

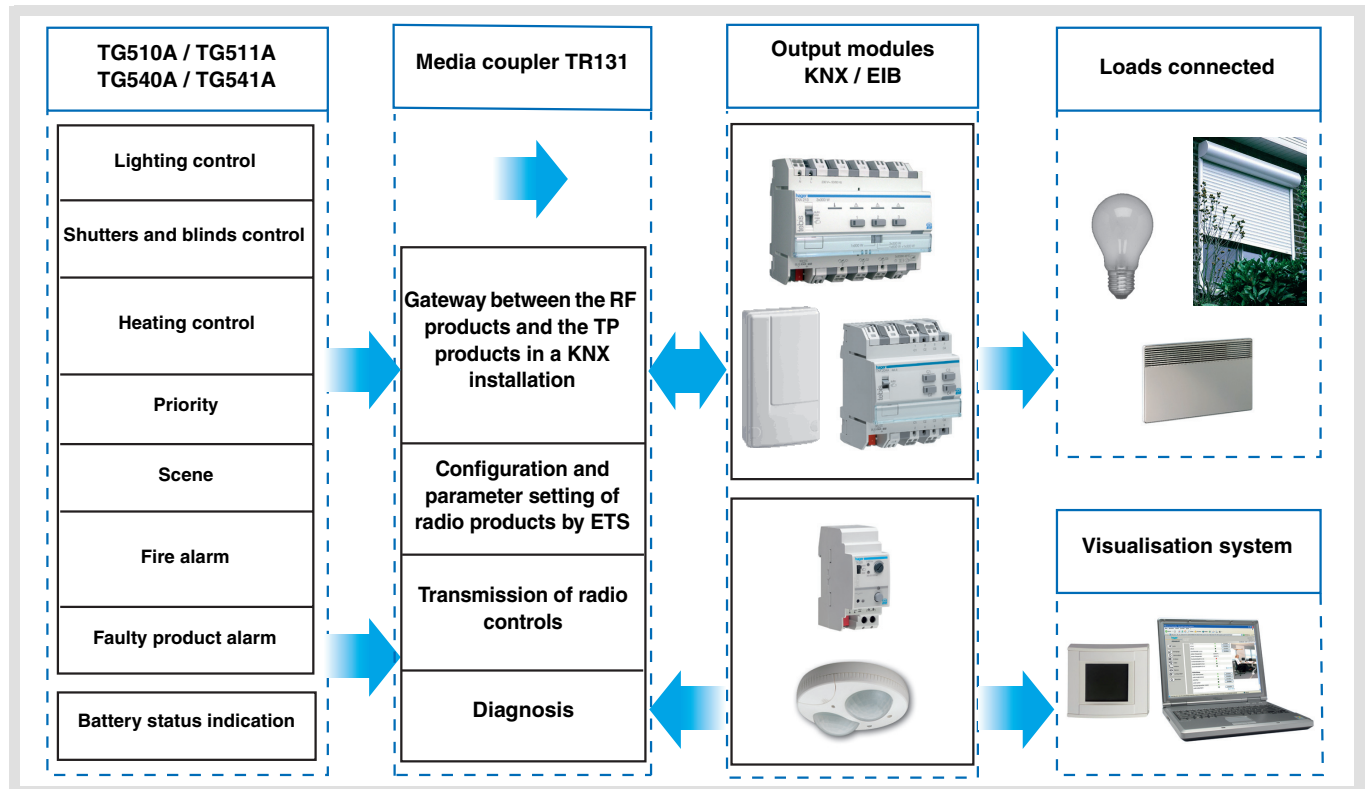
Tebis application software

- 📁 Catalog
- 📁 RF devices
- 📁 Heatstroke
- 📁 Smoke detector

STG51x Radio smoke detector
STG54x Radio heatstroke

Electrical / Mechanical characteristics: see product information

	Product reference	Designation	ETS version	TP device	RF device
	TG510A	Battery-operated smoke detector	ETS 3 ≥ 3.0f		
	TG511A	Mains-powered smoke detector 230V AC			
	TG540A	Battery-operated heatstroke	ETS 4 ≥ 4.0.2		
	TG541A	Mains-powered heatstroke 230V AC			



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1. Function Description

The smoke or heat (temperature) detector plays a role in the protection of buildings against the risk of fire. If something is detected, they emit an audible alarm and send the information to the KNX system.

The smoke detector and heat detector can detect smoke or heat in different ways:

- Local detection (not integrated in a network)
- Detection by a network of cabled wired detectors
- Detection by a network of radio detectors

The following information is sent when smoke or heat is detected:

- Fire alarm information (smoke or temperature)
- Lighting, shutter, heating or scene controls

Two other types of information are available:

- Faulty product information (Faulty product)
- Low battery (for TG510A / TG540A only)

These products can be integrated into an installation configured by TR131 with the ETS media coupler. The KNX radio link is unidirectional in use mode and bi-directional in configuration mode.

The application software STG54x and STG51x enable the command types emitted after an alarm has been detected to be configured individually.

The main functions are the following:

■ Emission of commands

- Lighting control
 - ON, OFF, ON / OFF, Timer, Priority
- Shutters / Blinds control
 - Up, Down
- Set point selection (Heating)
 - ON / OFF, Comfort Priority or Frost protection

■ Scene

This function is used to emit scenes to different types of outputs.

