application software

Input products / ON / OFF output / RF dimmer

Electrical / Mechanical characteristics: see product user manual

Product reference	Product designation	TP device RF device
8574 52 xx	**Control module** Time switch ON / OFF RF	(((
8512 12 00 8502 01 00	**Power module** 1 changeover output Power supply	

Inputs

Time switch ON / OFF RF	Media coupler	Output modules KNX RF devices	Products KNX Loads connected
Lighting control			
Dimming control	Gateway between the RF products and the TP products in a KNX installation	TP products	
Priority	Configuration and parameter setting of radio products by ETS		
Scene	Transmission of radio controls		**Visualisation system**
Status indication	Diagnosis		

ON / OFF output

Input modules KNX	Media coupler	Output modules KNX	Products KNX

Products KNX

Loads connected

Input modules KNX

Media coupler

Gateway between the RF products and the TP products in a KNX installation

Configuration and parameter setting of radio products by ETS

Transmission of radio controls

Diagnosis

Output modules KNX

ON / OFF output

ON / OFF

Timer

Scene

Priority

Status indication

Brightness value indication

Visualisation system

Summary

1. Description of the system

1.1 General overview

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.

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.

Specifics for quicklink🔲 radio transmitters:
Pressing the **cfg** button acrivates configuration mode. In this mode, the dialogue product is bi-directional. For numbering or programming operations, it will therefore no longer be necessary to bring the transmitters to be configured up to the media coupler. It is only necessary to remain within radio range.

