform the programming, parameter settings and group addressing for all the RF products except for the media coupler.
- Download the physical address of the media coupler. This must be of the type 1.1.0. (always end with a zero).
- Install the media coupler plug-in: 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.
- Select the device to be addressed, then click on the field **Addressing** in the menu line at the upper left of the window.
- Press the **cfg** button for each transmitter to be addressed, then click **Device search** (if the device is not found by the search, perform a **RESET device out of installation**, or manually on the device by pressing the **cfg > 10s** button).
- Select the device to be addressed and click on **Attribute address**. The physical addressing of the product is performed. The product is now part of the installation.
- After downloading the physical address, the symbol appears in front of the product.
- Répéter cette opération avec les autres émetteurs radio.

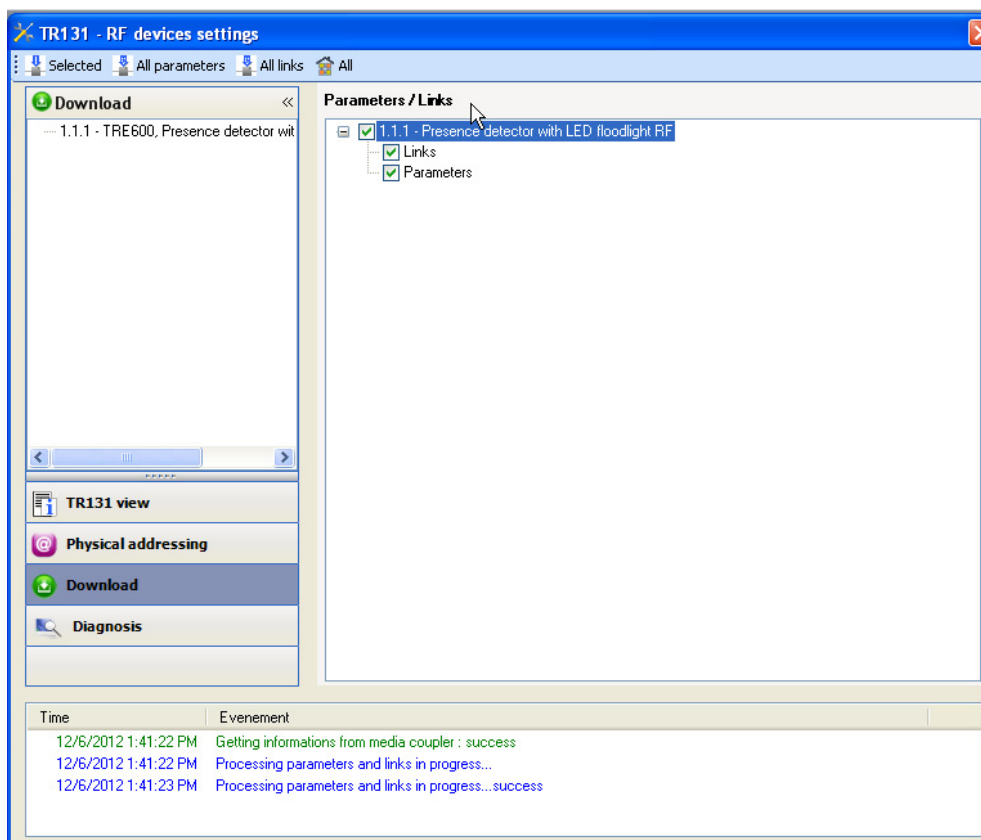
Caution: After an interruption in the above operations greater than 10 mn, it is necessary to press the **cfg** button again on the transmitter devices to be programmed.



## ■ Downloading the program and the parameters

This operation is performed using the plug-in. There are 2 ways of accessing the **Download** view:

- From the media coupler
  - Right-click on the product in the ETS tree structure, then select **edit the parameters**,
  - Click on **Download** and follow the instructions on the screen.
- From the RF product to be downloaded
  - Right click on the product in the ETS tree structure, then select **Download RF product...** and follow the instructions on the screen.



The right-hand window allows you to select the parameters and / or links to be downloaded for each product.