■ Priority

This function sends priority-start or priority-stop commands. The forcing action depends on the type of application controlled: Lighting, Heating.

■ Fire / smoke alarm (for TG510A / TG511A only)

This function signals a fire alarm using a heat detector. In case of alarm, a message is sent immediately and is then repeated every minute. Without an alarm, the detector emits one message per day to indicate that the product is functioning properly.

■ Fire / heat alarm (for TG540A / TG541A only)

This function enables the indication of a fire alarm signaled by a heat detector. In case of alarm, a message is sent immediately and is then repeated every minute. Without an alarm, the detector emits one message per day to indicate that the product is functioning properly.

■ Faulty product

This function signals that the product is faulty after a self-diagnosis (Faulty product or measurement chamber polluted). If a fault is signalled, a message is emitted immediately and is then repeated every 2 hours. When there is no fault, the detector sends a message each day to indicate that the product is functioning properly.

■ Battery status indication

The detector sends this information during startup (battery change), or every 12 hours and when the 1 button is pushed if the battery is low. The program remains saved when the batteries are changed.

■ Integration into a smoke or heat detector network

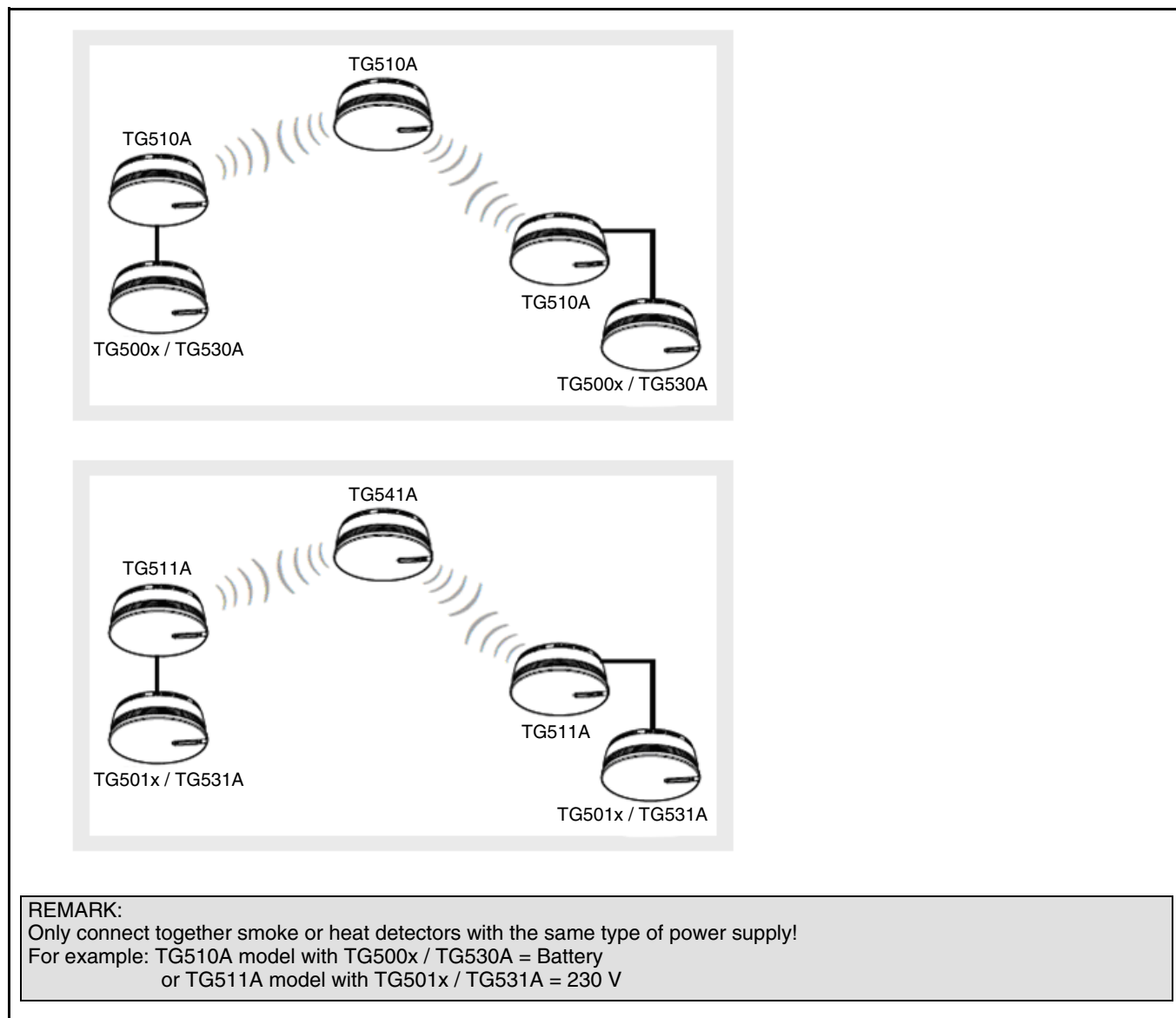
The smoke or heat detectors can be integrated into one of the following networks*:

- Wired network
- Radio network
- Hybrid network (wired and radio)

The alarm messages can be exchanged among the detectors in the network.

* For further information, see product user manual.

Example of several detectors positioned in the network.



