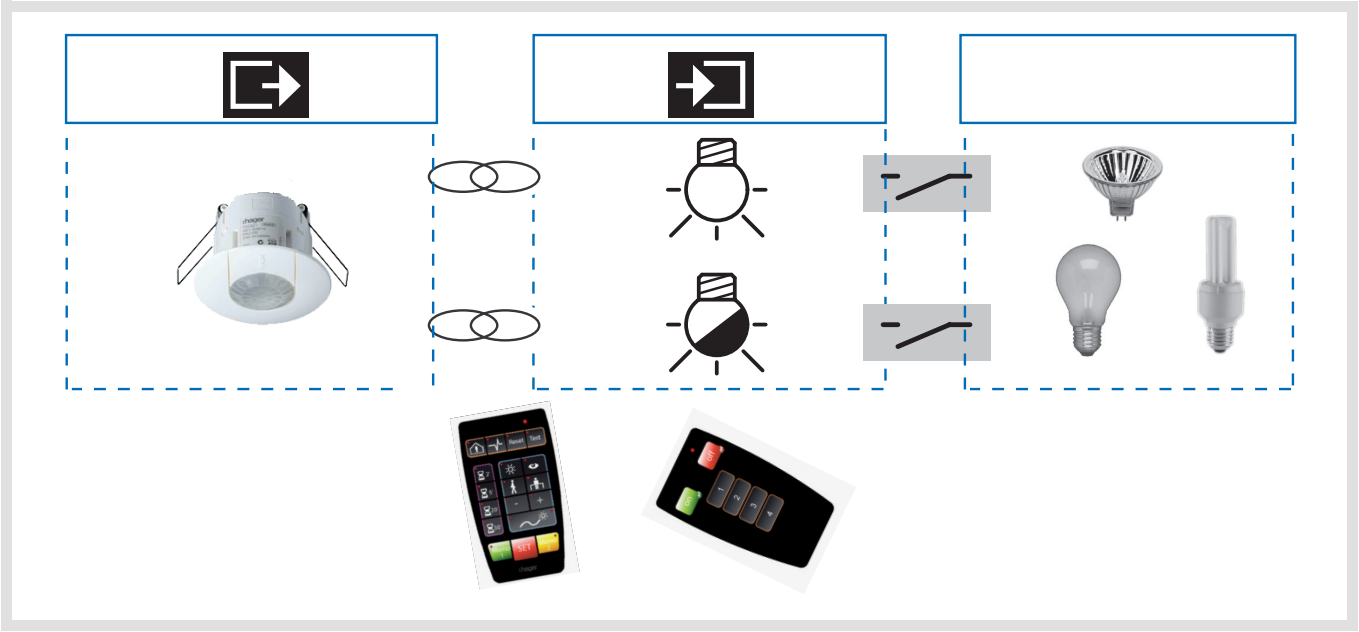
Start-up manual TX100

Presence detector 360°

Electrical / Mechanical characteristics: see product information

	Product reference	Description	TX100 version	TP device RF devices
	TCC510S	Presence detector 360° Single unit KNX	Version 2.6.0	



Summary

1. Presentation of the functions Presence detector 360° Single unit KNX

The main functions are the following:

Presence detection and brightness measurement

The TCC510S presence detector senses infrared radiation from the heat emitted by a body in motion. It enables commands for lighting and scenes to be sent in case the presence of a person is detected.

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.

Ambient light level

The ambient light level can be set by a potentiometer located on the product or by the installer remote control RF EE807.

Time delay for lighting and presence

This function enables a command to be sent after a time delay when no presence was detected during the time delay (**absence** of person). The value of the time delay can be set by a potentiometer located on the product or by the installer remote control RF EE807.

Semi-automatic or automatic mode, Override command (Lighting channel)

In semi-automatic mode, the change to presence and the lighting turning on take place due to an action on the override entry, the change to absence is then commanded by the detector based on the presences detected and the setting of the time delay turn-off. In automatic mode, the product is activated by presence being detected.

Master / Slave

The detector-type configuration enables the detection zone to be extended by associating several slave detectors with a single master detector. Only the master detector manages the brightness level and controls the outputs.

Scene execution

The Execution function enables commands to be sent from the group to various types of outputs to create atmospheres or scenarios (presence scenario, absence scenario,...).

The TCC510S can be configured as a master or slave.

