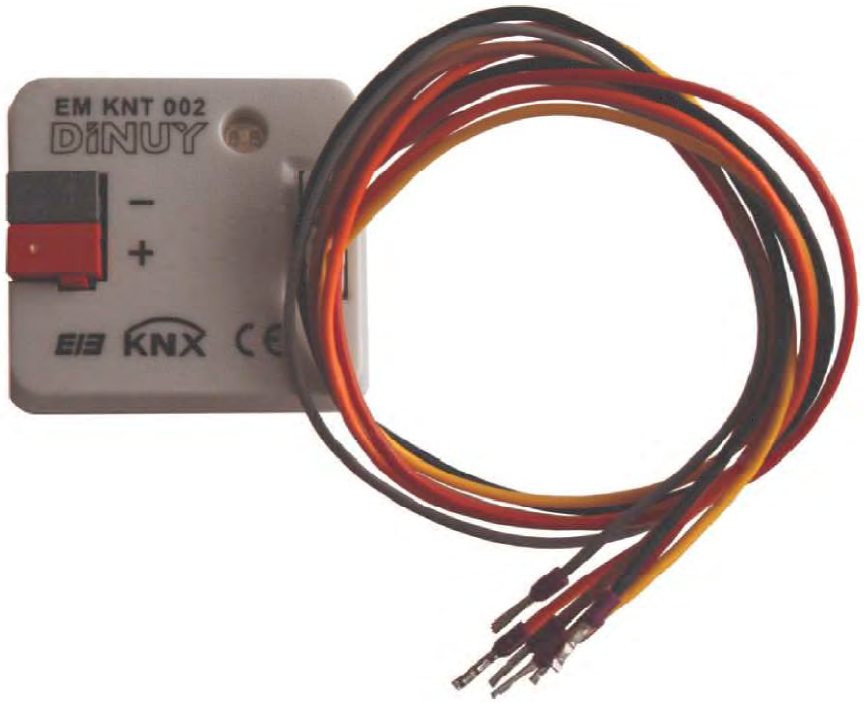
4-CHANNELS ANALOG/DIGITAL UNIVERSAL INTERFACE

EM KNT 002



INSTRUCTIONS MANUAL

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General Description

The universal interface EM KNT 002 is equipped with 4 independent channels Analog/Digital which may be used depending on the parameterization by the ETS4 software.

- **Binary inputs:** They can be connected to pusbutton, a switch or a conventional binary sensor potential-free.
- **Analog inputs:** They can work as temperature sensor by connecting a temperature sensor. Then the temperature of the room can be controlled (maximum 4 temperature sensors can be connected).
- **Thermostat:** It can be configured and enabled 4 independent thermostats.

In this way, the 4 channels of this device can be used as an interface for pushbuttons or switches (for binary inputs reading) or for analog inputs reading (temperature sensors) and as independent thermostat (this function is independent of the quantity and type of inputs Analog/Digital are configured.

Each one of the 4 channels can work as:

- Switch: to turn the light ON and OFF.
- Switch and Dimmer: to turn ON/OFF and dim the light.
- Multiple Switch: to turn ON/OFF the light depending of the number of pressings.
- Sequential Switch: to do sequential switching ON/OFF.
- Blinds/Shutters Control: to move the blinds/shutters by pushbutton or switches.
- Scenes Control: to save and recover a light scene.
- Values Sending: to send different measures or values, for example the light level, temperature...
- Impulse Counter: it allows, for example, counting the number of operations.
- Temperature sensor: sends the temperature value of the room. We can connect 4 temperature sensors.
- Thermostat: It can be configured and enabled 4 independent thermostats. Furthermore it is independent of the quantity and type of inputs Analog/Digital are configured.

In the table below is shown the color assignment of each wire:

Channel D	Black - 1
Channel C	Grey - 2
Channel B	Browm - 3
Channel A	Red - 4
Inputs Common	Orange - 5
Inputs Common	Yellow - 6

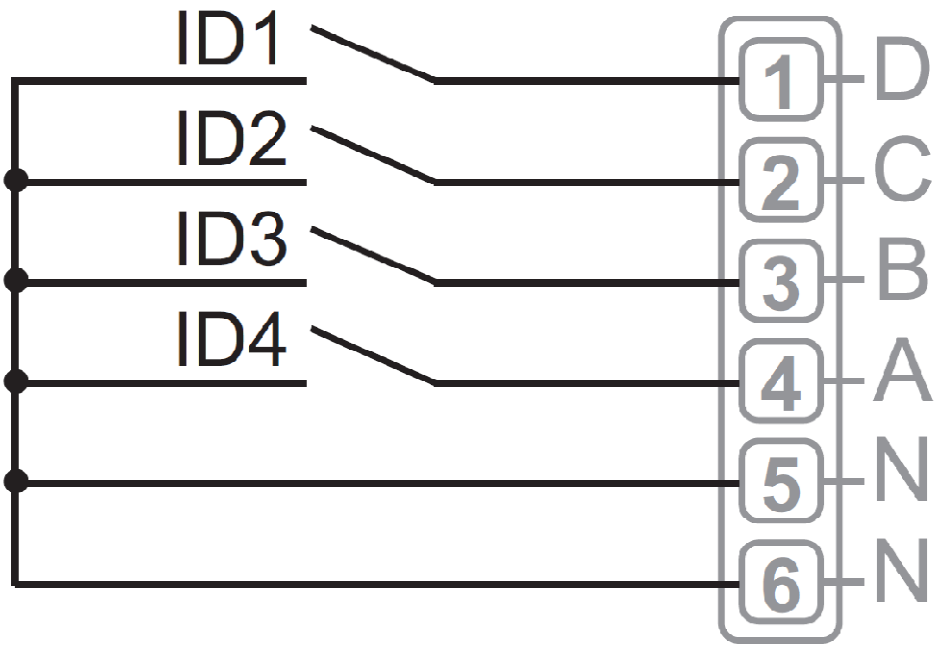
Technical Data

Power supply	21 ~ 32V_{DC} (via Bus)
Power consumption	< 10mA
Inputs / Outputs	4 (individually configurable)
Commissioning	ETS4
Wires length	~ 30cm
Line length	< 10 m
BUS connection	By the supplied KNX connecting terminal
Input polling Voltage	20V_{DC}
Input Current	0,5mA
Output Voltage	5V_{DC}
Output Current	<2mA
Safety	Short-circuit, Overload and wrong polarity
Dimensions	38 x 42 x 15mm
Ambient temperature	-5ºC ~ +45ºC
Type of protection	IP20 (EN60529)
Safety class	III
Mounting	Flush mounting universal box
According to the Standard	EN50090-2-2, EN50428 and EN50491
Certification	EIB/KNX