1.2 General outline
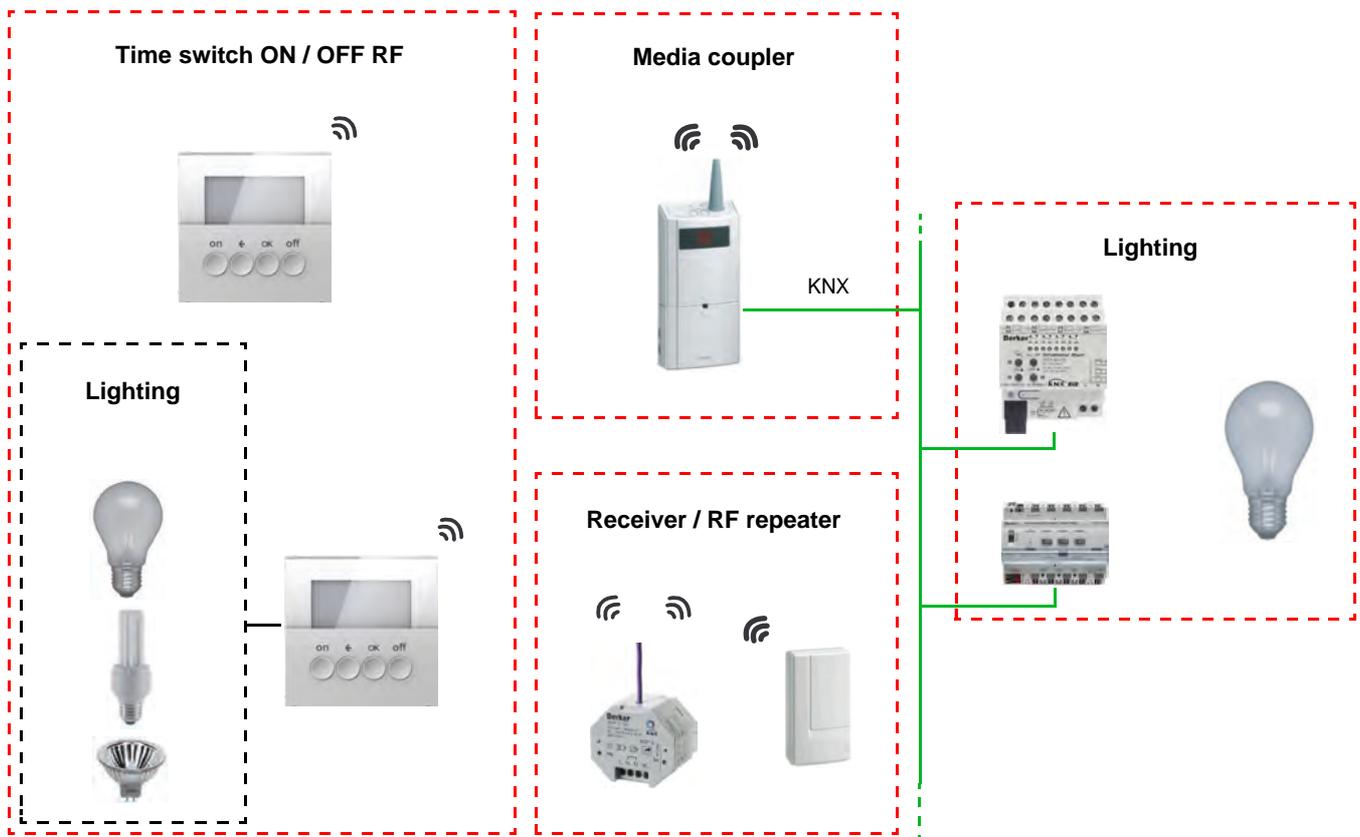
1.3 Description of the product

- **Control module**
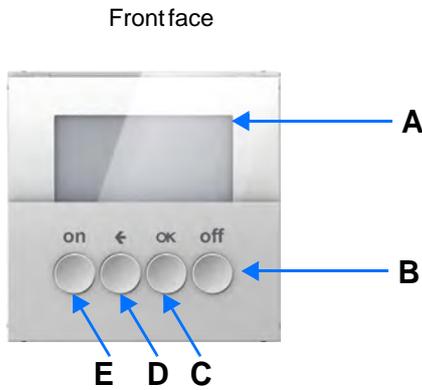
Front face

Rear face

A: Display D: Return button F: Connector
B: OFF button E: ON button
C: OK button

- **Power module**

Power supply

1 changeover output
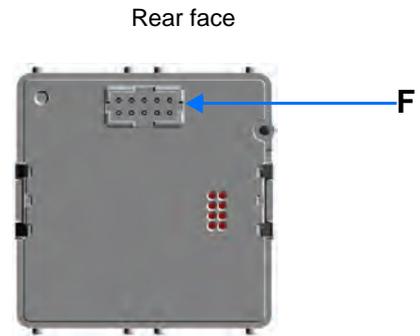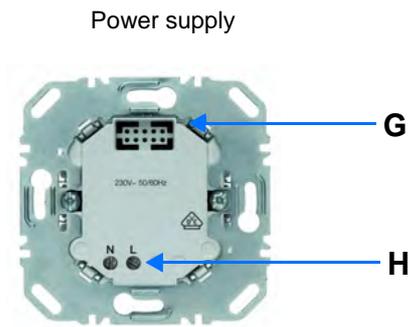
G: Connector
H: Connection terminal block
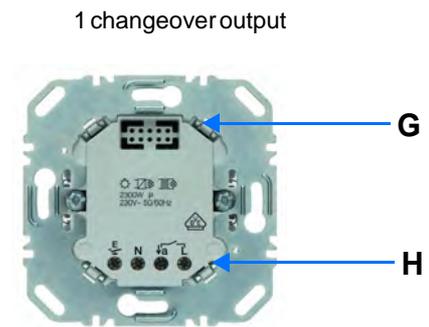
1.4 Compatibility between the control module and the power module

The table below shows the possible interconnections between the modules:

Power module	Control module	8574 52 xx
8512 12 00		Time switch ON / OFF RF 1 changeover output
8502 01 00		Time switch ON / OFF RF

1.5 Choice of application program in ETS

Program selection is compulsory according to the type of combination used.

- • Right click on the product in the ETS tree structure, then select **Change the application program…**,
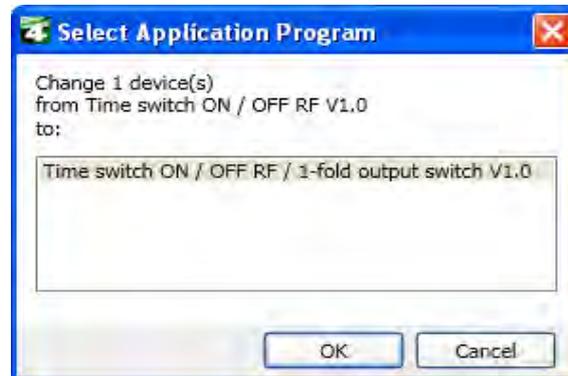
- • Select the product.

1.6 Function Description

1.6.1 Inputs

The inputs send lighting, priority and scene controls.

The main functions are the following:

■ Emission of commands
- • Lighting control
  - • ON, OFF, ON / OFF, OFF / ON
  - • Dimming (Brightness value and automatic control brightness value)

■ Priority

The Priority function allows an input to be forced to a defined status. The forcing action depends on the type of application controlled: Lighting, Shutters / blinds, Heating.

■ 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).

1.6.2 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 function can be interrupted via a long key press before the time delay expires.

■ 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.

1.7 Hardware and software required for configuration

- Windows PC with the ETS software,
  (Version 3.0f or higher or 4.0.7 or higher. Download and install the update if necessary.)
- Media coupler. The software version must meet the following characteristics:
  - Firmware: > 1.2.5
  - Plug-in: > 1.0.11
  (Check that you have administrator rights under Windows. If not you will not be able to install the media coupler plug-in.)
- Programming interface.

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	1	Input	ON / OFF	1 bit	C	R	-	T
Brightness value	4	Input	Brightness value	1 byte	C	R	-	T
Automatic control brightness value	4	Input	Brightness value	1 byte	C	R	-	T
Priority	3	Input	Priority	2 bit	C	R	-	T
Scene	5	Input	Scene	1 byte	C	R	-	T
Automatic control scene	5	Input	Scene	1 byte	C	R	-	T

2.1.2 Setting parameters

■ Parameter setting: Channel function

The input products send lighting, priority and scene controls.

➜ Parameter Setting screen
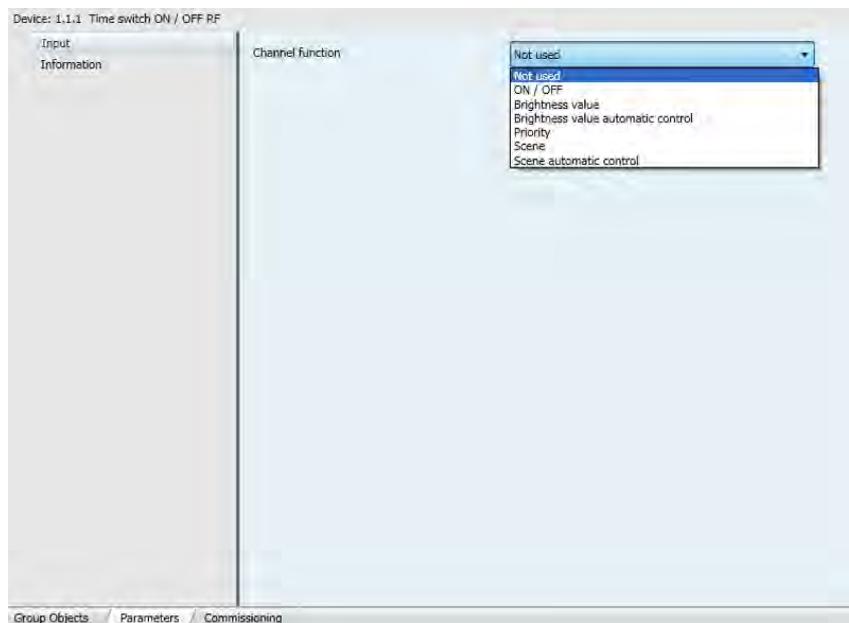
Parameter	Description	Value
Channel function	This parameter allows selecting the function associated with each input.	Not used ON / OFF Brightness value Automatic control brightness value Priority Scene Automatic control scene Default value: Not used

■ 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.