Notes:

- To monitor a network of wired and/or radio detectors, **only one KNX detector** must be used in this network. In this case, if the alarm is triggered in this network, it is the KNX detector that will send the KNX lighting, shutter or heating commands and the alarm indication
- All the detectors, which in case, of a fire alarm being indicated should emit KNX commands that must be configured in KNX, even if they have already been configured and integrated into a network of smoke or heat detectors
- To identify each detector in the KNX system in a unique way, each detector must be connected to the KNX installation. Unit identification is only possible with radio detectors
- A factory reset of products by ETS only erases the KNX links. The existing links (non KNX) between the different detectors are not erased

2. Objects and parameters

2.1 Objects List

Function					
Object name	ON / OFF	Timer	Shutters / blinds	Heating	Scene
ON / OFF	X			X	
Timer		X			
Slat angle / Stop			X		
Up / Down			X		
Scene					X
Priority	X			X	
Battery status indication	X	X	X	X	X
Fire alarm	X	X	X	X	X
Faulty product alarm	X	X	X	X	X

2.2 Alarm functions

■ Fire / smoke alarm

The smoke alarm information is emitted with the value 1 via the **Fire alarm** object. The telegram is repeated every minute until the alarm ends (value 0). If no alarm is indicated, the detector emits one telegram per day.

■ Fire / heat alarm

The Temperature alarm information is emitted with the value 1 via the **Fire alarm** object.

The fire alarm is triggered under the following conditions:

- Abnormal temperature rise
- An ambient temperature between 54 and 70°C being reached

The telegram is repeated every minute until the alarm ends (value 0). If no alarm is indicated, the detector emits one telegram per day

■ Faulty product alarm

This function signals that the product is faulty after a self-diagnosis:

- TG510A / 511A: Measurement chamber polluted indication
- TG540A / 541A: Faulty product indication

The faulty product alarm information is emitted with the value 1 via the **Faulty product Alarm** object. The telegram is repeated every 2 hours. If there is no faulty product indicated, the detector emits one telegram (value 0) per day. There is no test function for this indication.

2.3 Parameters

■ Setting parameters: Input channel function 1

The input 1 enables lighting, shutters / blinds, heating and scene commands to be implemented.

→ Parameter

Parameter	Description	Values
Input 1	This parameter allows selecting the function associated with each input.	Lighting: ON, OFF, ON / OFF, Timer, Priority ON, Priority OFF Shutters / blinds: Up, Down Heating: ON / OFF, Comfort Priority, Priority frost protection Scene 1 to 8 Default value: Default function.

■ Channel function: Lighting, ON / OFF, Lighting ON, Lighting OFF

These functions are used to control switching a lighting circuit or any other load on or off. The status of the object **ON / OFF** is inverted when the alarm is triggered.

The command to be sent (ON or OFF) can be defined in the parameters.

- Lighting, ON / OFF: Emission of the ON command when the alarm is triggered and emission of the OFF command when the alarm is stopped
- Lighting ON: Emission of the ON command when the alarm is triggered
- Lighting OFF: Emission of the OFF command when the alarm is stopped
- Timer: Emission of the ON command when the alarm is triggered. The timer duration is set on the output module. This function operates like a staircase light function. The commands are sent by object **Timer**

■ Channel function: Shutters / blinds

This function controls shutters and blinds. The status of the object **Up / Down** is inverted when the alarm is triggered. The command to be sent (up or down) must be defined in the parameters.

- Shutters / blinds: Up
Emission of the Up command when the alarm is triggered
- Shutters / blinds: Down
Emission of the Down command when the alarm is triggered

■ Channel function: Heating ON / OFF

Emission of the ON command by the **ON / OFF** object when the alarm is triggered, emission of the OFF command when the alarm is stopped.

■ Channel function: Priority ON, OFF, Comfort or frost protection

The ON or OFF lighting priority or the Comfort or Frost protection heating priority, is sent by the **Priority** object. This function enables the outputs to be prioritised. No other command is taken into account if a priority is active. Only end of priority or alarm commands will be taken into consideration. The priority command to be sent must be defined in the parameters.

■ Channel function: Scene 1 to 8

The Scene function sends group controls to different kinds of outputs to create ambiances or scenarios (Panic switch, television, etc.). The value of the **Scene** object is defined by the **Scene number** parameter. Pressing the 1 button for longer than 5 s memorises the scenes directly from the product.

■ Objects **Fire alarm** (smoke or heat), **Faulty product alarm** and **Battery status indication**

These objects do not have parameters.

3. Configuration with TR131 (ETS 3 Version \geq 3.0f / ETS 4 \geq 4.0.2)

3.1 Installation and addressing of the media coupler

The media coupler TR131 enables configuration by ETS of the RF devices in a KNX installation or a mixed installation with RF and wired bus devices.

