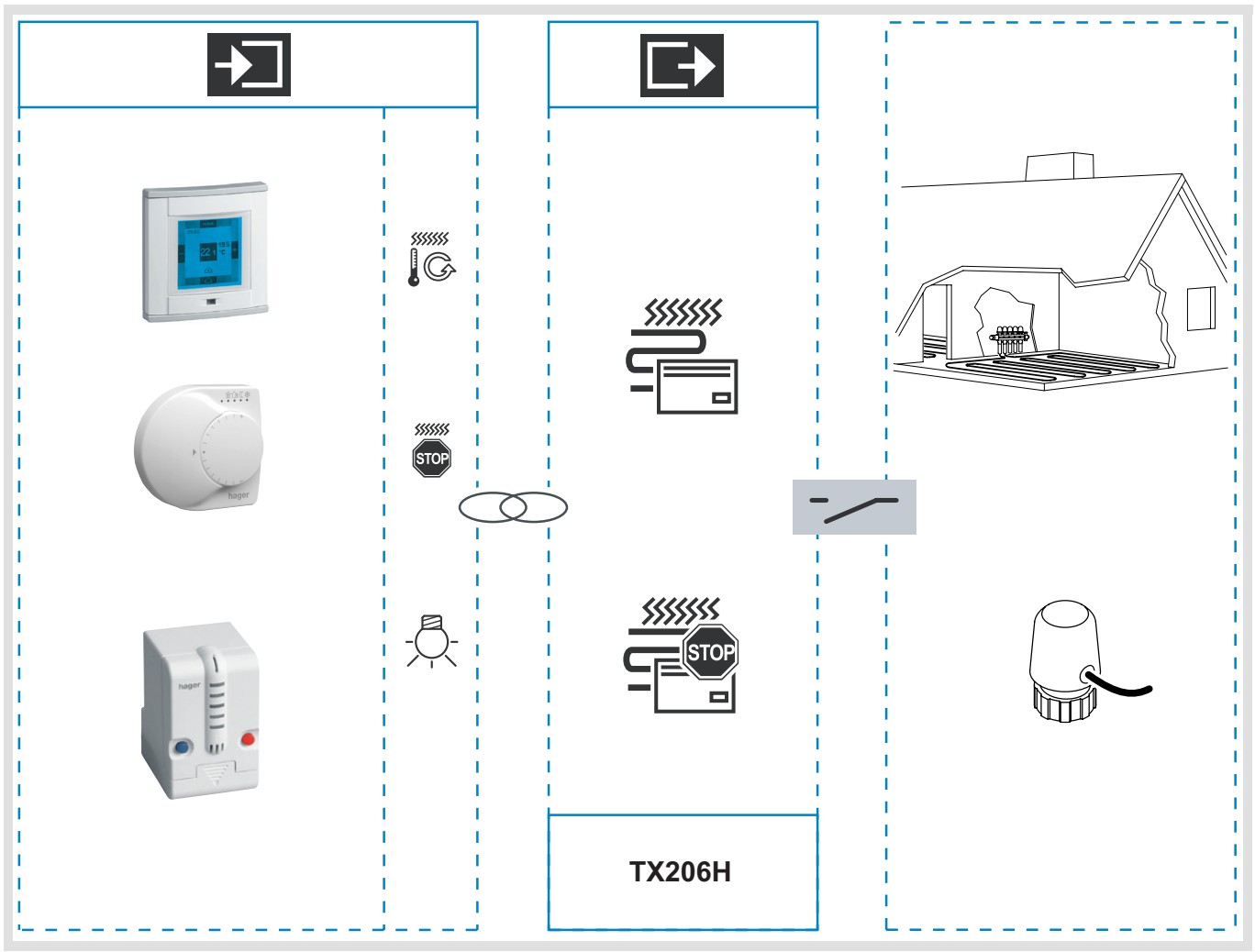
Operation with the Tebis TX100 configurator

Heating functions : Heating actuator 6 channels

Electrical / Mechanical characteristics : see product user's instructions

	Product reference	Product designation	Version TX100	TP device RF device
	TX 206H	Heating actuator 6 channels	≥ 1.6.3	



Summary

1. Presentation of the functions of the TX206H

The main functions are the following :

Valves control

The TX206H has 6 outputs. These outputs allow controlling normally closed valves equipped with 24VDC electrothermal motors. The outputs are adapted to the control of heating or air-conditioning systems with water-distribution circuit.

Time-proportional control

The TX206H receives from the thermostat(s), for each output, the heating rate (%-type value) to be applied. The TX206H converts, on the basis of a 15 min cycle, this %-type value into output opening and closing times. For example, if the thermostat requires a heating rate of 40 %, the valve will be closed for 9 min and then opened for 6 min.

Valve protection

A valve that remains inoperated for a long time may jam. To prevent if from jamming, the heating actuator integrates a valve protection function. If the output is not actuated (opening of the valve) for more than 24 h, whatever the current mode, it will be actuated automatically for 6 min all 24 h.