Description:
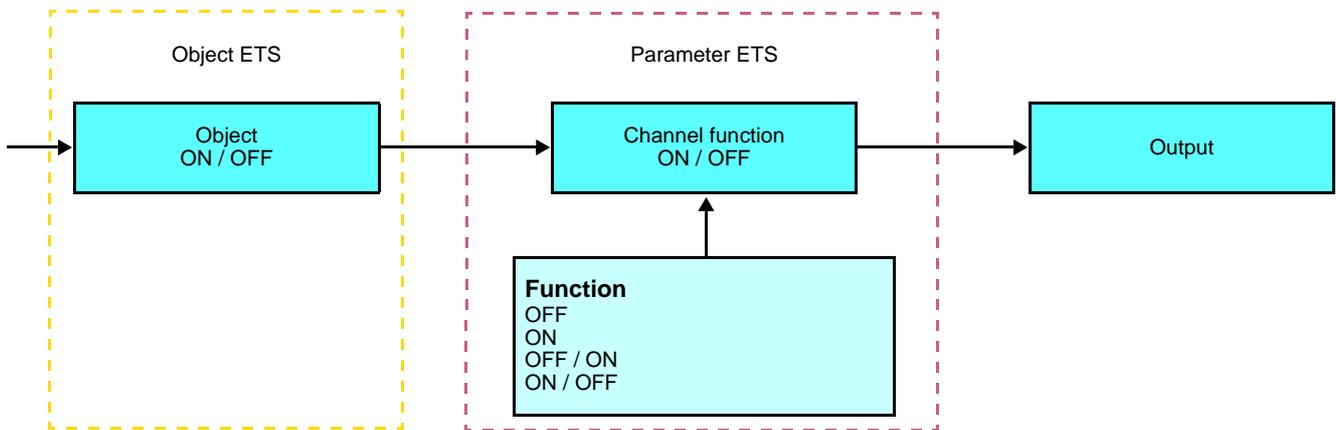
The control is sent when the input contact closes or when an input push button is pressed.

Function	Press on the ON push button	Press on the OFF push button
ON	ON control	No effect
OFF	OFF control	No effect
ON / OFF (Default value)	ON control	OFF control
OFF / ON	OFF control	ON control

■ Channel function: Brightness value and automatic control brightness value

This function is used to dim a light to a defined brightness value. The brightness value and automatic control brightness value are sent by the **Brightness value** object.

Description: There are 2 different function types: Brightness value and automatic control brightness value.

Channel function: Brightness value

This function sends the brightness value when the input contact is closed (ON).

Description:
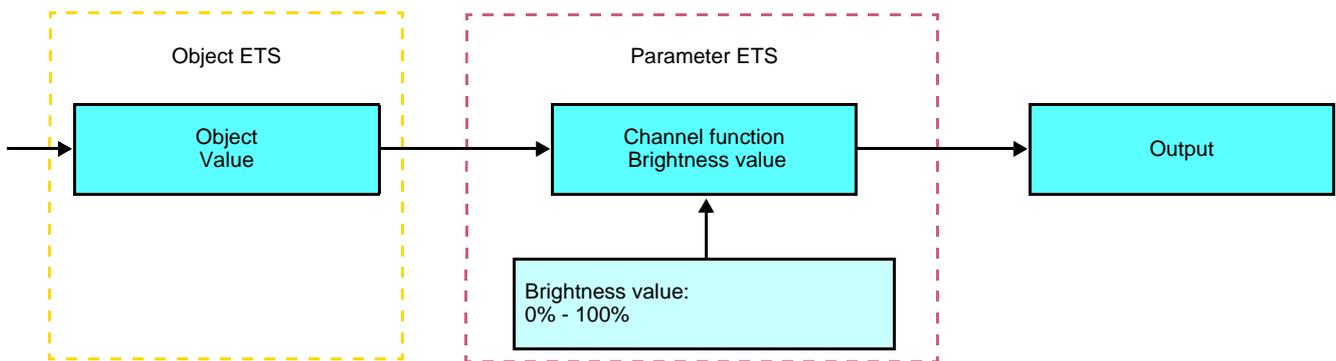
Channel function: Automatic control brightness value

This function sends the brightness value A when the input contact is closed (ON).
This function sends the brightness value B when the input contact is opened (OFF).
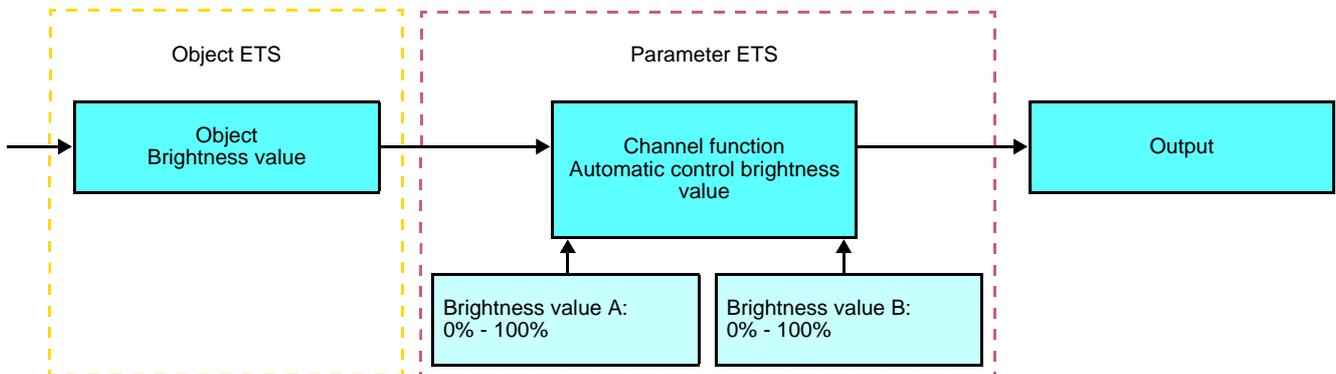
Description:

■ Channel function: Priority

This function sends priority-start or priority-stop commands. No other command is taken into account if a priority is active. Only end of priority or alarm commands will be taken into consideration.