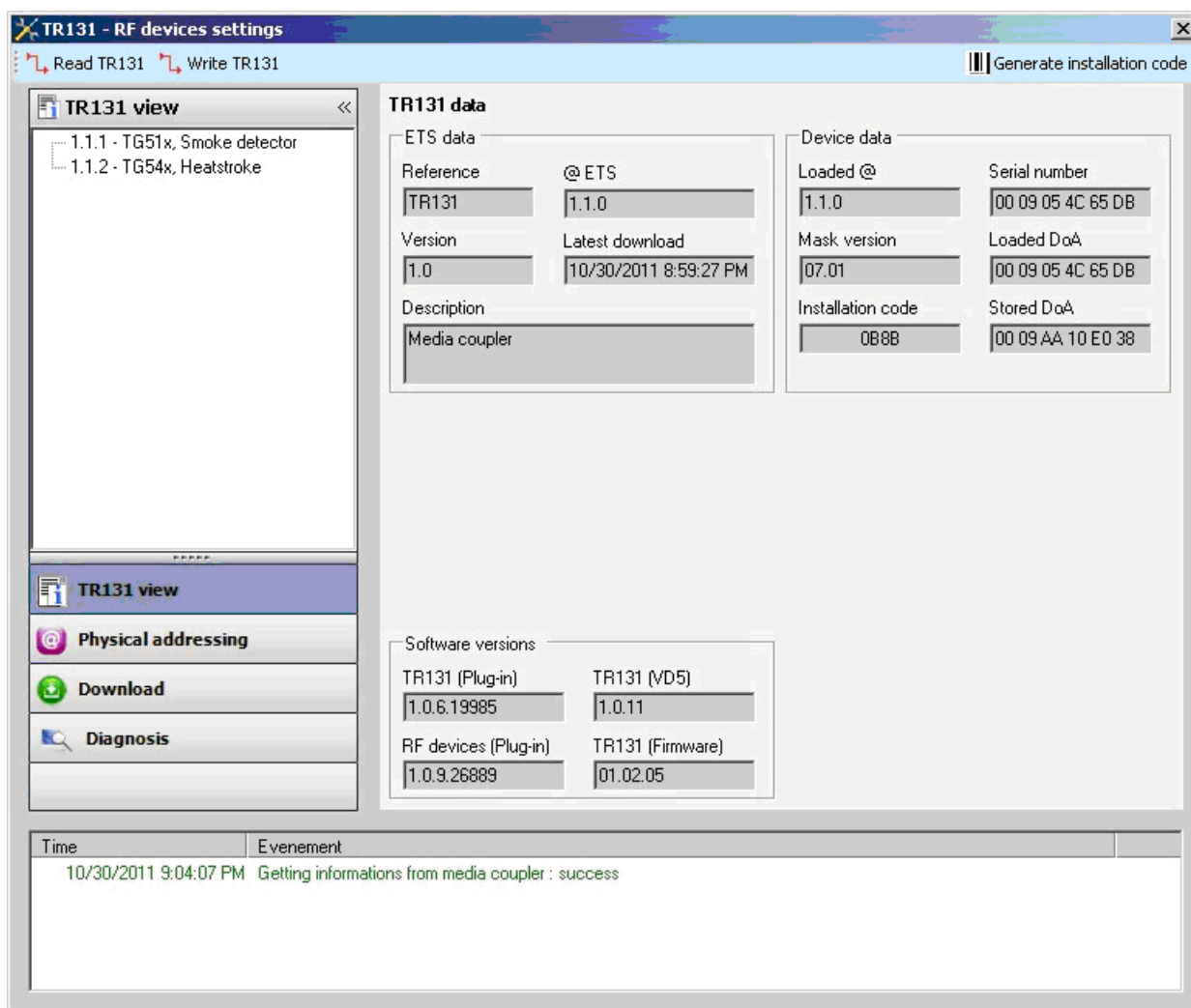
Minimum features of the TR131x:

- Firmware \geq 1.2.5
- Plug in \geq 1.0.11

Configuration steps with the TR131:

- Create a line reserved for RF devices in your ETS plan. First insert the coupler in this line then insert the other RF devices (do not insert wired bus products in this line)
- Perform programming, parameter setting and group addressing for all the RF devices except for the TR131
- Physical addressing of the TR131: Press the 2 buttons of the media coupler (the display indicates Ad) and download the physical address of the TR131, this must be the type x.y.0. (must always end with 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

You will get the screen below (View of the TR131) after installation of the plugin.