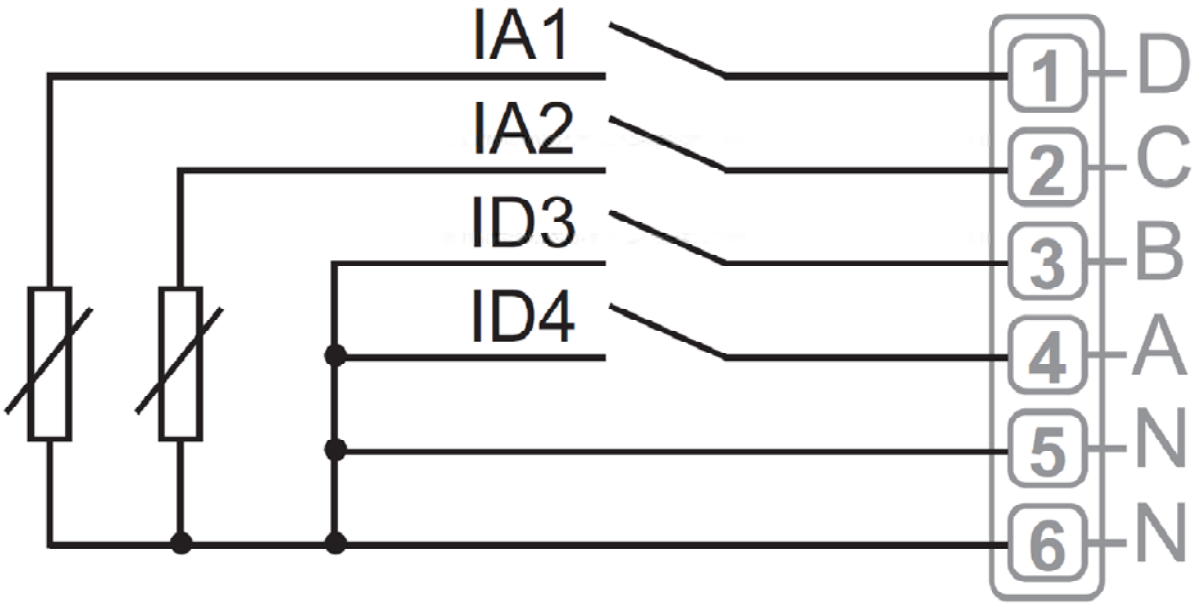
Installation

This interface can be used as analog inputs or digital (binary) inputs:

Wiring diagram as 4 binary inputs with pushbuttons or switches (Channels A, B, C and D):

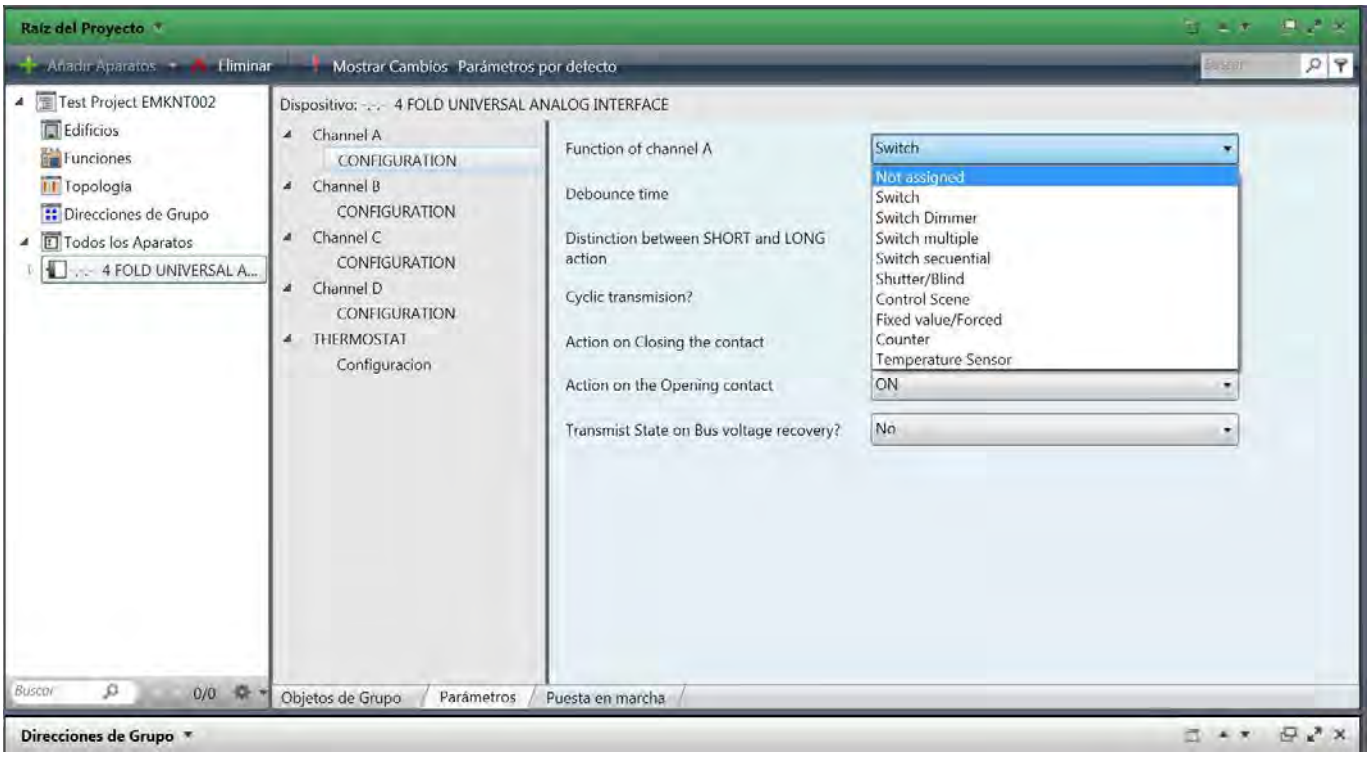


Wiring diagram as 2 analog inputs with temperature sensors (Channels C and D) and 2 binary inputs with pushbuttons or switches (Channels A and B).



Project Development and Commissioning

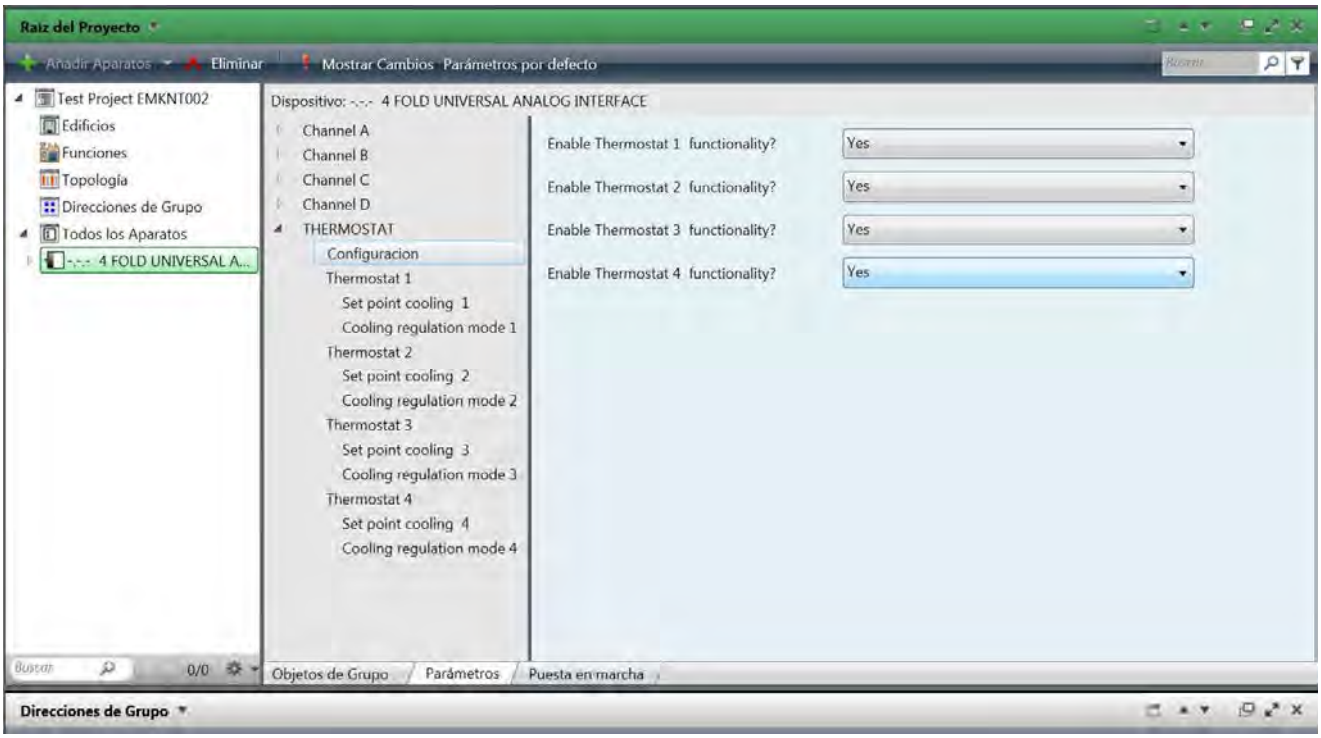
The communication objects are identical for the 4 channels. Furthermore we can configure and enable the independent thermostat function (maximum 4 independent thermostats).