Description:

```
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐      ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
         Object ETS                       Parameter ETS
┌────────────────────┐      ┌────────────────────┐      ┌────────────────────┐
│      Object        │      │  Channel function  │      │      Output        │
│     Priority       │      │     Priority       │      │                    │
└────────────────────┘      └────────────────────┘      └────────────────────┘

                            ┌────────────────────┐
                            │ Function           │
                            │ Priority ON - Down - Comfort │
                            │ Priority OFF - Up - Frost protection │
                            └────────────────────┘
```
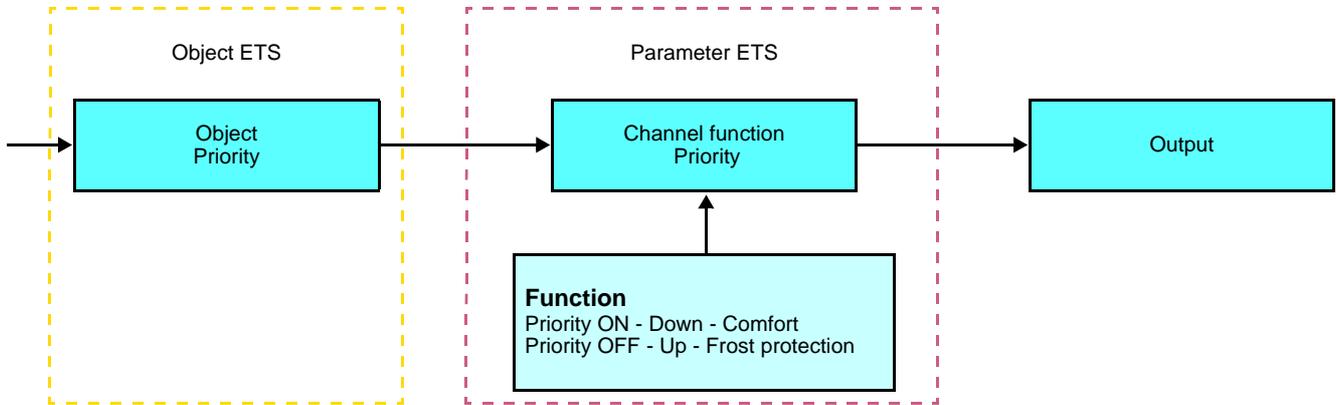
The command to be sent must be defined in the parameters:

- Priority ON - Down - Comfort: The **Priority ON / Down / Comfort** control is sent when the input contact is closed and the cancellation of this priority is sent when the input contact is opened,

- Priority OFF - Up - Frost protection: The **Priority OFF / Up / Frost protection** control is sent when the input contact is closed and the cancellation of this priority is sent when the input contact is opened.

■ Channel function: Scene and automatic control 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.

There are 2 different function types: Scene or automatic control scene

- Channel function: Scene
This function sends the scene number when the input contact is closed (OFF).

Description:

```
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐      ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
         Object ETS                       Parameter ETS
┌────────────────────┐      ┌────────────────────┐      ┌────────────────────┐
│      Object         │      │  Channel function  │      │      Output        │
│      Scene          │      │      Scene          │      │                    │
└────────────────────┘      └────────────────────┘      └────────────────────┘

                            ┌────────────────────┐
                            │ Scene number        │
                            │ Scene 1             │
                            │ Scene 2             │
                            │ Scene 3             │
                            │ Scene 4             │
                            │ Scene 5             │
                            │ Scene 6             │
                            │ Scene 7             │
                            │ Scene 8             │
                            └────────────────────┘
```
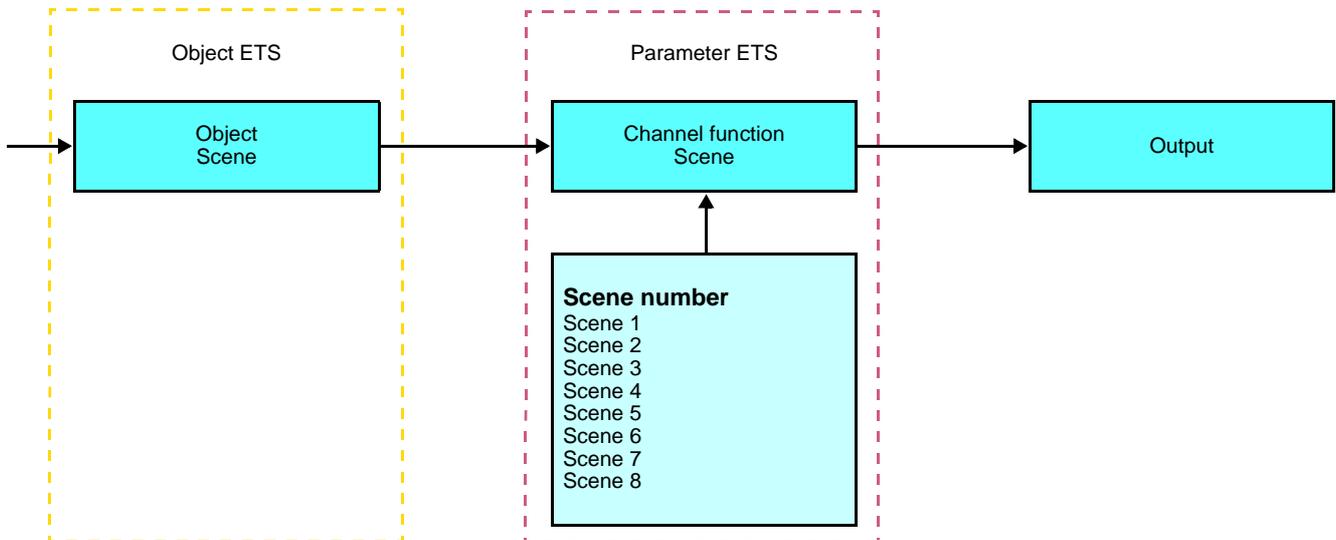
- Channel function: Automatic control scene
This function sends the scene number A when the input contact is closed (ON).
This function sends the scene number B when the input contact is opened (OFF).
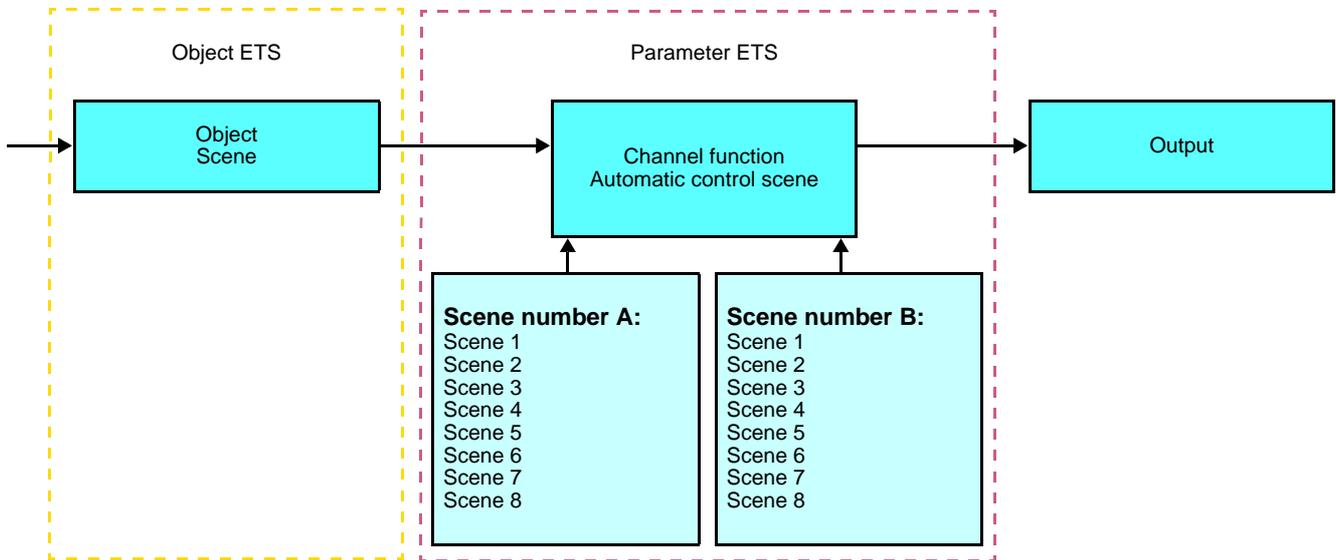
Description:

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.

2.2 ON / OFF output

2.2.1 Objects List

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

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.
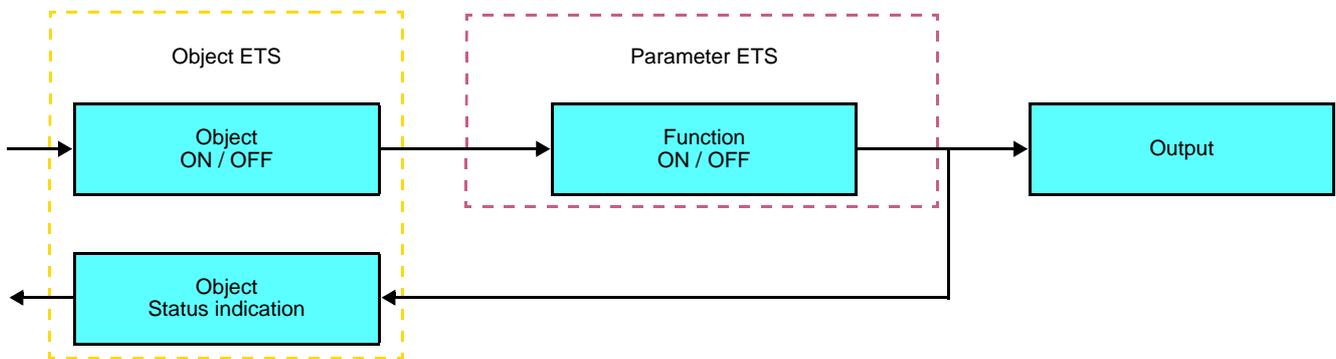
■ Timer function

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.
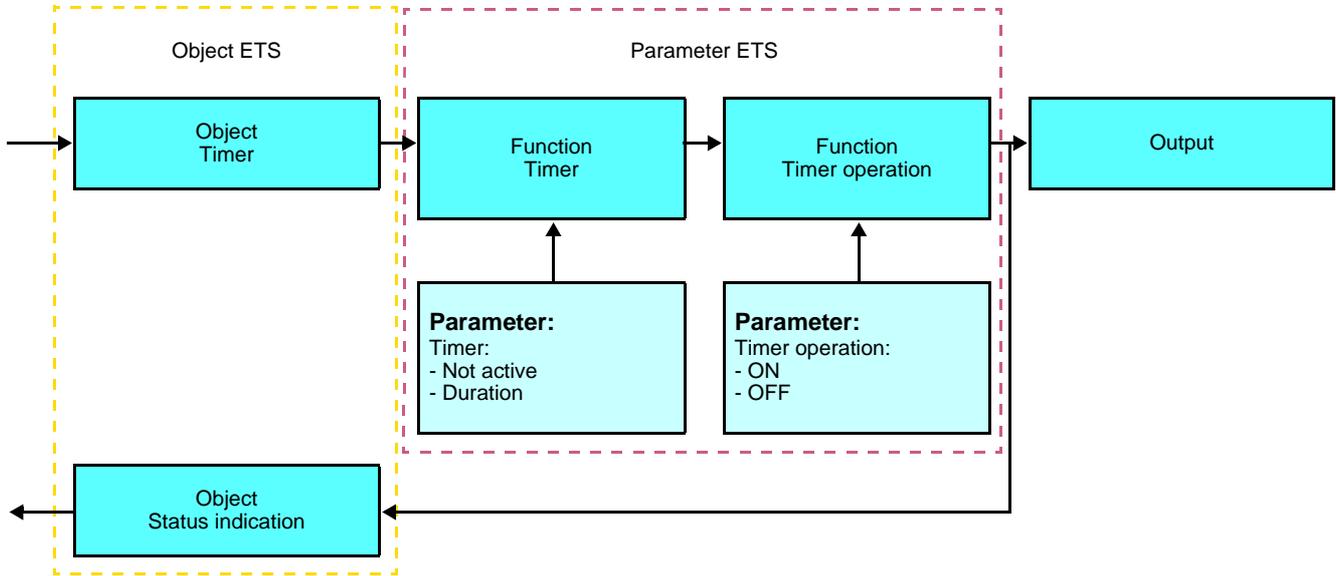
→ Parameters