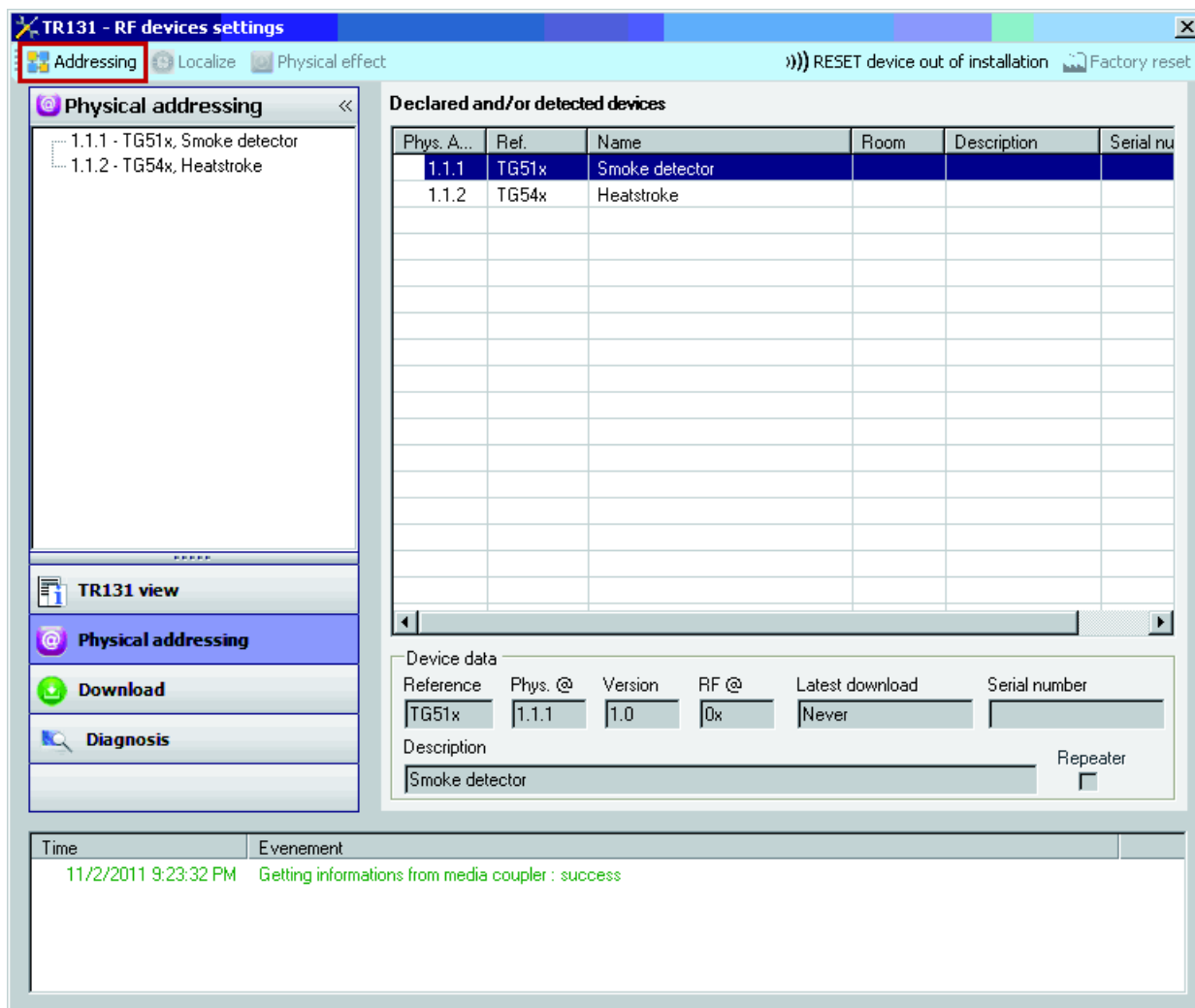


The ETS tree structure for the products inserted in the RF line appears in the left-hand window.

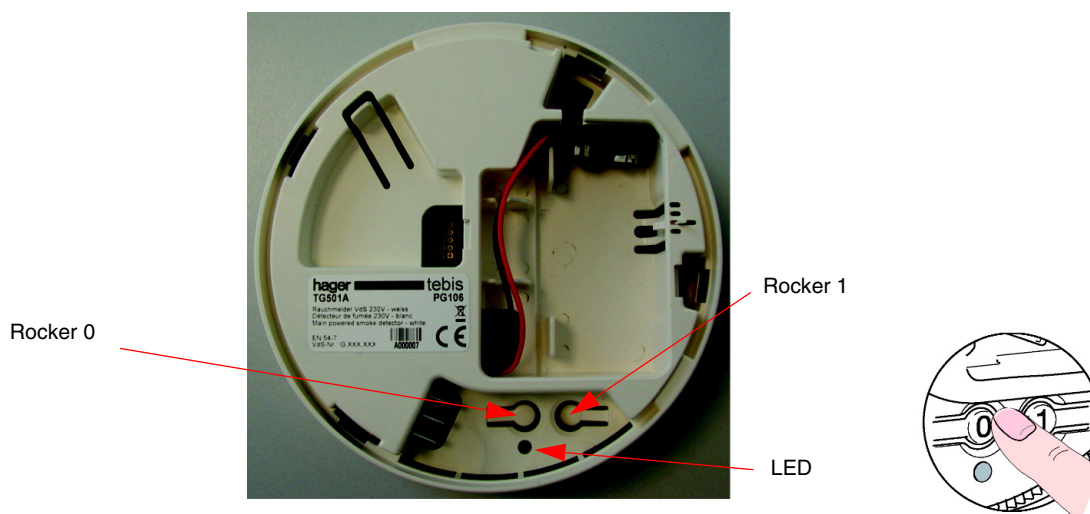
3.2 Addressing and download of the RF devices

Physical addressing:

- Click on the **Physical addressing** button
- Select **the detector** to address and click on the **Physical addressing** field in the menu line at the top left of the window

