# application software

## Radio control for timer toggle switch

*Electrical/Mechanical characteristics: see product user manual*

| | Product reference | Product designation | Application software ref | TP device ▬▬<br>Radio device 《 |
|---|---|---|---|---|
| | TRM600 | Radio control for timer toggle switch | STRM600 | 《 |

# Content

# 1. Presentation

## 1.1 General

The purpose of this manual is to describe the operation and configuration of the KNX-devices using the ETS program. It consists of 4 parts:
- General information.
- The parameters and KNX objects available.
- The Easy tool configurations are available.
- Technical characteristics.

## 1.2 About the program ETS

### 1.2.1 ETS compatibility

The application programs are compatible with ETS4 and ETS5. They can be downloaded from our website under the order number.

| ETS Version | File extension of compatible files |
|---|---|
| ETS4 (V4.1.8 or higher) | *.knxprod |
| ETS5 | *.knxprod |

### 1.2.2 Application descriptions

| Application | Product reference |
|---|---|
| STRM600 | TRM600 |

### 1.2.3 Plugin TR131

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 TR131 Plugin must be installed in the ETS software to configure the radio products..

## 1.3 Easy tool software appearance

This product can also be configured using the TXA100 configuration tool. It is composed of a TJA665 configuration server. It is essential to update the configuration server software version. (Please refer to the TXA100 user manual).

## 2. General Description

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.
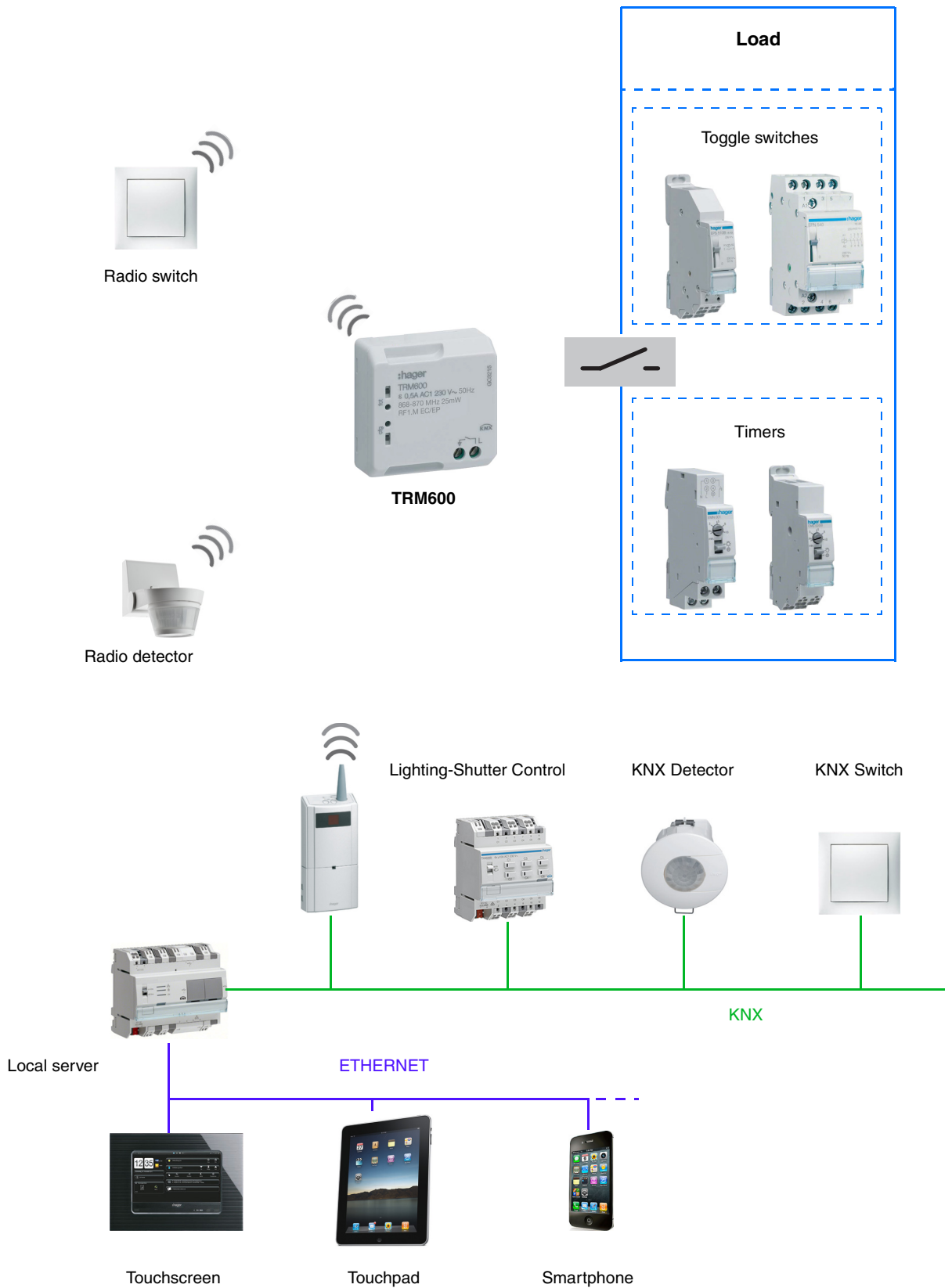
These products can also be configured in easy mode by the TXA100 configuration tool or in system mode by ETS via the media coupler.