| 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.

```
┌─────────────────────────┐   ┌──────────────────────────────────────┐
┊      Object ETS         ┊   ┊            Parameter ETS             ┊
┊                         ┊   ┊                                      ┊
┊   ┌─────────────────┐   ┊   ┊   ┌──────────────────┐               ┊   ┌──────────────────┐
──►┊   │     Object      │───┊───┊──►│ Priority function │───────────────┊──►│     Output       │
┊   │    Priority     │   ┊   ┊   │                  │               ┊   │                  │
┊   └─────────────────┘   ┊   ┊   └──────────────────┘               ┊   └──────────────────┘
┊                         ┊   ┊            ▲                         ┊
┊                         ┊   ┊   ┌────────┴─────────┐               ┊
┊                         ┊   ┊   │ **Parameter:**       │               ┊
┊                         ┊   ┊   │ Status after priority │               ┊
┊                         ┊   ┊   │ - Maintain        │               ┊
┊                         ┊   ┊   │ - Inversion       │               ┊
┊   ┌─────────────────┐   ┊   ┊   └──────────────────┘               ┊
◄──┊   │     Object      │◄──┊───┊──────────────────────────────────────┊
┊   │ Status indication │   ┊   ┊                                      ┊
┊   └─────────────────┘   ┊   ┊                                      ┊
└─────────────────────────┘   └──────────────────────────────────────┘
```
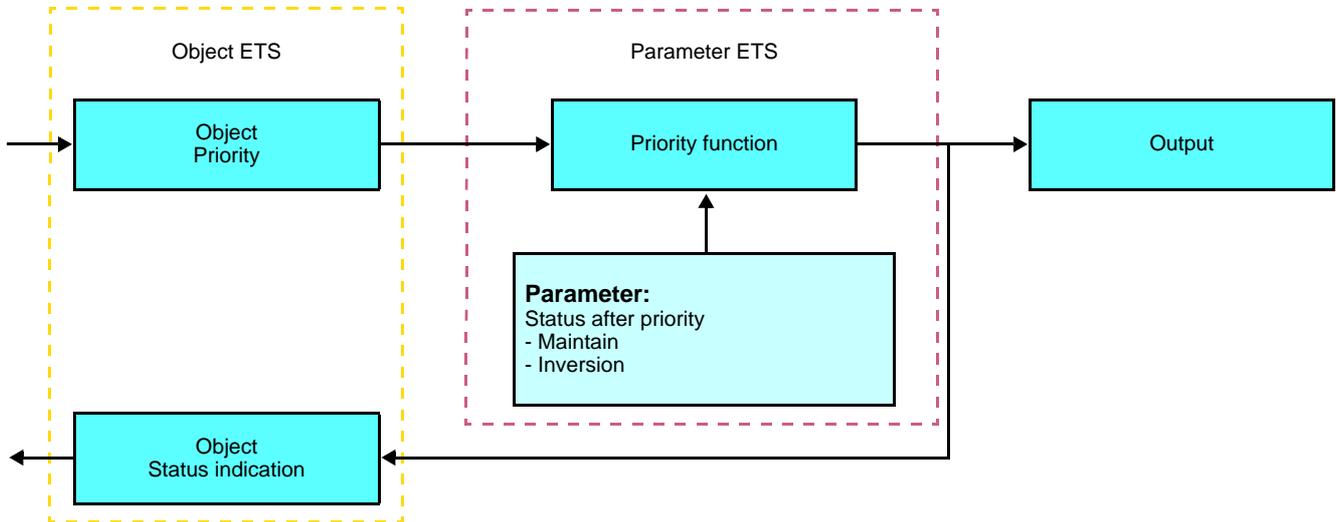
➔ Description of the **Priority** object

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.
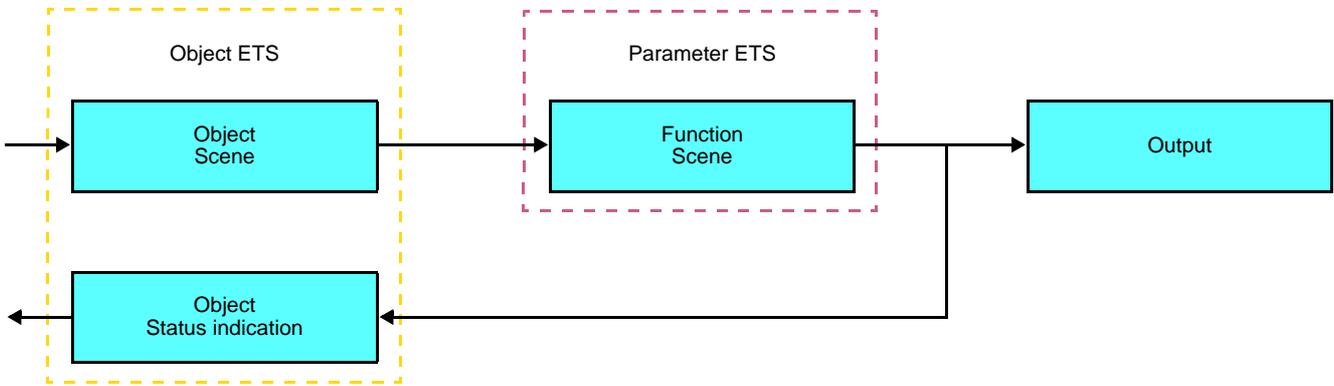
➜ Description of the **Scene** object (1 byte)

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 8505 01 00 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. 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.