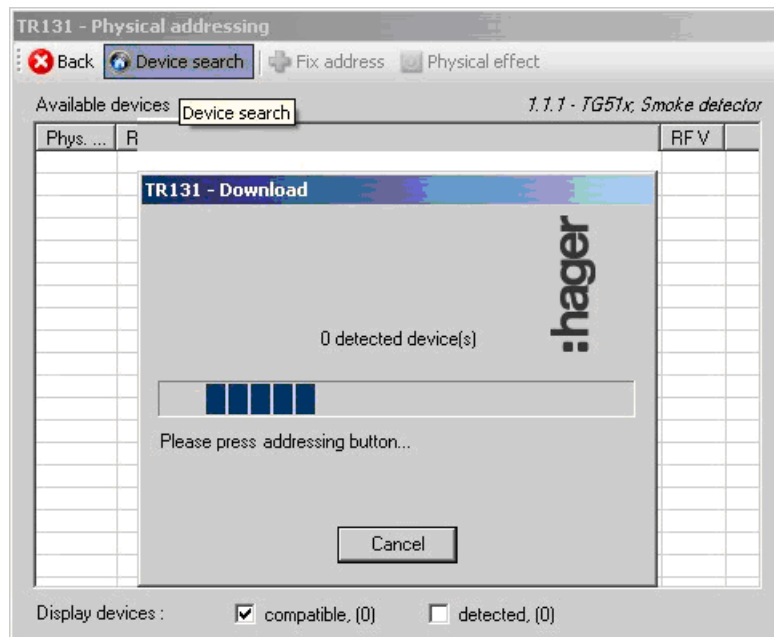


- Set the detector to KNX configuration mode by pressing and holding (> 3 s) the 0 button on the smoke or heat detector: the red LED switches to permanently lit. To address several detectors, they must be changed to configuration mode **one after another**

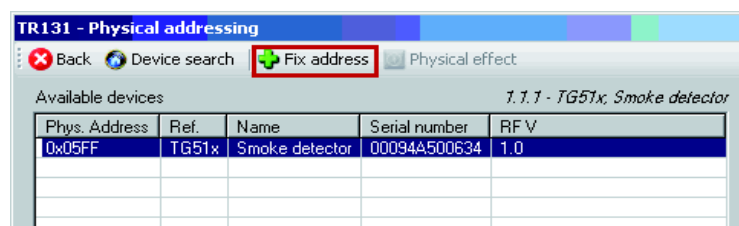


Remark: A short press on the 0 button or a 10 minute time delay leads to exiting from detector configuration mode.

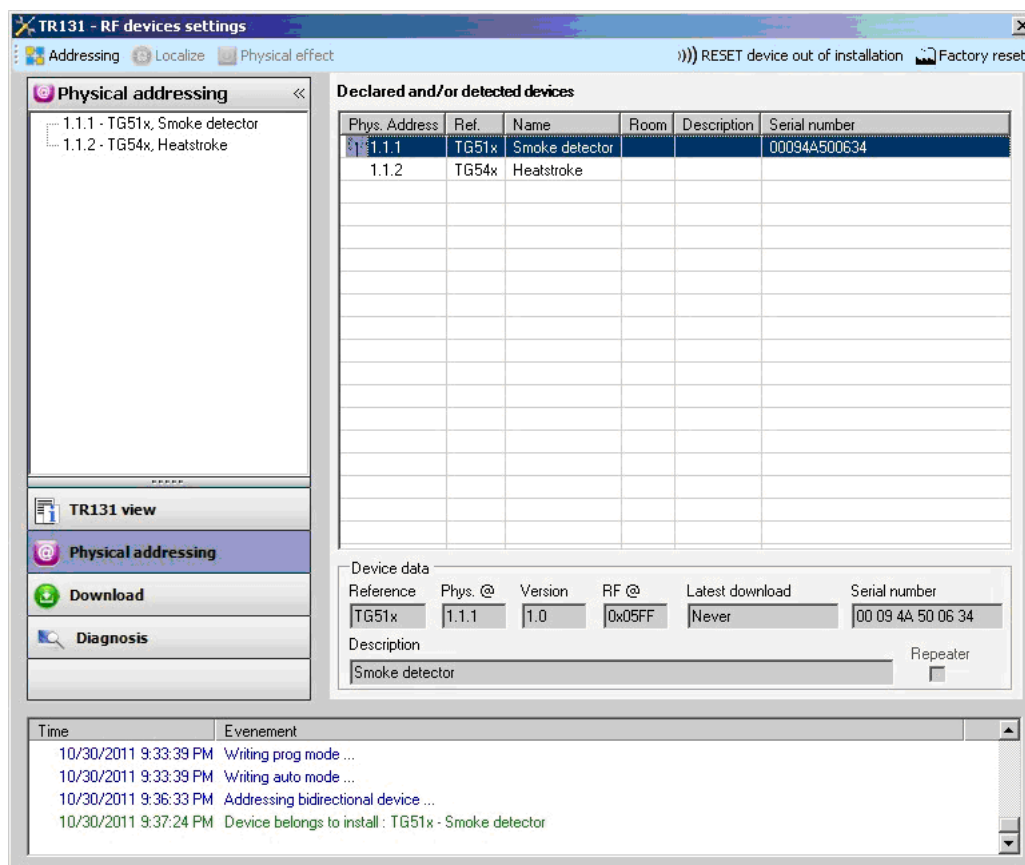
- Click on **Product search**, if the product is not found by the search, perform a factory reset on the product outside the installation



- 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



Remark:

- If the detector is not found by the search, it is necessary to perform a factory reset on the product (See Factory reset chapter: Product outside installation)
- If the programming is not performed on one or more detector(s) which are in the installation, a factory reset must be performed on the products concerned (see Factory reset chapter)