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**.

# 2.1 Installation of the device

## 2.1.1 Overview presentation

**Load**

Toggle switches

Timers

Radio switch

**TRM600**

Radio detector

Lighting-Shutter Control          KNX Detector          KNX Switch

KNX

Local server          ETHERNET

Touchscreen          Touchpad          Smartphone

### 2.1.2 Description of the device
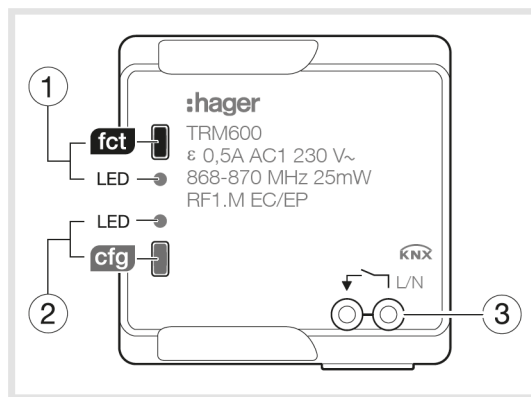


① Push button and function LED `fct` of the output
② Push button and configuration LED `cfg`
③ Terminal block

*Note: The product is powered using the toggle switch or timer control circuit in parallel with a control circuit push-button.*

## 2.2 Function modules of the application

■ Pulse

It allows a toggle switch or timer on a traditional 230V lighting circuit to be controlled. It does not have a status feedback object. Command is by radio and can come from push-buttons or other pulse control inputs. The pulse duration is set at 200 ms and cannot be changed.

**Communication objects**

# :hager

## 3. Programming by ETS

### 3.1 Parameters

The product only has a single fixed parameter.

| Parameter | Description | Value |
|---|---|---|
| Pulse duration | This parameter defines the duration of the output contact pulse. The pulse duration is set at 200 ms and cannot be changed. | 200ms* |

### 3.2 Communication objects

The object only has one communication object.

| | Number | Name | Function of the object | Length | C | R | W | T |
|---|---|---|---|---|---|---|---|---|
| 🔲⇄ | 0 | Pulse | Pulse | 1 bit | C | - | W | - |

| No. | Name | Function of the object | Data type | Flags |
|---|---|---|---|---|
| 0 | Pulse | Pulse | 1 bit - 1.017 DPT_Trigger | C, W |
| These objects are always activated. | | | | |
| They enable switching of the output contact in accordance with the value that is sent via the KNX bus. | | | | |
| If the object receives the value 0 or 1, the output relay contact switches for a duration of 200ms. | | | | |