Stop

The Stop mode allows switching the heating actuator completely off (all outputs). The Valve protection function is active during this stop.

Bus failure mode

A non-adjustable emergency programme will be activated in case of a bus failure. This programme consists in activating successively each of the valves for 8 minutes. For example : channel 1 ON for 8 min (all other channels OFF), then channel 2 ON for 8 min (all other channels OFF), etc.

2. Configuration and parameterising of the TX206H

The TX206H is a 6 channels heating actuator.

Its main function consists in applying to each of the outputs the heating rate required by the linked thermostat.
For that purpose, each of the outputs must be linked to a thermostat by means of the TX100.

The Heating OFF input 

allows switching off all outputs of the product.

➜ **The user's instructions of the TX100 configurator give all explanations required to set up links.**

2.1 Teaching the TX206H with the TX100

Pressing the key of the TX100 for a long time in Prog mode allows carrying out the learning process on the TX206H. After this learning, the following symbols will be displayed on the right side of the display of the TX100 :

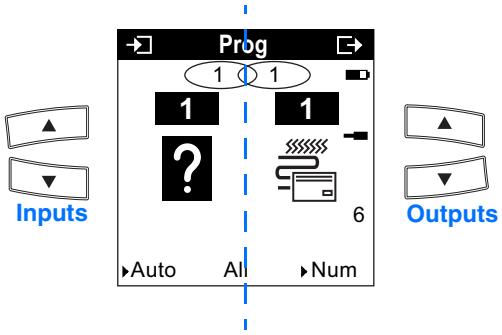
- 6 times .

  Each symbol represents an output of the actuator.

  Pressing briefly the key will light temporarily the LED corresponding to the output. This function allows finding in the installation the output number of each of the channels. Each of the outputs must be linked to a thermostat.

- 1 time .

  The symbol represents the Stop function.
  This Stop function allows switching off simultaneously all outputs of the TX206H.
  As long as the Stop command will be present, the commands issued by the various thermostats will not be applied.



X stands for a possible input or output number.

The keys allow scrolling the input / output numbers.

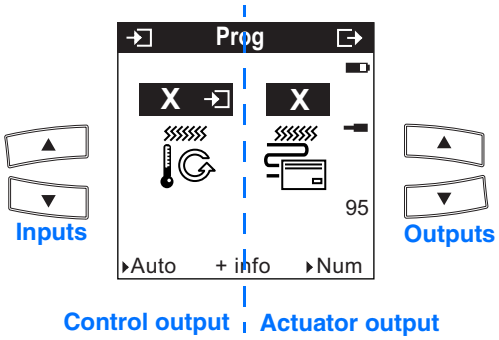
The key allows toggling between the input number **X** and the linked function ? in order to select or modify this function.

2.2 Creating a link between an output of the TX206H and a thermostat

Important information :
Creating a link between a thermostat and a heating output is only possible in the Prog/+Info mode of the TX100.

To assign a thermostat to an output (heating circuit), it is indispensable to switch the display of the TX100 to the +Info mode. This is done by pressing the central key underneath the display ▭. This operation is not possible while the Expert mode is activated.

After activating the Prog/+Info mode, the thermostats are displayed on the right side of the display of the TX100.



X stands for a possible input or output number.

To create the link between a thermostat and a channel of the heating actuator :

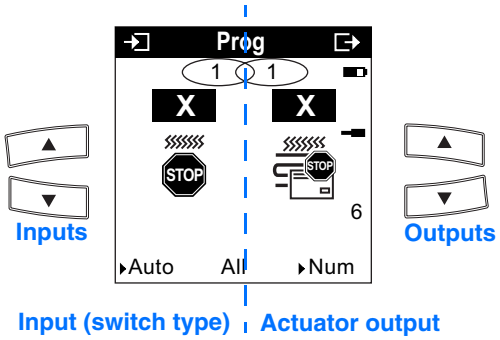
- Use the ▲▼ keys of the TX100 to select the thermostat on the left side of the display.
- Use the ▲▼ keys of the TX100 to select the output channel on the right side of the display.
- Press ✓ to create the link.

Function of the input		Description	Operation
	Regulation This function must be linked to a -type output.	The regulation function allows the thermostat to communicate to the output the heating rate to apply.	The thermostat communicates to the output the heating rate to apply (%-type value). Based on a cycle time of 15 min, the TX206H converts the %-type value in ON and in Off switching times. The connected valves will be opened during the ON switchng period and closed during the OFF switching period.

2.3 Creating a link between the TX206H heating actuator and a Stop input

The Stop function allows stopping simultaneously the 6 heating channels of the TX206H and ending all current cycles. The valves connected to the outputs will be closed.

To carry out this function, a link must be created between an input with the STOP function and the output channel with the STOP function.



X stands for a possible input or output number.

To create a link between the TX206H and a Stop input.