Downloading the program and the parameters

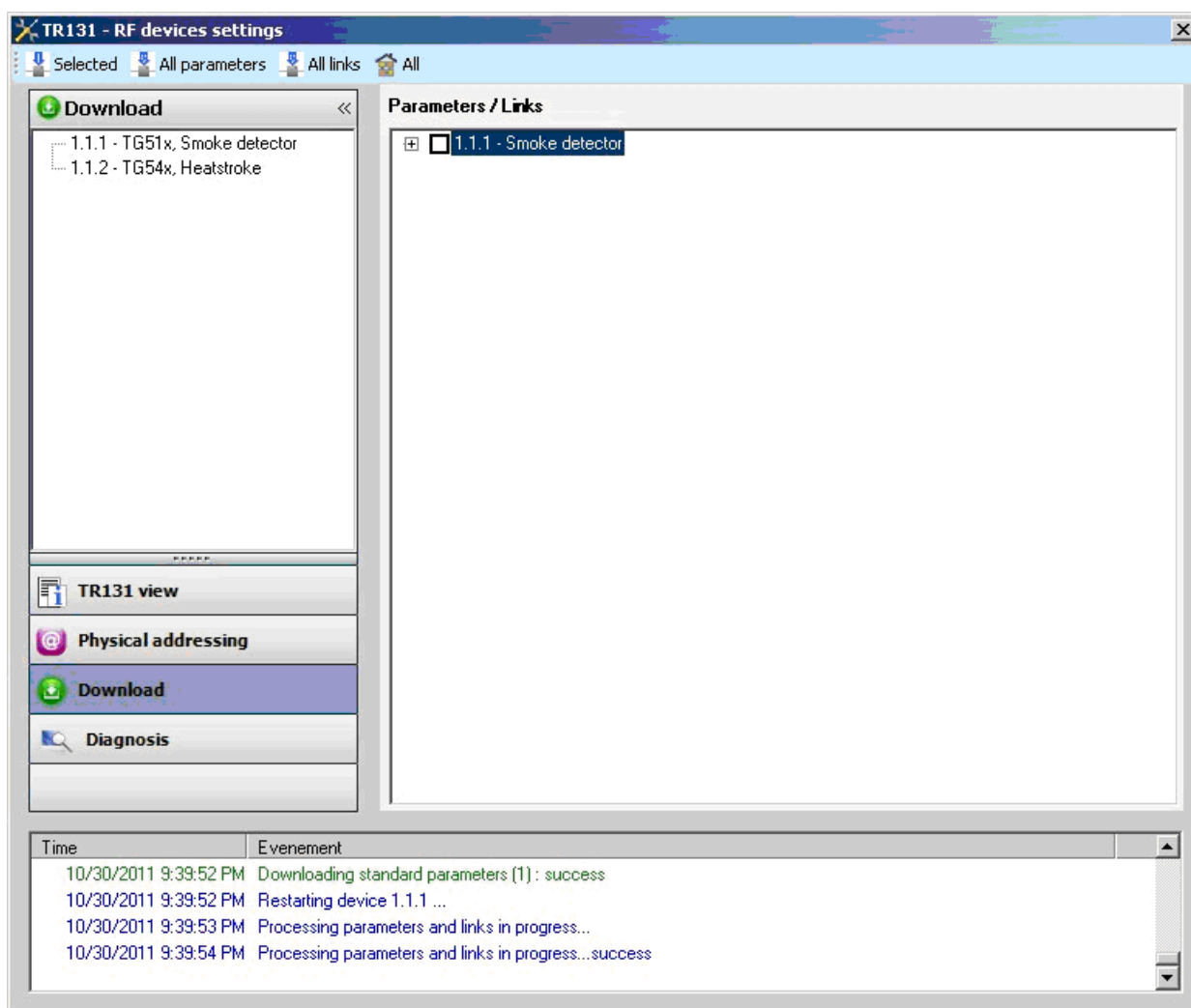
This operation is performed on the **Download** screen of the plug in.

- Check that the detector is still in configuration mode, if not, do a long key-press (> 3 s) on button 0 of the detector
- Click on **Download**

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 KNX functions and communication, return the detector to normal use mode and wait 30 s before pressing button 1. The plug in for TR131 must be deactivated during functional testing.

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

4. 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.

Factory reset (Product is part of the installation)

This function is accessible via the Physical addressing / Factory reset button on the TR131:

- Select the product in the **Physical addressing** view
- Put the detector in KNX configuration mode with a long key-press (> 3 s) on the 0 button located on the back of the smoke detector or heat detector
- Click on **Factory reset** and follow the instructions on the screen. A Beep confirms the factory reset

The screenshot shows the 'TR131 - RF devices settings' window. The 'Physical addressing' tab is active, displaying a list of devices: 1.1.1 - TG51x, Smoke detector and 1.1.2 - TG54x, Heatstroke. A modal dialog titled 'TR131 - Download (Appl)' is overlaid, showing the selected device '1.1.1 - TG51x, Smoke detector' and a progress bar with the text 'Factory reset in progres...'. The background interface includes a 'Declared and/or detected devices' table, a 'Device data' section, and an event log.