Channels Functions:

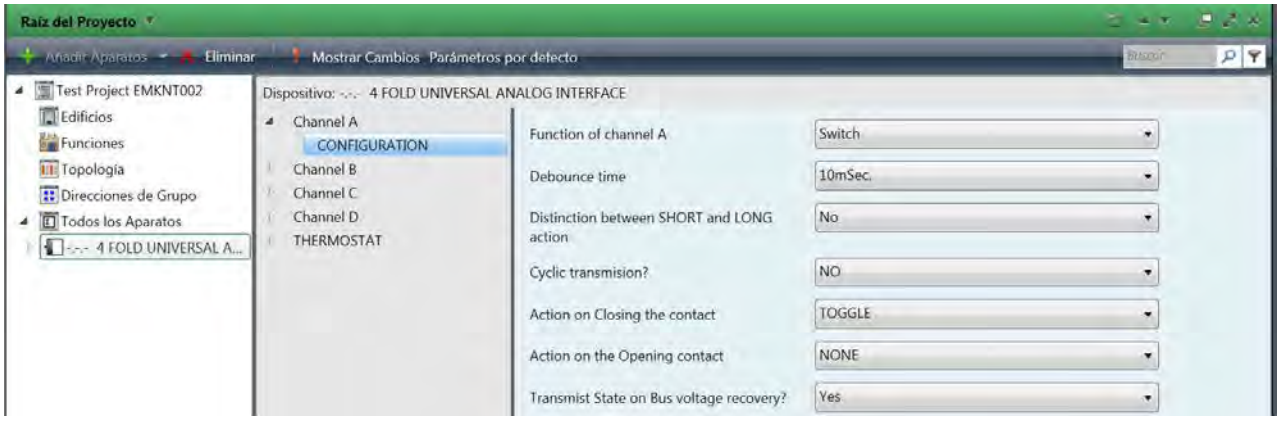
Not assigned	There is not assigned any function
Switch	Switch ON or OFF
Switch Dimmer	Switch ON/OFF or Dim
Switch multiple	Switch ON or OFF depending on the number of actions
Switch sequential	Switch ON or OFF sequentially
Shutter/Blind	Move UP or DOWN shutters or blinds
Control Scene	Save and recover Scenes
Fixed value/Forced	Send specific values
Counter	Count input pulses
Temperature sensor	Send the temperature value of the room.

Thermostat Function: It can be configured and enabled 4 independent thermostats. It is independent of the quantity and type of inputs analog/digital are configured.



4 INDEPENDENT CHANNELS FUNCTIONS

1 - "Switch" Function



1.1 - Parameters

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

Adjustable from 10ms up to 160ms.

Distinction between SHORT and LONG action

It allows discriminating between a long and a short action. Thus, if the distinction is made, could run two different actions depending on the duration of the operation.

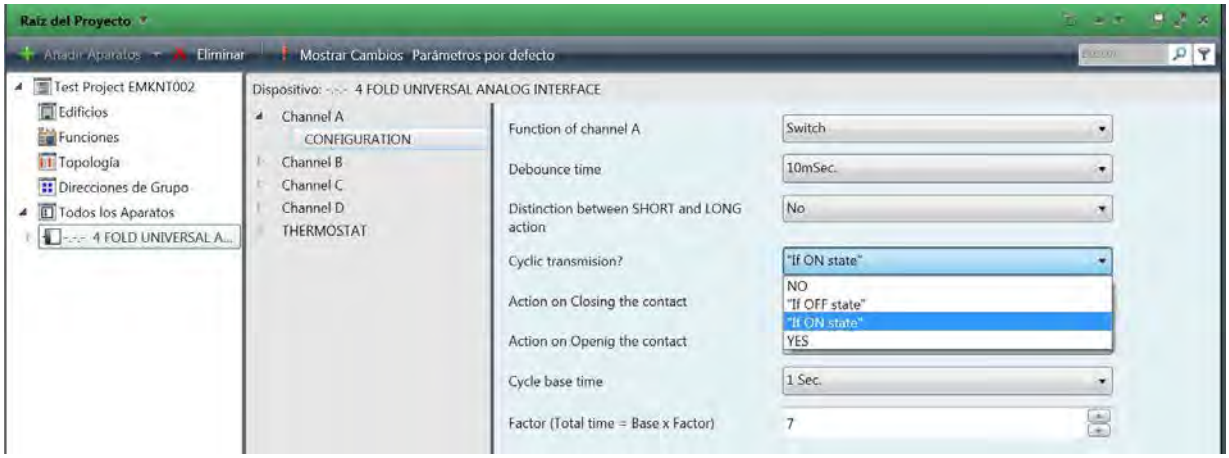
- If NO distinction is made between a short and a long action:

Cyclic transmission

It allows sending the communication object "Switch Telegram" cyclically, at set time intervals.

It is possible to select "NO" sending it cyclically, to send always ("YES"), regardless of the value of the communication object, or depending on the object ("If OFF state" or "If ON state").

In case of selecting the “cyclic transmission” it will be necessary to choose its frequency through the parameter “Cycle base time” and “Factor”. The time between two transmissions will be the multiplication of the two parameters.



Action on Closing the contact

Defines the action to be done when the contact is closed.

The value of the object can be: “ON”, “OFF”, “TOGGLE” or “NONE”.

Action on Opening the contact

Defines the action to be done when the contact is open.

The value of the object can be: “ON”, “OFF”, “TOGGLE” or “NONE”.

Transmit State on Bus voltage recovery

After a recover from a failure in the Bus supply, it is possible to configure whether the current state of the object "Switch Telegram" is sent again.

- If distinction is made between a short and a long action:

Contact type

Allows selecting if it is a normally open (“Normally OPEN”) or closed (“Normally CLOSED”) contact.

Long action after…

Sets the duration of the action from which is interpreted as long (“Long action”).

Configurable from 0.3s up to 4s.

Long action

Sets the value of the object after a long action.

The value of the object can be: “ON”, “OFF”, “TOGGLE” or “NONE”.