2. Master / Slave configuration and channel numbering

To configure the TCC510S as a Master and number the lighting channel:

- Set the potentiometer **Lux** of the TCC510S to a position other than ON,
- Press the  button with a long key press to train all the input and output products available in the installation,
- Wait until the training procedure finishes: The product is now configured as a Master,

To configure the TCC510S as a Slave and number the channels:

- Set the **Lux** potentiometer of the TCC510S to the on position,
- Press the  button with a long key press to train all the input and output products available in the installation,
- Wait until the training procedure finishes: the product is now configured as a slave,

- Numbering the Slave channel:
  Numbering takes place in Num mode of the TX100, the lighting time delay potentiometer must be set to the **Lux ON** position (activate the potentiometer and reset it to **Lux ON** if it is already in this position),
  The green LED blinks: 1 long, 1 short, 1 long, 1 short, 1 long, 1 short.
- When it beeps, the Slave channel number and the  symbol will be displayed.

  The  symbol confirms that the detector is in Slave mode. The Slave channel enables the product to be connected to a Master detector.

Remark: To change the Master configuration to Slave or vice versa, it is necessary to reset the product to factory configuration: see chapter **Factory Reset Function (RAZ)**. The product can then be reconfigured as a Master or Slave.

3. Function configuration and creation of links in standard mode

After configuration as a Master or Slave and channel numbering, it is possible to allocate a function to the lighting channel (Master detector only) to control the outputs:

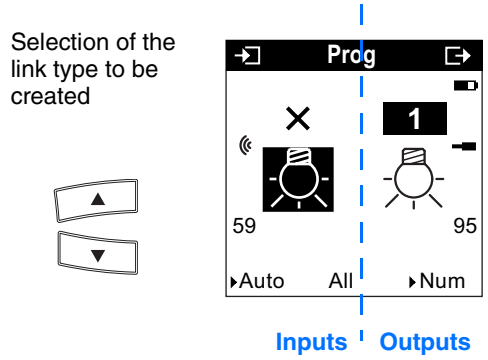
- Lighting commands:
  - ON, OFF, ON / OFF, Timer
  - Dimming to a predefined level: 25%, 50%, 75%, 100%
  - Priority
- Scene controls

These functions are available in the TX100's Standard configuration mode by creating links with the appropriate output devices.

3.1 On / Off Lighting functions

The ON / OFF Lighting functions command the ON / OFF Lighting outputs symbolized by the icon on the right part of the display. Refer to the configuration instructions of the various lighting output products for the installation and configuration of these products.

After channel numbering, the functions and links available appear in the left part of the screen of the TX100.



The table here after shows all type of links compatible with the product:

Possible link type		Link description	Output operation
	ON	The ON function switches the lighting circuit ON.	A valid movement detection causes the output contact to close.*
	OFF	The OFF function switches the lighting circuit OFF.	A valid movement detection causes the output contact to open.*
	Switch	The Switch function switches the lighting circuit ON or OFF.	A valid movement detection causes the output contact to close.* Each valid detection restarts the turn-off time delay. At the end of the time delay, if no movement has been detected, the output contact opens.
	Timer ON	The Timer ON function switches the lighting circuit ON for an adjustable time. Select the time delay after confirming the link: Setting range [0 s - 24 h] Not active, 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. Default value: 1 min	A valid movement detection causes the timed closing of the output contact.* At the end of the timer's time delay, the contact opens. The time delay set on the TCC510S is added to the time delay defined on the output module.

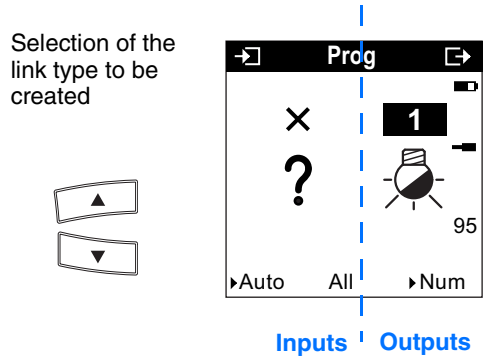
	Timer OFF	The Timer OFF function switches the lighting circuit off for an adjustable time. Select the time delay after confirming the link: Setting range [0 s - 24 h] Not active, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 45 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 5 min, 15 min, 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h. Default value: 1 min	A valid movement detection causes the timed opening of the output contact.* After the timer's time delay, the contact closes.
	Priority ON	The Priority ON function forces the lighting circuit ON and maintains it ON.	A valid movement detection sets the output priority to ON.* The change to absence cancels the priority. Priority is the function with the highest priority. Only a priority-end control ends the priority and re-authorizes the bus commands to be taken into consideration. After confirming the link, select the behaviour to follow Priority Cancellation: • Maintain: the contact is maintained in the same status as during Priority, • Inversion: the contact is inverted in relation to the status active during Priority. A priority is also cancelled by another Priority command.
	Priority OFF	The OFF Priority function forces the lighting circuit OFF and maintains it OFF.	A valid movement detection sets the output priority to OFF.* The change to absence cancels the priority. Priority is the function with the highest priority. Only a priority-end control ends the priority and re-authorizes the bus commands to be taken into consideration. After confirming the link, select the behaviour to follow Priority Cancellation: • Maintain: the contact is maintained in the same status as during Priority, • Inversion: the contact is inverted in relation to the status active during Priority. A priority is also cancelled by another Priority command.