5. 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.

6. The product copy function must not be used in ETS for radio products. It causes inconsistencies in the projects leading to plug-in malfunctions.

7. Copying projects which already contain a configured media coupler leads to plug-in malfunctions.

8. 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.

9. 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.

10. Changing the line of a media coupler which is already configured leads to plug-in malfunctions.

11. 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.
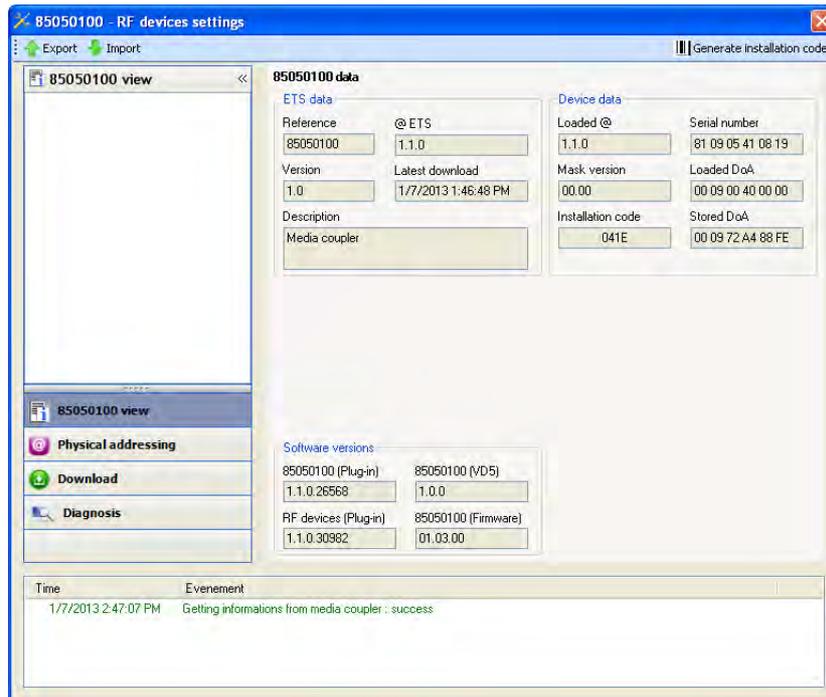
■ Physical addressing of the radio transmitters
- • Click on the button **Physical addressing** to display the physical addressing screen for the plug in,
- • Select the device to be addressed, then click on the field **Addressing** in the menu line at the upper left of the window,
- • Click on **Product 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.
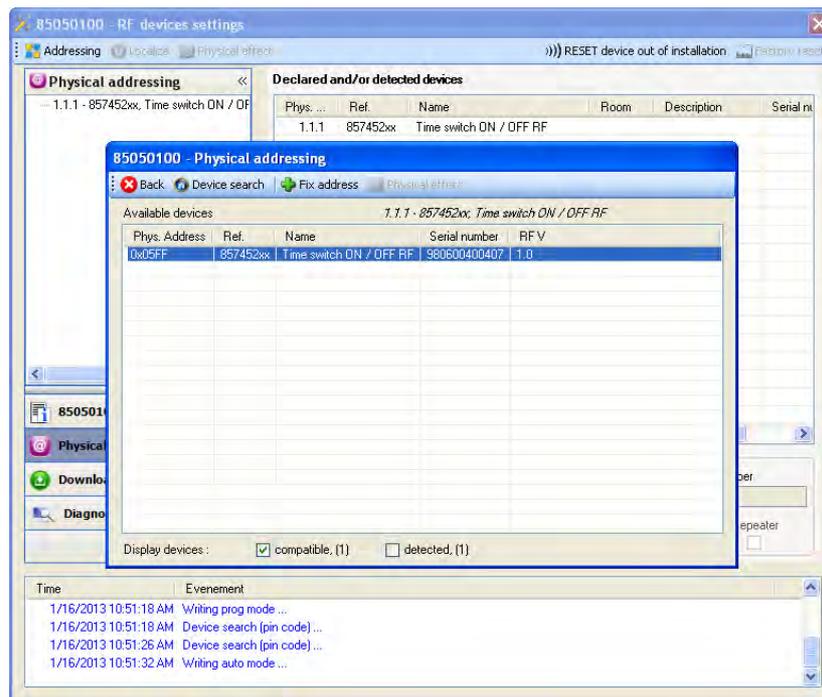
■ Downloading the program and the parameters

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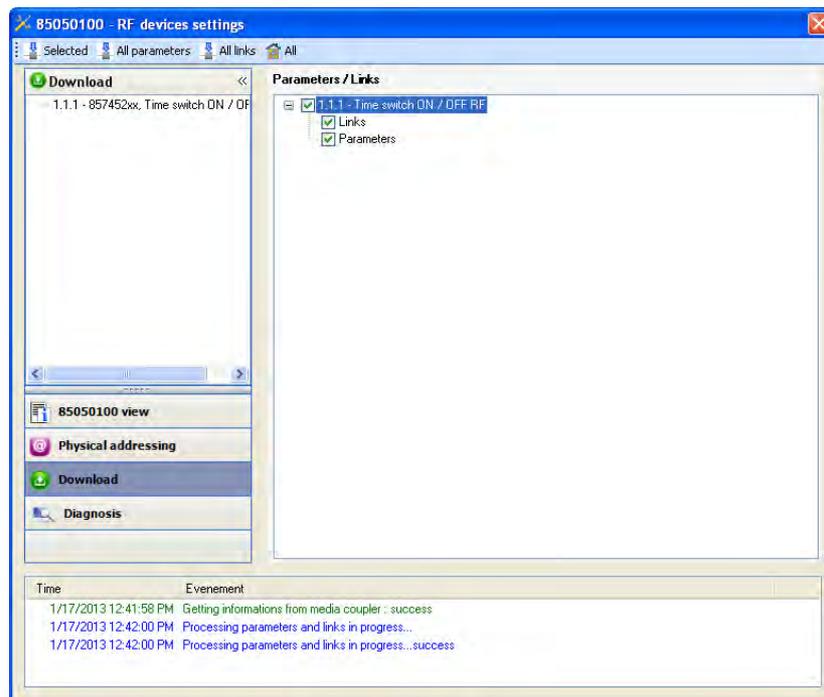
The right-hand window allows you to select the parameters and / or links to be downloaded for each product.