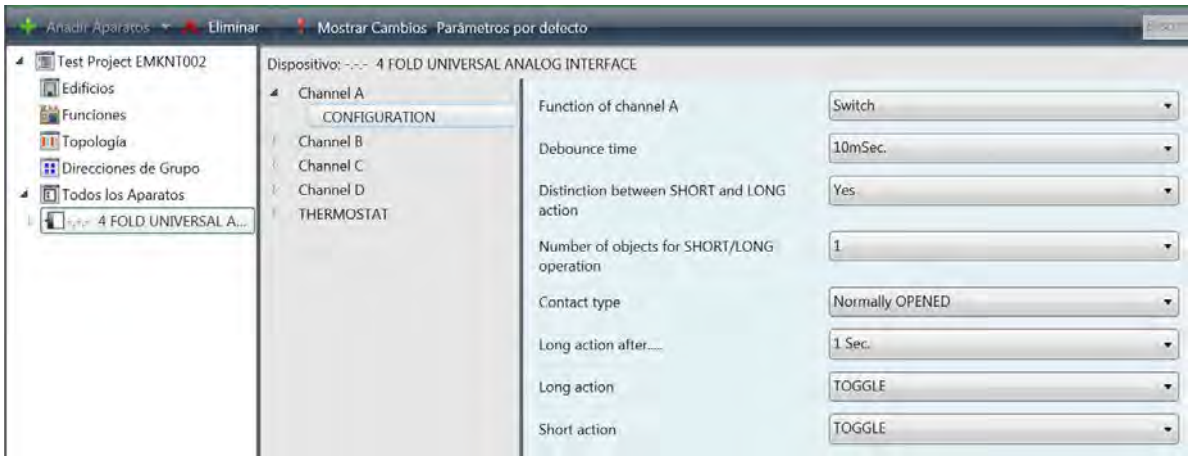
Short action

Sets the value of the object after a short action.

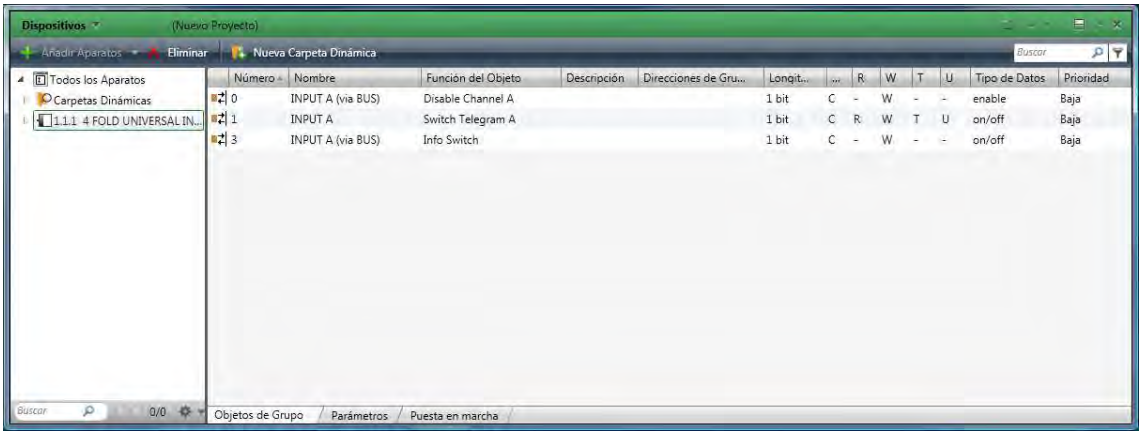
The value of the object can be: “ON”, “OFF”, “TOGGLE” or “NONE”.

Number of objects for SHORT/LONG operation

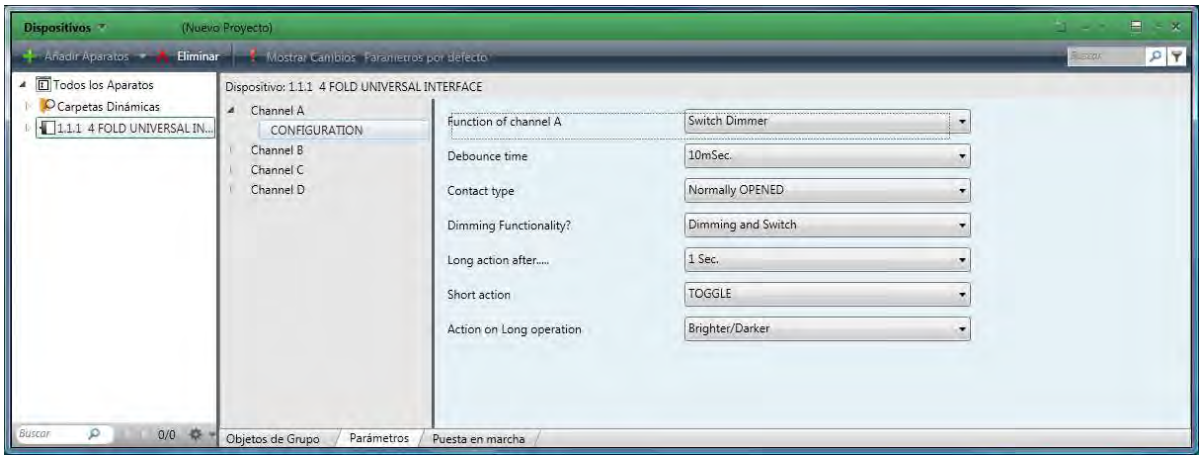
If this option is enabled the short action works with an object and the long action with another. If not, both actions work on the same object.



1.2 – Communication Objects



2 - "Switch Dimmer" Function



2.1 - Parameters

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

Adjustable from 10ms up to 160ms.

Contact type

Allows selecting if it is a normally open ("Normally OPEN") or closed ("Normally CLOSED") contact.

Dimming Functionality

Allows selecting if it is only necessary to dim the lighting ("Only Dimming") or dimming and switching ("Dimming and Switch").

If "Dimming and Switch" is selected, the lighting is dimmed with long actions and it is switched on/off with short press.

- Selecting "Only Dimming":

Action on operation

Allows selecting the action after a short or long press: "Brighter/Darker" (each press changes the dimming direction), "Dim Brighter" (upward dimming) or "Dim Darker" (downward dimming).

- Selecting "Dimming and Switch":

Long action after…

Sets the duration of the action from which is interpreted as long ("Long action").

Configurable from 0.3s up to 4s.

Short action

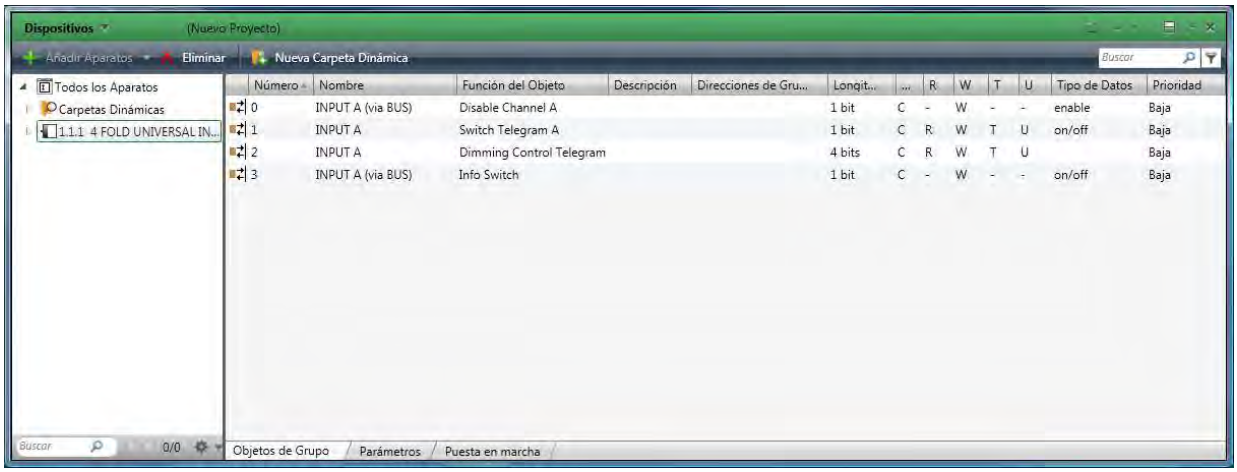
Sets the value of the object after a short action.