* Detection of valid movement: movement detected and ambient light below the threshold.

3.2 Dimmer Lighting functions

The dimmer Lighting functions command the dimmer Lighting output symbolized by the icon on the right part of the display. Refer to the configuration manuals for the various dimmer Lighting output devices for information on installing and configuring these devices.

After channel numbering, the functions and links available appear in the left part of the screen of the TX100.



The table here after shows all type of links compatible with the product:

Possible link type		Link description	Output operation
	ON	The ON function switches the lighting circuit ON.	A valid movement detection causes the light to turn on at the last memorised level.*
	OFF	The OFF function switches the lighting circuit OFF.	A valid movement detection causes the light to turn off to 0%.*
	Level 25%	Turning on the light to 25%.	A valid movement detection causes the light to turn on to 25%.*
	Level 50%	Turning on the light to 50%.	A valid movement detection causes the light to turn on to 50%.*
	Level 75%	Turning on the light to 75%.	A valid movement detection causes the light to turn on to 75%.*
	Level 100%	Turning on the light to 100%.	A valid movement detection causes the light to turn on to 100%.*
	Switch	The Switch function switches the lighting circuit ON or OFF.	A valid movement detection causes the light to turn on at the last memorised level.* Each valid detection restarts the turn-off time delay. At the end of the time delay, if no movement has been detected, the light is turned off to 0%.
	Timer ON	The Timer ON function switches the lighting circuit ON for an adjustable time. Select the time delay after confirming the link: Setting range [0 s - 24 h] Not active, 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. Default value: 1 min	A valid movement detection causes the light to turn on at the last memorised level.* At the end of the timer's time delay, the light turns off to 0%. The time delay set on the TCC510S is added to the time delay defined on the output module.

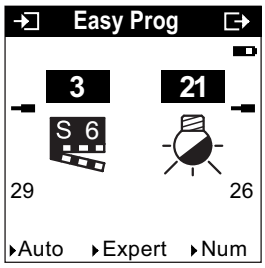
Possible link type		Link description	Output operation
	Timer OFF	The Timer OFF function switches the lighting circuit off for an adjustable time. Select the time delay after confirming the link: Setting range [0 s - 24 h] Not active, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 45 s, 1 min, 1 min 15 s, 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. Default value: 1 min	A valid movement detection causes the light to turn off to 0%.* At the end of the timer's time delay, the light is on at the last memorised level.
	Priority ON	The Priority ON function forces the lighting circuit ON and maintains it ON.	A valid movement detection sets the output priority to ON.* The change to absence cancels the priority. The ON priority switches the light ON to 100%, whatever the level stored. Priority is the function with the highest priority. Only a priority-end control ends the priority and re-authorizes the bus commands to be taken into consideration. After confirming the link, select the behaviour to follow Priority Cancellation: • Maintain: the output is maintained in the same status as during Priority, • Inversion: the output is inverted in relation to the status active during Priority. A priority is also cancelled by another Priority command.
	Priority OFF	The OFF Priority function forces the lighting circuit OFF and maintains it OFF.	A valid movement detection sets the output priority to OFF.* The change to absence cancels the priority. The OFF priority switches the light off to 0%, whatever the stored level. Priority is the function with the highest priority. Only a priority-end control ends the priority and re-authorizes the bus commands to be taken into consideration. After confirming the link, select the behaviour to follow Priority Cancellation: • Maintain: the output is maintained in the same status as during Priority, • Inversion: the output is inverted in relation to the status active during Priority. A priority is also cancelled by another Priority command.

* Detection of valid movement: movement detected and ambient light below the threshold.

3.3 Scene function

Link creation

When selecting a Scene function (number 1 to 8), it is possible to create links between an infrared detection channel and the outputs that must be part of the scene.



Possible link type		Link description	Output operation
S 1 ... S 8	Scene 1 to 8	The Scene function groups a set of outputs. These outputs can be set to an adjustable predefined status. Each output may be integrated into 8 different scenes.	A valid movement detection causes the scene to activate.* The status of each output can be defined: • By parameterising the actuators or regulators, • Via learning, with the push buttons on the installation or on the front of certain devices.