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.

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

NB: For more information, refer to the description for the 8505 01 00 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 **RESET device out of installation**, then **Unidirectional device with Addr. button**.
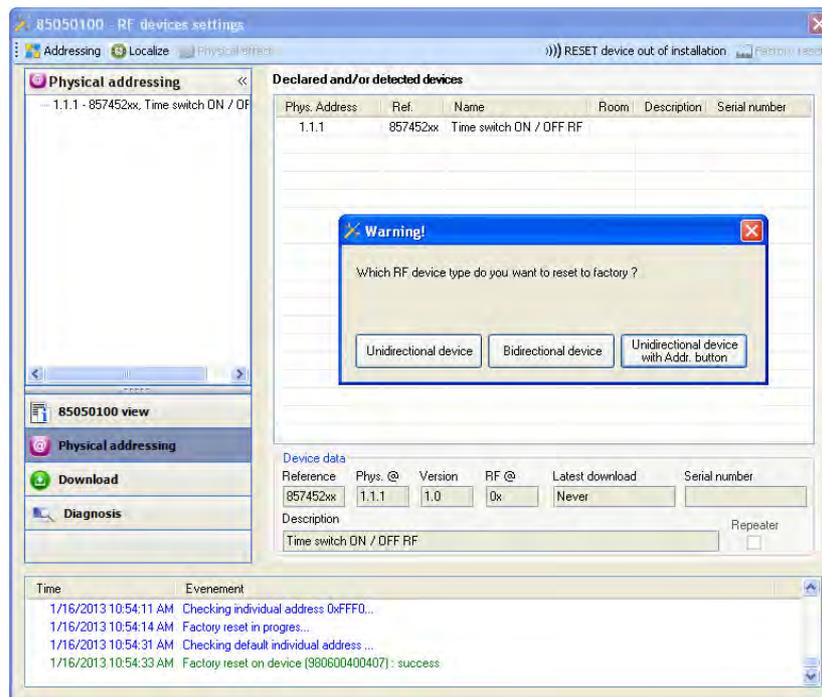
On the product, activate the addressing button as described below:
- Press and hold (> than 3 seconds) the OK button until the menu appears,
- Select "Installer menu" using the ON or OFF buttons,
- Press the button OK to validate your selection,
- Select "Quicklink settings" using the ON or OFF buttons,
- Press the button OK to validate your selection,
- Select "Configuration" using the ON or OFF buttons,
- Press the button OK to validate your selection,
- Select "Conf. activated" using the ON or OFF buttons,
- Press the button OK to validate your selection.

The product is in configuration mode.

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:
- Press and hold (> 3 seconds) the ON button until the menu appears,
- Select "Installer menu" using the ON or OFF buttons,
- Press the button OK to validate your selection,
- Select "Factory settings" using the ON or OFF buttons,
- Press and hold (> than 10 seconds) the OK button until the Ω symbol appears.

The product restarts automatically.

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. Examples of applications

4.1 Switching the light on/off (ON / OFF)

The 8574 52 xx module controls the 8512 12 00 module and the 6 ON/OFF outputs module.

Operation:
- When the input contact closes (manually or by programming): Switch on the light,
- When the input contact opens (manually or by programming): Switch off the light.

Equipment:

1x 8574 52 xx	1x 8512 12 00	1 6 ON / OFF outputs module
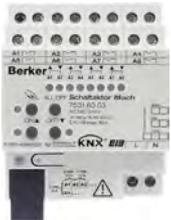
Object KNX

N°	8574 52 xx		N°	8512 12 00
	Object name			Object name
1	Input - ON / OFF	➜	6	Output - ON / OFF

N°	8574 52 xx		6 ON/OFF outputs module
	Object name		Object name
1	Input - ON / OFF	➜	Output - ON / OFF

Parameters KNX

	8574 52 xx		8512 12 00	6 ON/OFF outputs module
	Input			
Channel function	ON / OFF		Default settings	Default settings
Function	ON / OFF			

Comment:
- The lights are switched on and off according to the operating mode of the input (manual or by programming).

4.2 Dimming of the light

The 8574 52 xx module controls the 3 dimming outputs module.

Operation:
- When the input contact closes (manually or by programming): Lighting dimming at 80%,
- When the input contact opens (manually or by programming): Lighting dimming at 20%.

Equipment:

1x 8574 52 xx	1x 8502 01 00	1 3 dimming outputs module
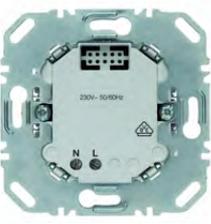
Remark: The 8502 01 00 power module is only used to power the control module.

Object KNX

N°	8574 52 xx		3 dimming outputs module
	Object name		Object name
4	Input - Brightness value	➜	Output - Brightness value

Parameters KNX

	8574 52 xx		3 dimming outputs module
	Input		
Channel function	Automatic control brightness value		
Brightness value A	80%		Default settings
Brightness value B	20%		

Comment:
- The brightness value A (80%) and the brightness value B (20%) are sent according to the operating mode of the input (manual or by programming).

5. Main characteristics

Product	8574 52 xx
Max. number of group addresses	60
Max. number of links	62

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