Phys. Address	Ref.	Name	Room	Description	Serial number
1.1.1	TG51x	Smoke detector			00094A500634
1.1.2	TG54x	Heatstroke			

Reference	Phys. @	Version	RF @	Latest download	Serial number
TG51x	1.1.1	1.0	0x05FF	10/30/2011 9:39:52 P	00 09 4A 50 06 34

Time	Evenement
10/30/2011 9:51:37 PM	Device search (pin code) ...
10/30/2011 9:51:44 PM	Device search (pin code) ...
10/30/2011 9:54:21 PM	Starting factory reset ...
30/10/2011 21:54:22	Factory reset in progres...

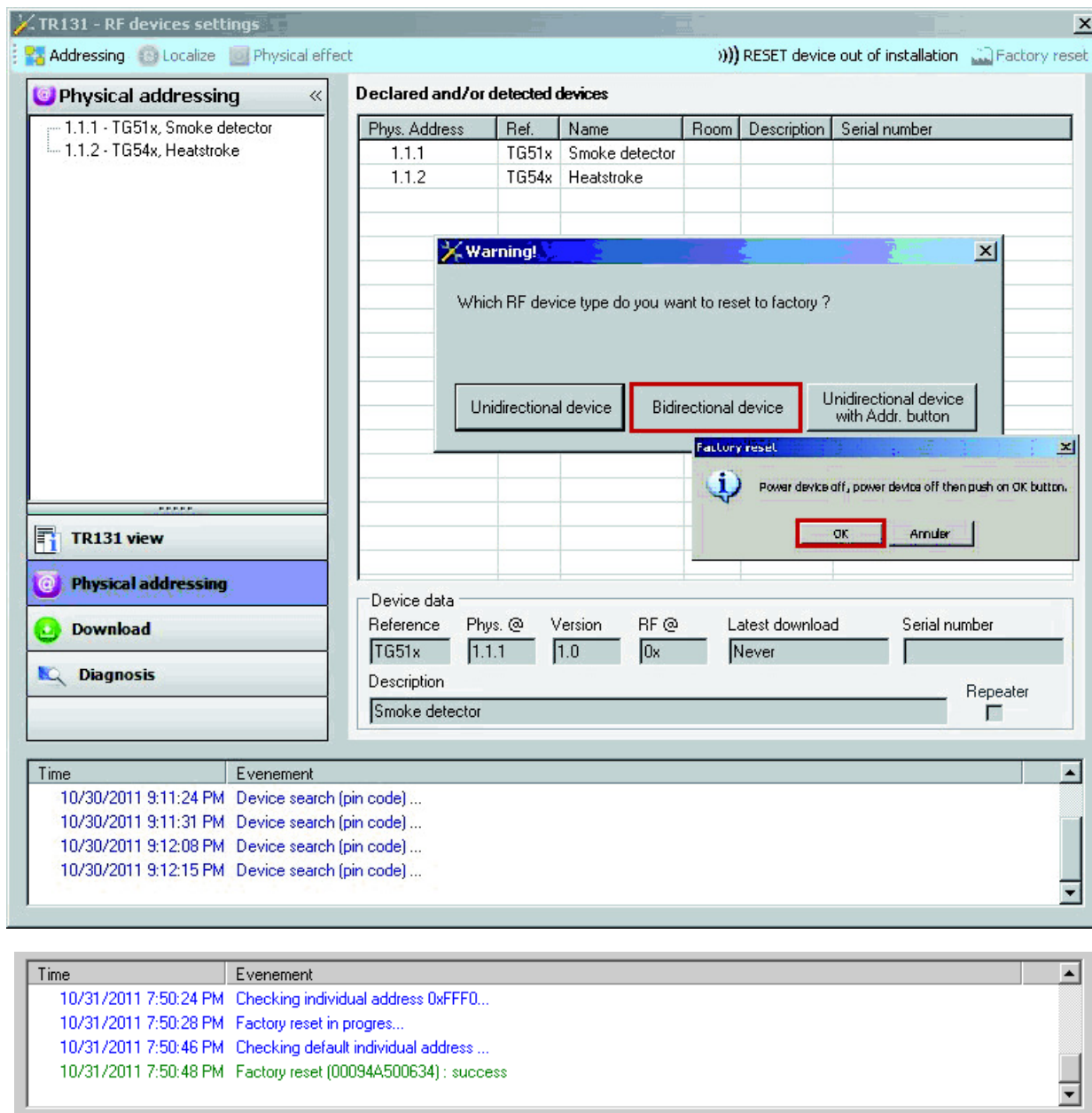
Time	Evenement
10/30/2011 9:54:21 PM	Starting factory reset ...
30/10/2011 21:54:22	Factory reset in progres...
30/10/2011 21:54:39	Checking default individual address ...
30/10/2011 21:54:45	Factory reset on device (00094A500634) : success

To exit configuration mode, press button 0 or wait for the end of a 10 minute time delay.

Factory reset: Product outside of the installation

This function can be accessed via the Physical addressing menu of the TR131. It is carried out individually on each product. If you wish to perform a factory reset on several detectors, this operation must be repeated on each product.

- Click on **Factory reset for product outside of installation** then click on **Bidirectional product**
- Set the detector to KNX configuration mode by pressing and holding (> 3 s) the 0 button on the smoke or heat detector. You now have 15 s to start the factory reset
- Click on the OK button (without cutting power) and confirm the 2 next screens with **YES**



5. Characteristics

Product	TG510A	TG511A	TG540A	TG541A
Max. number of group addresses	32	32	32	32
Max. number of links	50	50	50	50