* Default value

# 3.3 Configuration with media coupler

■ 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. 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.
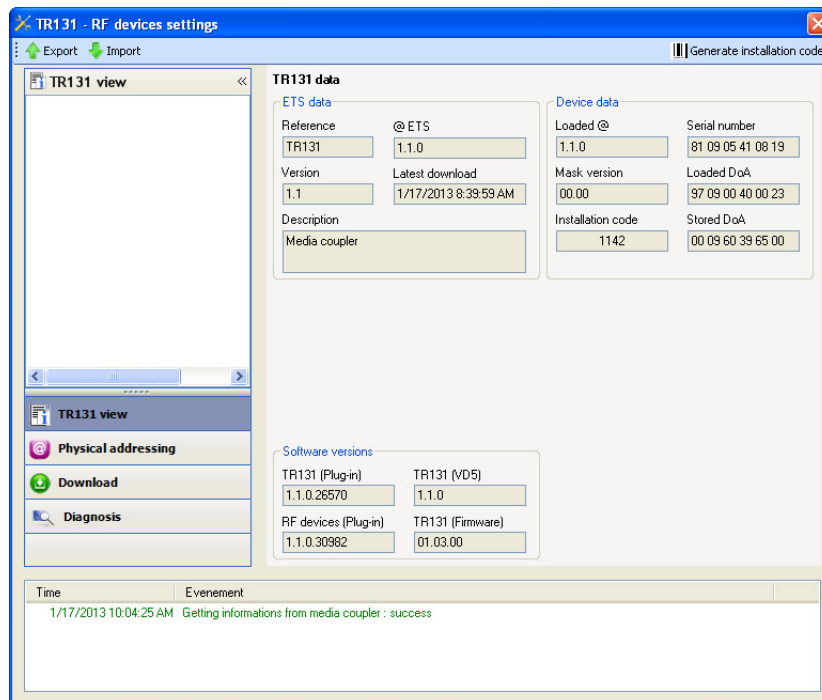
■ Physical addressing of the radio transmitters
- Click on the button **Physical addressing** to display the physical addressing screen for the plug in.
- Select the device to be addressed, then click on the field **Addressing** in menu line at the upper left of the window.
- Click on **Product search**, if the product is not found by the search, perform a factory reset on the product outside the installation.
- 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.
- Repeat this operation for the other radio transmitters.
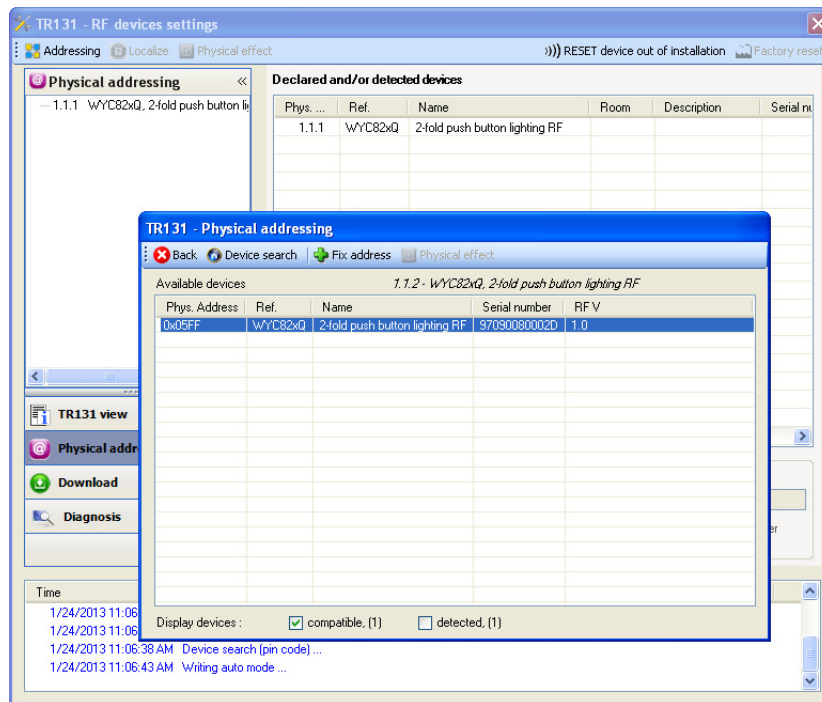
■ Downloading the program and the parameters