The value of the object can be: "ON", "OFF", "TOGGLE" o "NONE".

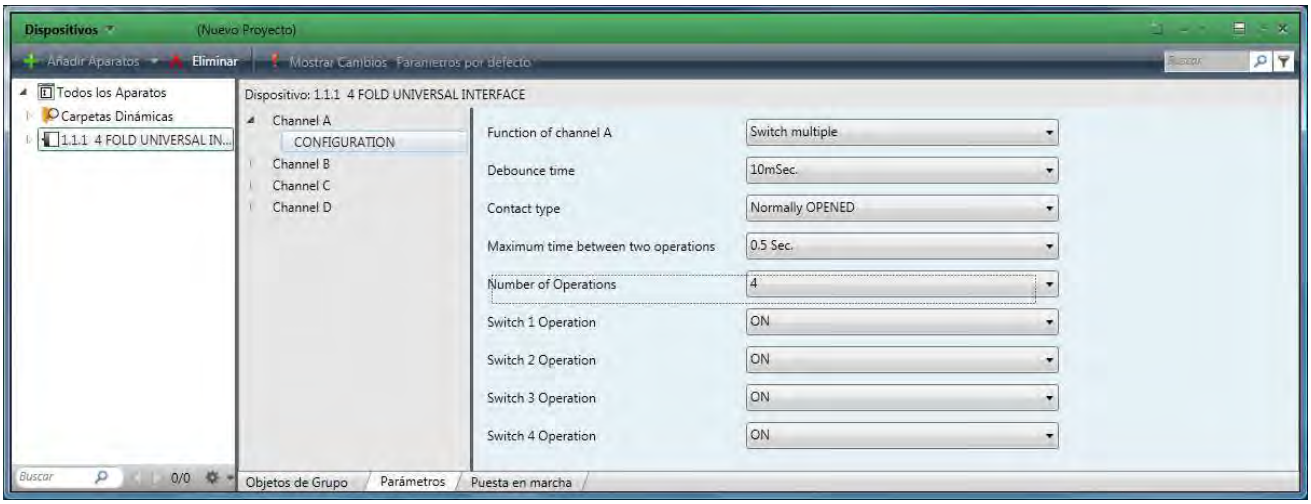
Action on long operation

Allows selecting the action after a short or long press: "Brighter/Darker" (each press changes the dimming direction), "Dim Brighter" (upward dimming) or "Dim Darker" (downward dimming).

2.2 – Communication Objects



3 - "Switch Multiple" Function



3.1 - Parameters

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

Adjustable from 10ms up to 160ms.

Contact type

Allows selecting if it is a normally open ("Normally OPEN") or closed ("Normally CLOSED") contact.

Maximum time between two operations

Defines the maximum time between two consecutive actions of the same sequence.

Adjustable from 0,5s and 3s.

Number of operations

Number of actions which compose a sequence.

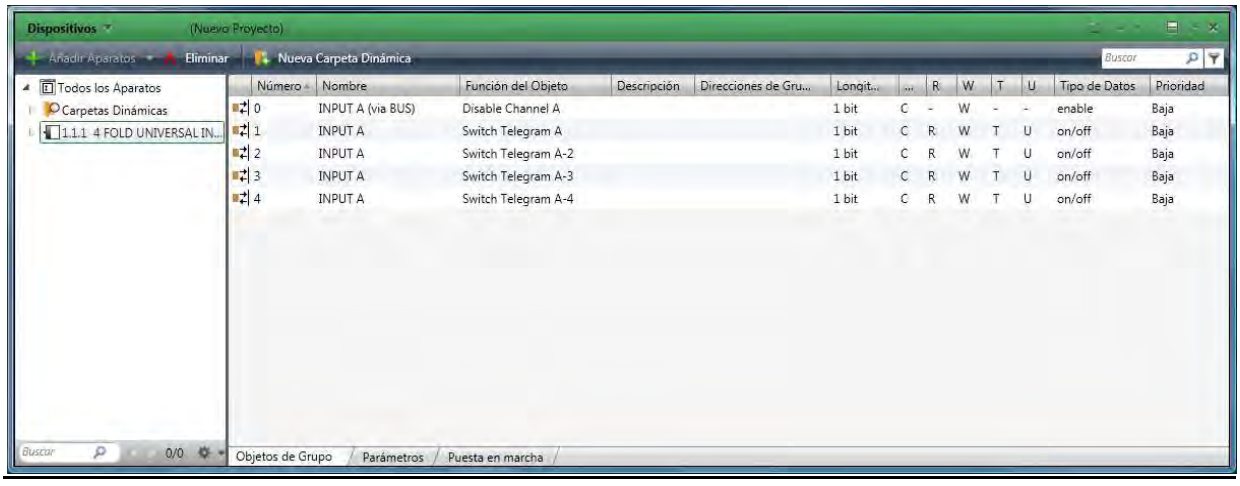
Adjustable from 2up to 4.

Switch 1…4 operation

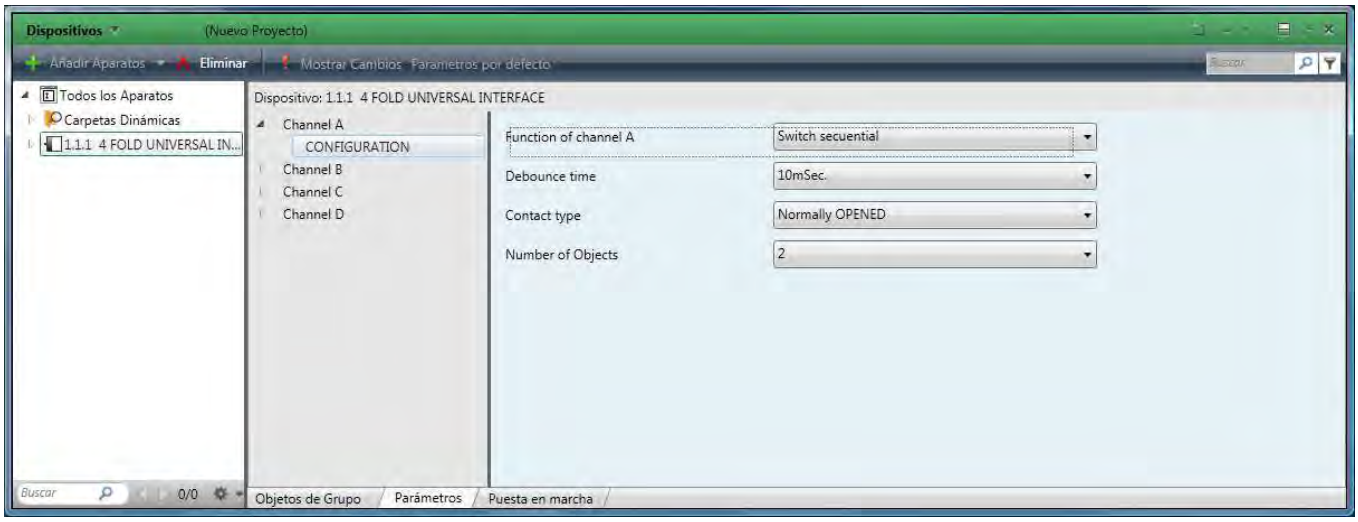
Operation that will be done by each of the consecutive actions.

The value of the object can be: "ON", "OFF" or "TOGGLE".

3.2 – Communication Objects



4 - "Switch Sequential" Function



4.1 - **Parameters**

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

Adjustable from 10ms up to 160ms.