Finalise the download by selecting the type of download in the upper bar:

- **Selected** to download the selected parameters and links,
- **All parameters** to download all the parameters of all the products displayed,
- **All links** to download all the links for all the products displayed,
- **All** to download all the parameters and all the links of all the products displayed.

To test the functions and the KNX radio communication, return to normal use mode and wait 15 s before pressing a control button on a transmitter.

Caution: The media coupler plug-in must be deactivated during the functional tests.

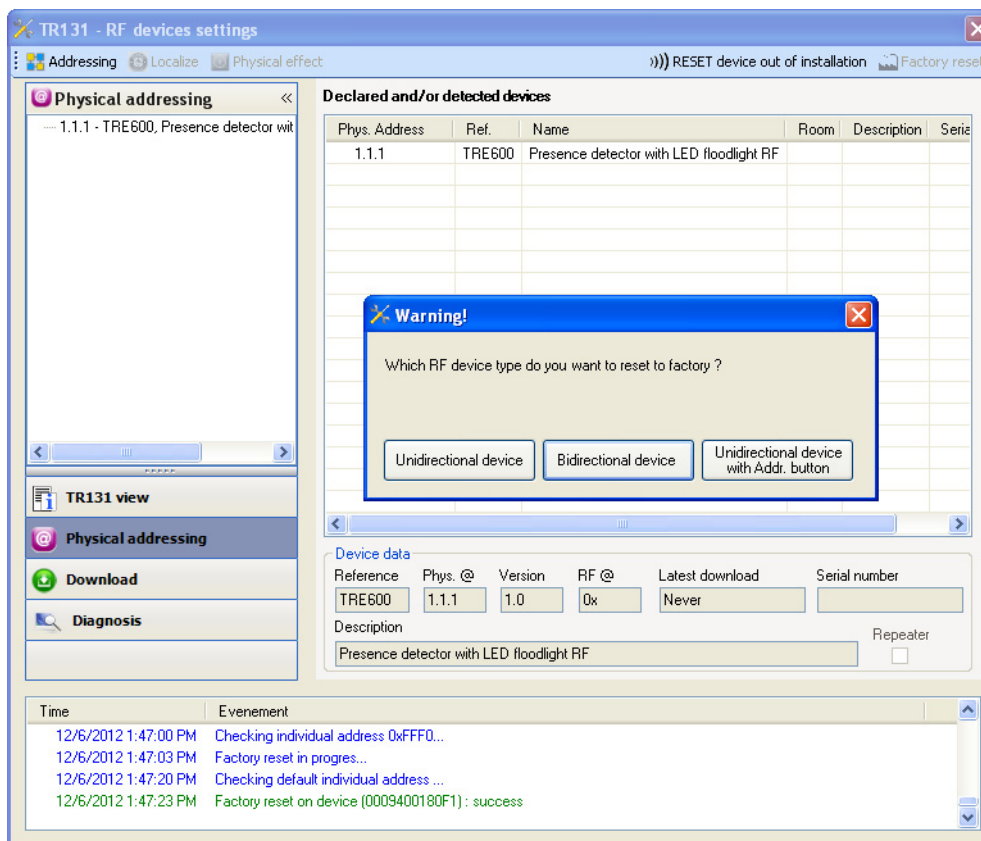
NB: For more information, refer to the description for the TR131 application software.

## 3. Factory reset

This function enables the product to be returned to its initial configuration (factory reset). After a device reset, the device can be re-used in a new installation. A factory reset can be performed either directly on the product or by the media coupler plug-in. This last solution is recommended if the product is part of an installation configured by ETS, thus the device is erased from the project.

### 3.1 Factory reset by ETS via the media coupler

- For a product which is part of the installation (known by the media coupler): In the **Physical addressing** menu, select **Factory reset** and then follow the instructions which appear on the screen,
- For a product which is not part of the installation (unknown by the media coupler): In the menu **Physical addressing**, select **Product out of installation**, then **Bidirectional 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 re-use a product which has already been programmed in another installation, whatever the configuration mode, a factory reset must be performed on the product.

## 4. Main characteristics

Product	TRE600
Max. number of group addresses	84
Max. number of links	95