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.
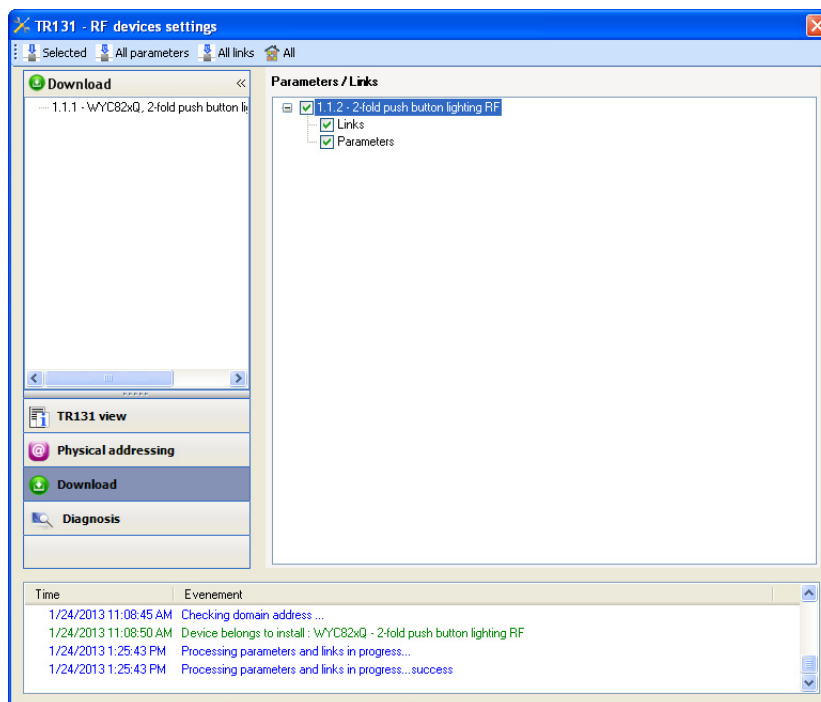


The right-hand window allows you to select the parameters and/or links to be downloaded for each product.

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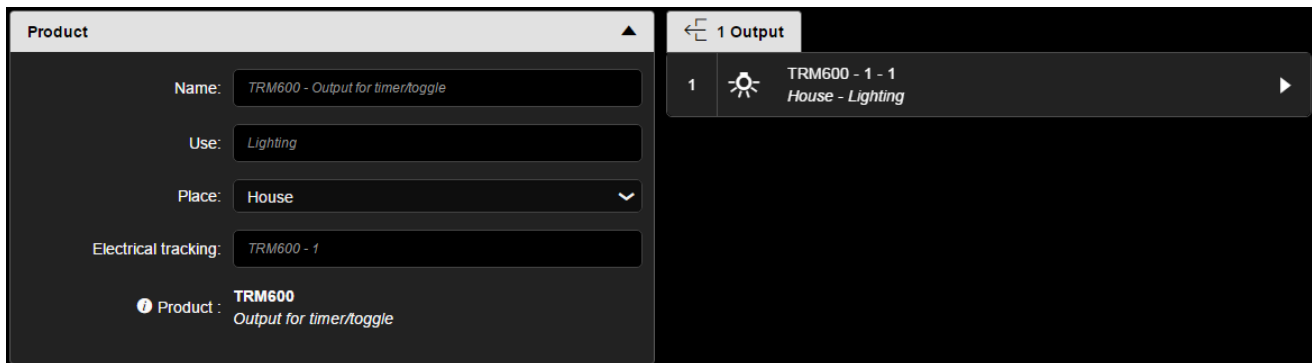
Warning: The media coupler plug-in must be deactivated during the functional tests.