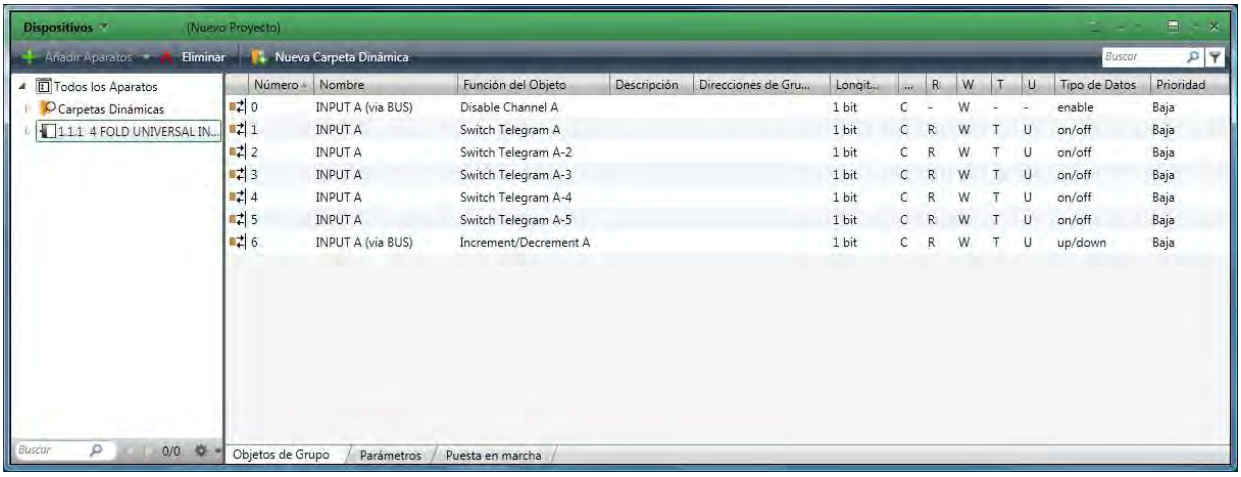
Contact type

Allows selecting if it is a normally open ("Normally OPEN") or closed ("Normally CLOSED") contact.

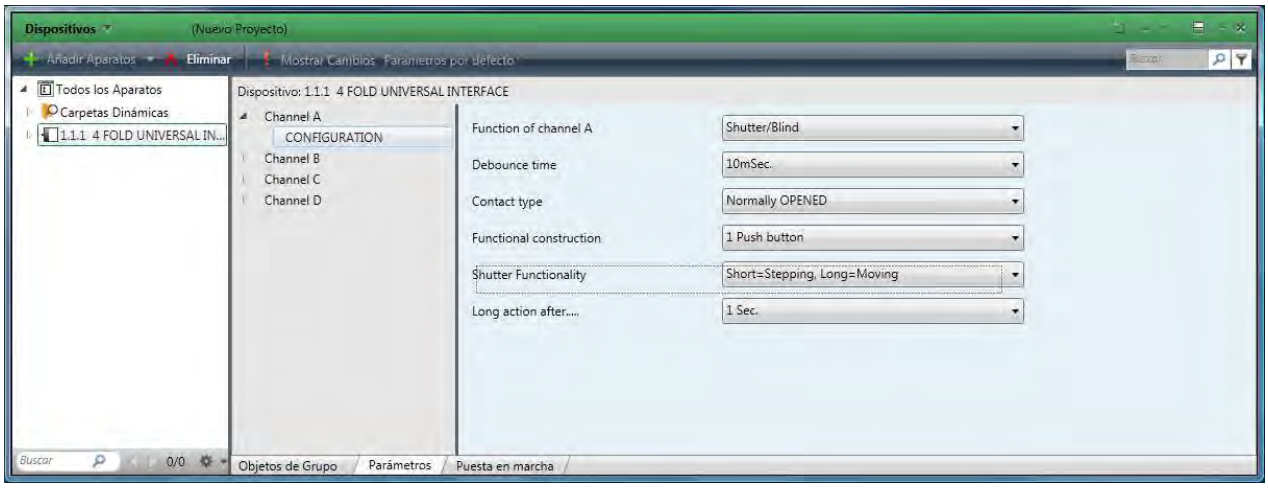
Number of objects

Sets the maximum number of levels. Adjustable from 2 up to 5.

4.2 – **Communication Objects**



5 - "Shutter/Blind" Function



5.1 - **Parameters**

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

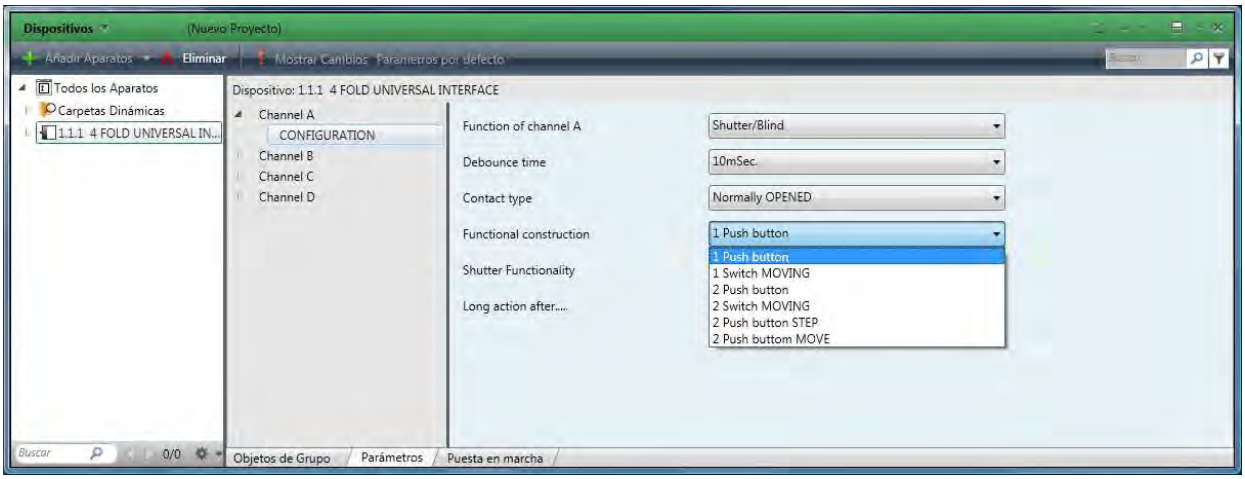
Adjustable from 10ms up to 160ms.

Contact type

Allows selecting if it is a normally open ("Normally OPEN") or closed ("Normally CLOSED") contact.

Functional construction

To define the type of operation being carried out and with which mechanism will be done.



1 Push button

Pushbutton control.

Shutter functionality

Permits choosing the operation depending on the action (short or long).

- Short=Stepping → The shutter is raised or lowered one step. Each press changes the movement direction. After a "Moving" done after a long press, a short press will do a "Stop".
- Long=Moving → The shutter is raised or lowered completely or until a short press is done. Each press changes the movement direction.
- Short=Moving → The shutter is raised or lowered completely or until a short press is done. Each press changes the movement direction.

- Long=Stepping → The shutter is raised or lowered one step. Each press changes the movement direction. After a "Moving" done after a short press, a long press will do a "Stop".
- Up-Stop-Down-Stop → The following process is done cyclically with each short or long action: "Move Up" → "Stop" → "Move Down" → "Stop"…

Long action after…

Sets the duration of the action from which is interpreted as long ("Long action").

Configurable from 0.3s up to 4s.

1 Switch MOVING

The shutter is raised or lowed depending on the position of the switch.
The possible actions are: "Move Up" or "Move Down".