- Use the keys of the TX100 to select the Stop input on the left side of the display.
- Use the keys of the TX100 to select the Stop output on the right side of the display.
- Press ✓ to create the link.

Function of the input		Description	Operation
STOP	Stop This function must be linked to a STOP-type output.	The Stop function allows stopping simultaneously the 6 heating channels of the TX206H and ending all current cycles. The valves connected to the outputs will be closed.	The associated input contact is of a switch type. The closing of this contact will cause the contacts of all the outputs to open. The Heating OFF command has the highest priority. Only a Stop end command allows re-starting the heating. The Valve protection function of the valve remains active. Closing of the contact : Stop of all channels of the TX206H; this command is maintained even in case of a request coming from a thermostat. The Valve protection function remains active. Opening of the contact : The Stop command is cancelled. The outputs apply the commands isued by the thermostats.

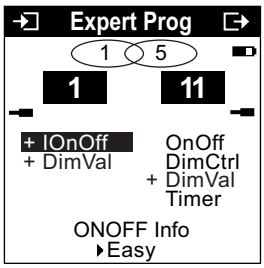
3. Expert mode programming

Basic EIB/KNX knowledge (for example, ETS=EIB software) is required to perform programming in the Expert mode.

The Expert mode includes the following functions :

a. extension of the communication system : grants access to the group address given during programming in Standard mode in order to set up links between a Tebis TX installation (TP,Funk KNX) and Hager products such as technical alarms, display, Internet gateways.
b. programming mixed installations (EIB/KNX and Tebis TX) : the Expert mode allows integrating KNX RF products in an installation parameterised with ETS.
c. programming additional functions : in order to maintain the ease of programming in Standard mode, certain functions of the product may not be available in this mode. Therefore, certain specific solutions are reserved for the Expert mode.

Example of an Expert mode display :



The following pages describe the objects of the 6 heating actuator visible in the Expert mode. For basic information about the operation of the Expert mode, refer to the specific documentation.

3.1 Objects and functions in the Expert mode

3.1.1 Stop function/HvacEna object

The HvacEna object allows switching off simultaneously all outputs of the TX206H.
When receiving this object, the current cycles are stopped and the connected valves are closed
The Valve protection function remains active.

Tebis TX		ETS Application software			Function
Symbol	Designation	Object name	Format	Flags	
STOP	HvacEna	Heating Stop	1 Bit	CRW-U	Value 1 means Stop Value 0 means No Stop

3.1.2 Priority function/LogValue object

There is a Logvalue object for each of the heating outputs of the TX206H. This object allows forcing the stop of the output. In Expert mode, a link can be set up between this object and a binary-type input (e.g.: an input with  function).

When receiving this object with a 1 value, the current cycle is stopped and the valves connected to this output are closed. The (%-type) commands issued by the thermostat will not be taken into consideration.

The Valve protection function remains active.

Tebis TX		ETS Application software			Function
Symbol	Designation	Object name	Format	Flags	
	LogValue	Output X OFF priority	1 Bit	CRW-U	Value 1 on this object = a stop priority will be activated on the output. Value 0 on this object = no priority, the output is driven by the % command

3.1.3 % Command function/% Value object

There is a % Value object for each of the heating outputs of the TX206H. This object allows transmitting to the heating output the command to be applied in the form of a percentage-type value.

Tebis TX		ETS Application software			Function
Symbol	Designation	Object name	Format	Flags	
	%Value	Output X Command %	1 Byte	CRW-U	With this object, the heating output receives the command to be applied (in %)

4. Resetting the TX206H to factory configuration.

This function allows resetting the product to its original configuration (factory settings).
After a device reset, the product can be re-used in a new installation.
This function is accessible through the menu Device Management/Reset of the TX100.

Two cases may occur :

1 - The product belongs to the installation.

Press briefly the key and select the Device Management menu, and then Factory Setting (Reset).

➜ The list of the products of the installation is displayed.

Select the product in the list.

Confirm with ✓, and confirm the cancellation of the product.

➜ The product is reset.

Back with the key.

2 - The product does not belong to the installation.

Press briefly the key and select the Device Management menu, and then Factory Setting (Reset).

➜ The list of the products of the installation is displayed.

Select not install. Device.

Confirm with the ✓ key.

Select TP.

Confirm with the ✓ key.

Press the physical addressing pushbutton of the TX206H.

The physical addressing indicator lights.
The product is reset to factory configuration and the indicator goes off.

Back with the key.

The learning of the whole installation must be carried out to allow using again a product reset to factory configuration.

5. Characteristics

Max. number of group addresses	254
Max. number of links	255
Number of objects	13

6. Bus presence check (supply voltage)

To check the presence of the bus, press the physical addressing pushbutton. The physical addressing indicator lights to show the presence of the bus (supply voltage). Pressing again allows switching the indicator off.

Important :
The physical addressing indicator must be off to allow programming or operating the installation.