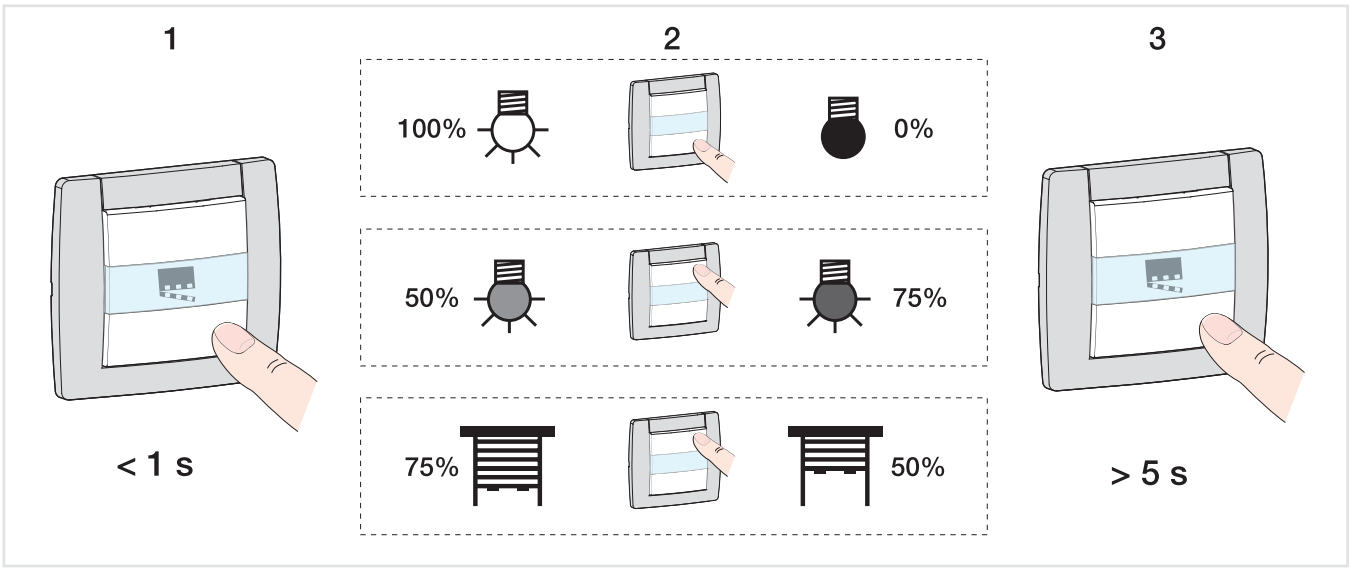
Output configuration by parameterisation

Refer to the user instructions for the various actuators.

Configuration by learning and scene storing

This procedure enables a scene to be modified and memorised locally via the push buttons located in the room or locally via the push buttons located on the front of certain products (Actuators for lighting, for rolling shutters / blinds, ...).

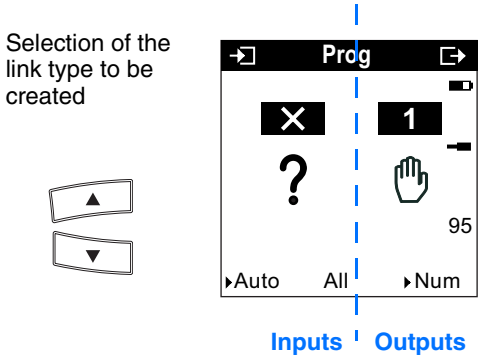
- Set the outputs (lighting, rolling shutters, thermostats, TX460 regulator, ...) to the desired status using the push buttons in the room that control them individually or locally using the push buttons on the front of certain products (see the configuration manuals of the concerned devices for more details),
- Store the output statuses and the regulator mode by pressing the scene-triggering Ambiance pushbutton for at least 5 s. The storage is indicated by temporary activation of the outputs on certain actuators.



3.4 Configuration of an override command

The override command enables the operating mode of the lighting channel to be overridden, from a push button communicator for example or user remote controls (EE808), independently of all presence detection and the ambient luminosity level. We can refer to the configuration instructions for the various input products (communicator push buttons, ...) for the installation and configuration of these products.

After numbering the channels, the override input of the TCC510S is represented by the icon appearing in the right-hand part of the screen.