2 Push button

The shutter will be controlled with two pushbuttons, each one in a different cannel (A…D), so it must be configured independently.

Action on Short operation

Defines the operation to be done with a short action.

The value of the object can be: "Step Up" or "Step Down".

Action on Long operation

Defines the operation to be done with a long action.

The value of the object can be: "Move Up" or "Move Down".

Long action after…

Sets the duration of the action from which is interpreted as long ("Long action").

Configurable from 0.3s up to 4s.

2 Switch MOVING

The shutter will be controlled with two switches, each one in a different cannel (A…D), so it must be configured independently.

Action on Long operation

Defines the operation to be done with a long action.

The value of the object can be: "Move Up" or "Move Down".

2 Push button STEP

The shutter will be controlled with two pushbuttons, each one in a different cannel (A…D), so it must be configured independently.

Action on Short operation

Defines the operation to be done with a short action.

The value of the object can be: "Step Up" or "Step Down".

2 Push button MOVE

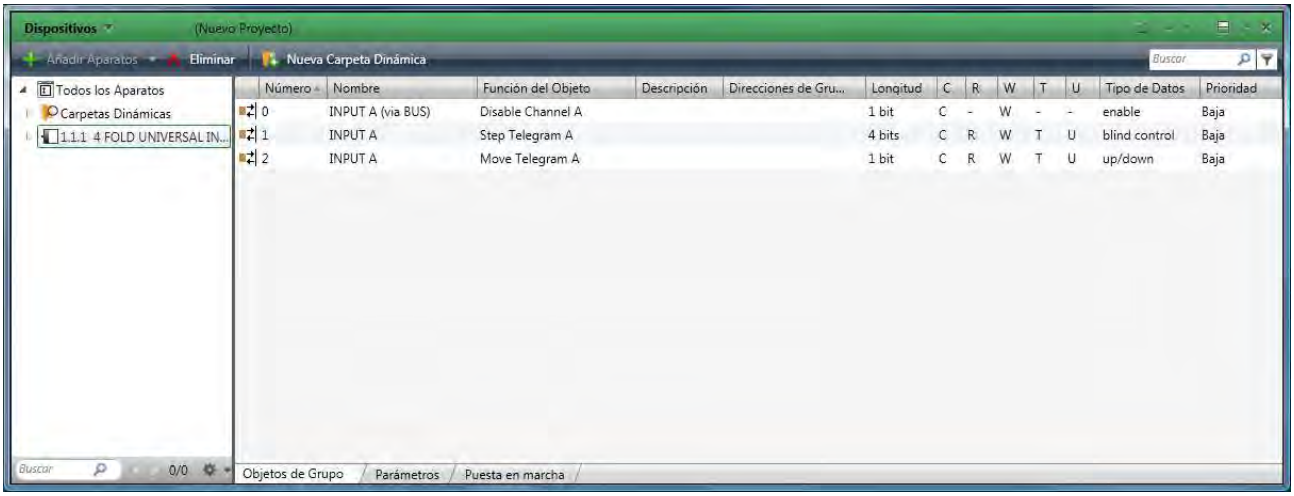
The shutter will be controlled with two pushbuttons, each one in a different cannel (A…D), so it must be configured independently.

Action on Long operation

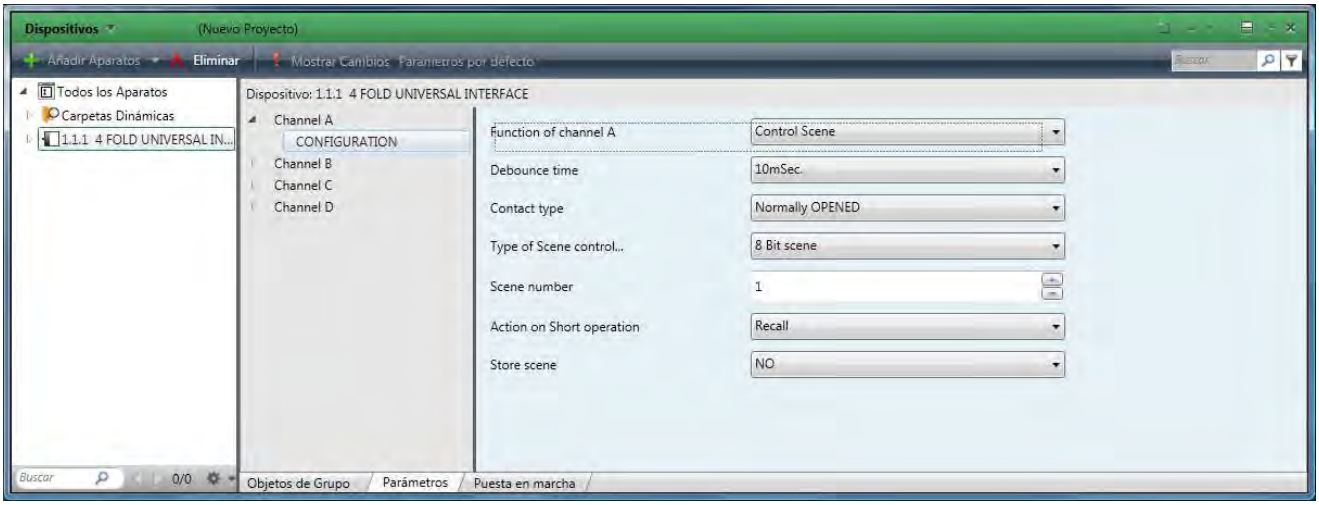
Defines the operation to be done with a long action.

The value of the object can be: "Move Up" or "Move Down".

5.2 – Communication Objects



6 - "Control Scene"Function



6.1 - Parameters

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

Adjustable from 10ms up to 160ms.

Contact type

Allows selecting if it is a normally open ("Normally OPEN") or closed ("Normally CLOSED") contact.

Type of scene control…

Sets if the scene control will be done by 5 separated objects or by 8 bits.

Scene number

Assigns the number of scene to the channel that is being configured (1 – 63).

Action on Short operation

Defines the operation to be done with a short action.

The value of the object can be: "Recall" or "Ignore".

Store scene

Which action saves the current scene:

- NO: it does not do anything.
- On LONG operation: with a long action.
- with OBJECT value=1: if the object “Store Scene object” receives the value “1” the scene is saved.
- On Long operation if OBJECT value=1: if the object “Store Scene object” receives the value “1”, after the next long action the scene is saved.

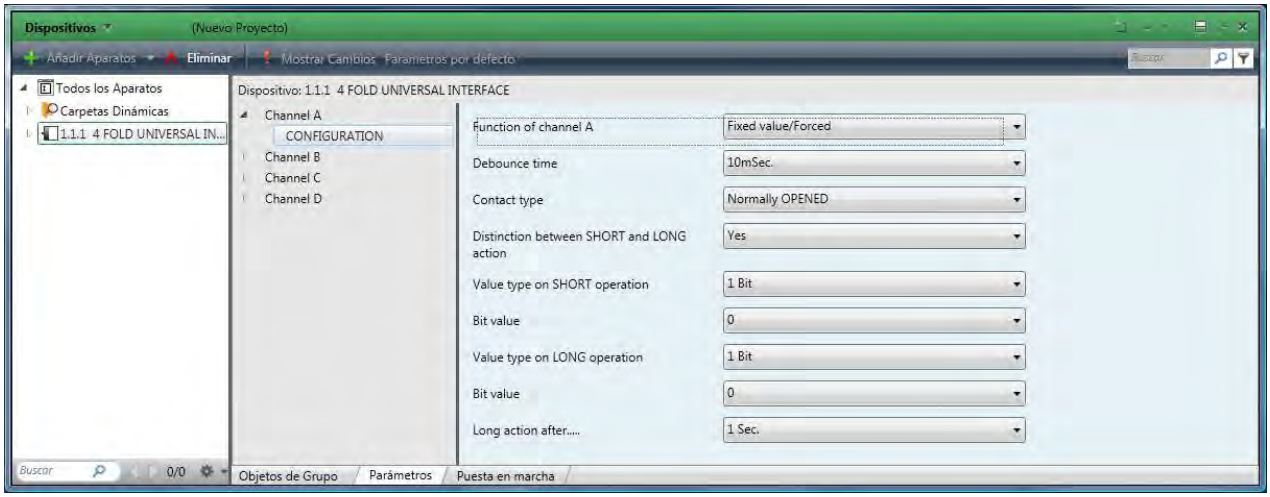
Long action after…

Sets the duration of the action from which is interpreted as long (“Long action”).