NB: For more information, refer to the description for the TR131 application software.
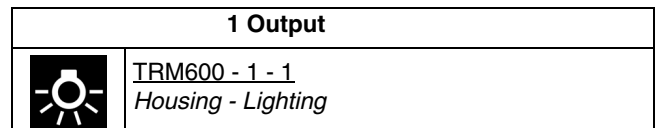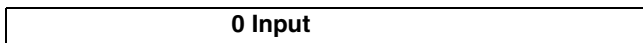
# 4. Programming by Easy Tool

## 4.1 Product overview

Product view:



View of channels:

| 0 Input |
| --- |

| 1 Output |
| --- |
| TRM600 - 1 - 1<br>*Housing - Lighting* |

*Note: Localisation of the product closes the output for 200ms. The physical effect will be different depending on the connected device:*
- *For a toggle switch, the output status is inverted for each pulse.*
- *For a timer, the output remains in the status for a determined duration.*

## 4.2 Product functions at output

■ Pulse

It allows a toggle switch or timer on a traditional 230V lighting circuit to be controlled. Command is by radio and can come from push-buttons or other pulse control inputs. The pulse duration is set at 200 ms and cannot be changed.

■ The connection

The Timer function is the only function which can be linked to the output.

| Inputs | Outputs |
| --- | --- |
| TRM690G - 1 - 1<br>*Housing* | TRM600 - 1 - 1<br>*Housing - Lighting* |
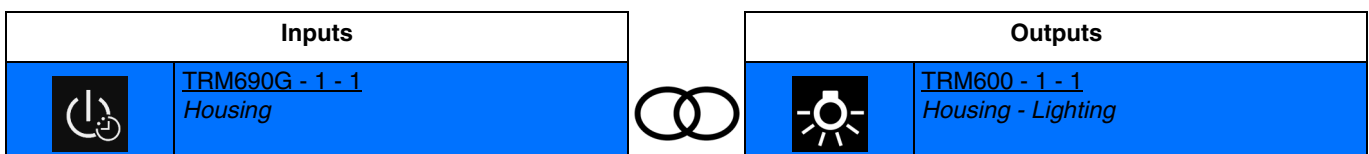
Brief closing of the input contact: 200ms switching of the output contact.

# 5. 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. 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.

## 5.1 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 **RESET device out of installation**, then **Unidirectional device with Addr. button**.
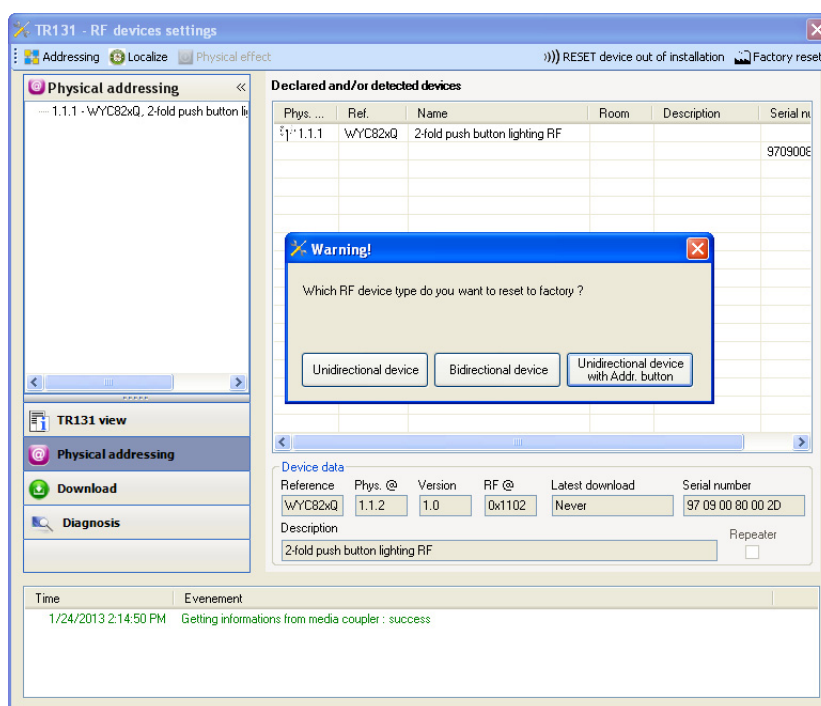


## 5.2 Factory reset on the product

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.

# 6. Characteristics

| Device | TRM600 |
|---|---|
| Max. number of group addresses | 83 |
| Max. number of allocations | 90 |