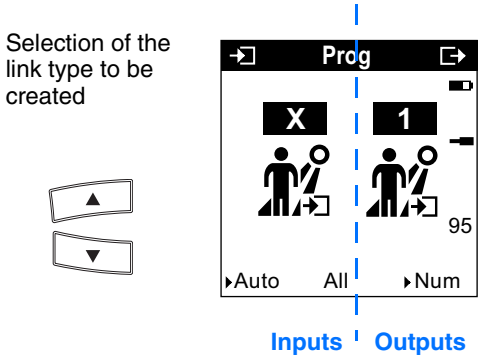
The table here after shows all type of links compatible with the product:

Possible link type		Link description	Output operation
	ON	The ON function enables the detector's operating mode to be overriden.	In semi-automatic mode: Press on the push button ➜ The output changes to ON and automatic operation with presence detection is activated In automatic mode: Press on the push button ➜ Overriding the output's operating mode with inversion of the output status
	OFF	The OFF function enables the detector's operating mode to be overriden.	In semi-automatic mode: Press on the push button ➜ The automatic function with presence detection is deactivated and the output switches to OFF In automatic mode: an override in progress is cancelled.

3.5 Configuration of the Master-Slave link

This function enables a link to be established between a master detector and a slave detector.

The master detector is represented by the icon on the right of the screen and the slave detector by the icon on the left of the screen:



The creation of a link enables the master detector and the slave detector to be connected.

3.6 Mode + Info

General points

The mode +Info can be accessed in the Prog and Visu modes of the TX100.

The +Info mode is activated for all products in the installation in progress until the mode is deactivated. This mode enables access to the status indication of an output and to special functions.

The status indication sends the current status over the network each time the status changes. The +Info mode allows the status indication to be linked from an output to a viewing product: Area controller, LED output, etc.

The status indication is represented by the symbol  .

The status indication adds itself to the list of inputs on the left of the TX100 screen with the same number as the output.

3.7 Expert mode and Specific links

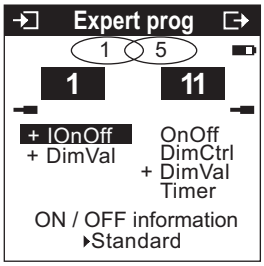
General points

To set a program in Expert mode, it is necessary to have some basic knowledge in EIB / KNX (for example, software ETS = EIB).

Expert mode includes the following functions:

- Extension of the communication system: Gives access to the group address given when programming in Standard Mode in order to establish the links between a Tebis TX installation (TP, radio KNX) and Hager products such as technical alarms, visualisation, internet router,
- Programming of mixed installations (EIB / KNX and Tebis TX): Expert mode allows integrating KNX RF products in an installation parameterised with ETS,
- Programming of additional functions: To maintain ease of programming in Standard mode, some of the device's functions may not be available in that mode. Thus, some specific solutions are only available in Expert mode.

Example of an Expert mode display:



The push button objects visible in expert mode are described on the following pages. The objects visible depend on the functions set. Basic information on Expert mode operation can be found in specific documentation.

■ List of the available objects

Designation TX100	Designation ETS	Function	Format	Description
On / Off and Dimmer Lighting controls				
OnOff	On/Off	ON / OFF	EIS1 1 bit	Allows an ON / OFF command to be transmitted.
IOnOff	InfoOn/Off	ON / OFF information	EIS1 1 bit	Indicates the output's status.
DimVal	DimmingValue	Dimming command	1 byte	Enables the output level of a dimmer to be set to a defined value.
Derogation	Derogation	Override command	1 bit	Enables overriding the presence or absence mode in progress.
Timer	TimedStartStop	Timer	EIS1 1 bit	Allows you to activate or interrupt the timer.
Forced	Forced	Priority	EIS2 2 bit	Forces an output.
Scene				
Scene	SceneNumber	Scene	1 byte	Activates the scene by its number.

3.8 Other functions

■ Restore Factory Configuration function

This function resets the device to its original configuration (Factory configuration).
After a device reset, the device can be re-used in a new installation.
This function is accessible via the TX100's Device Management / Reset menu.

There are 2 different cases:

- The device belongs to the installation: it appears in the Reset menu's list of devices that can be reset to Factory configuration. Select the device from the list, press ✓ and confirm deletion.
- The device does not belong to the installation:
  - Returns the potentiometer to the **Adr** position,
  - On the TX100:
    - Select Install. product outside of system from Reset menu,
    - Press ✓,
    - Select TP,
    - Press ✓.

After the operation, the TX100 emits a beep.
After a device reset, the installation must be learnt again in order to relocate the devices reset to Factory configuration.

■ Bus presence test

To check the presence of the bus, set the time delay adjustment potentiometer to the **Adr** position.
indicator ON = Bus presence.
Important: move the potentiometer to exit this mode.

■ Characteristics

Max. number of group addresses	254
Max. number of links	255