Configurable from 0.3s up to 4s.

6.2 – Communication Objects

7 - “Fixed value/Forced” Function



7.1 - Parameters

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

Adjustable from 10ms up to 160ms.

Contact type

Allows selecting if it is a normally open (“Normally OPEN”) or closed (“Normally CLOSED”) contact.

Distinction between SHORT and LONG action

It allows discriminating between a long and a short action. Thus, if the distinction is made, could run two different actions depending on the duration of the operation.

Value type on operation

Determines the sent data type:

- 1 Bit → Bit value: 0 or 1
- 2 Bit → Bit value: 00...11 (0, 2 or 3)
- 1 Byte → Bit value: 0...255
- 2 Bytes signed → Bit value: -32768...+32768
- 2 Bytes unsigned → Bit value: 0...65535
- 2 Bytes Floating → Bit value: -99,99...+99,99
- 4 Bytes unsigned → Bit value: 0...4294967295

Value type on SHORT operation

Determines the sent data type with a short action:

- 1 Bit → Bit value: 0 or 1
- 2 Bit → Bit value: 00...11 (0, 2 or 3)
- 1 Byte → Bit value: 0...255
- 2 Bytes signed → Bit value: -32768...+32768
- 2 Bytes unsigned → Bit value: 0...65535
- 2 Bytes Floating → Bit value: -99,99...+99,99
- 4 Bytes unsigned → Bit value: 0...4294967295

Value type on LONG operation

Determines the sent data type with a long action:

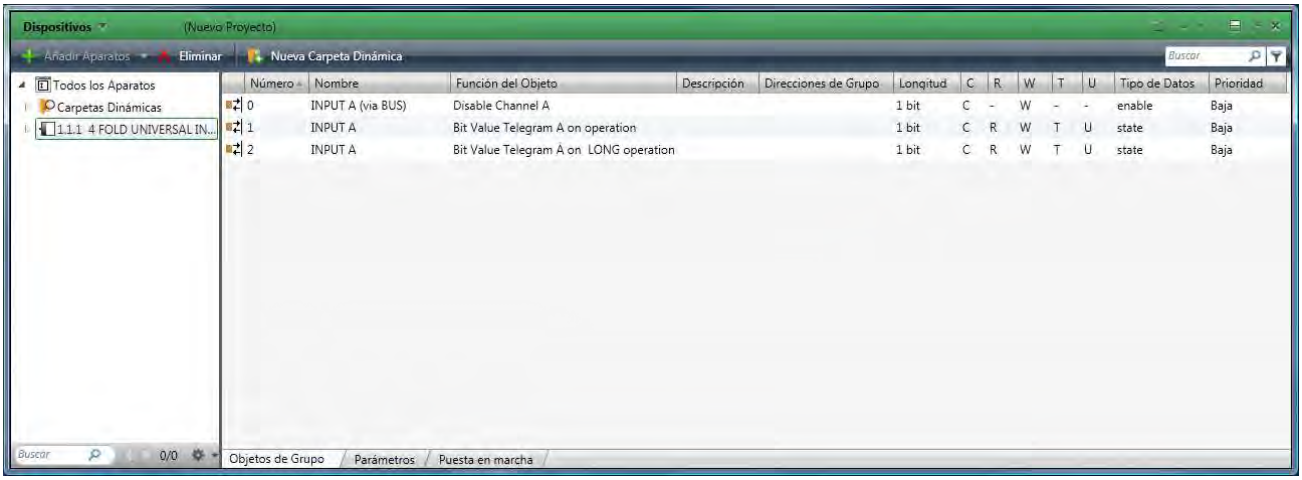
- 1 Bit → Bit value: 0 or 1
- 2 Bit → Bit value: 00...11 (0, 2 or 3)
- 1 Byte → Bit value: 0...255
- 2 Bytes signed → Bit value: -32768...+32768
- 2 Bytes unsigned → Bit value: 0...65535
- 2 Bytes Floating → Bit value: -99,99...+99,99
- 4 Bytes unsigned → Bit value: 0...4294967295

Long action after…

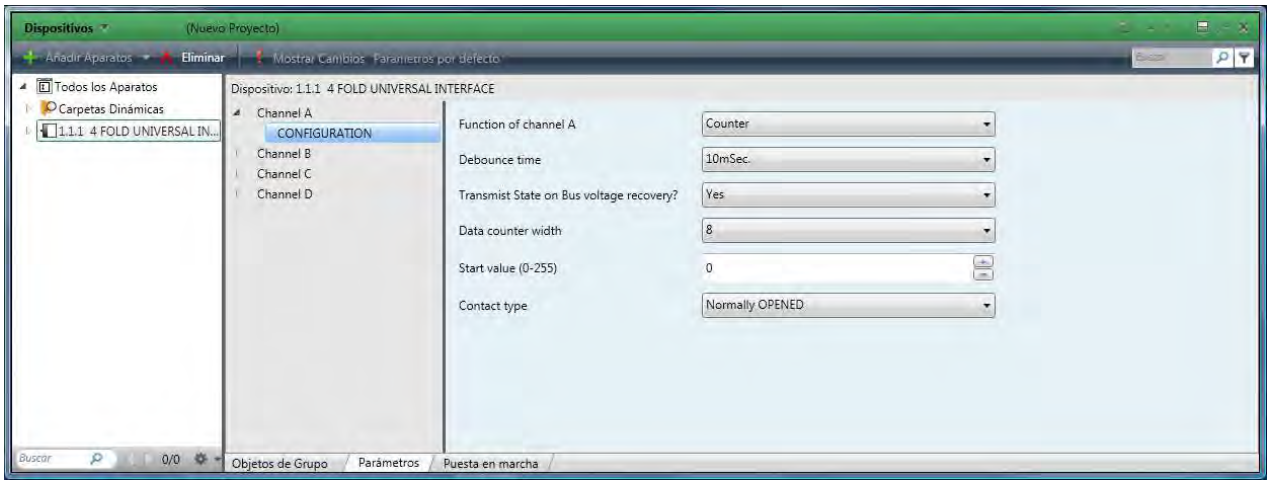
Sets the duration of the action from which is interpreted as long (“Long action”).

Configurable from 0.3s up to 4s.

7.2 – Communication Objects



8 - "Counter" Function



8.1 - **Parameters**

Debounce time

Sets the time of suppression of rebounds when there is a switching. It prevents multiple unwanted actions caused by the rebound at the moment of closing its contact.

Adjustable from 10ms up to 160ms.

Transmit State on Bus voltage recovery

After a recover from a failure in the Bus supply, it is possible to configure if the current state of the object "Bit Value Telegram on operation" is sent again.

Data counter width

Determines the size of the data in bits: 8, 16 or 32.

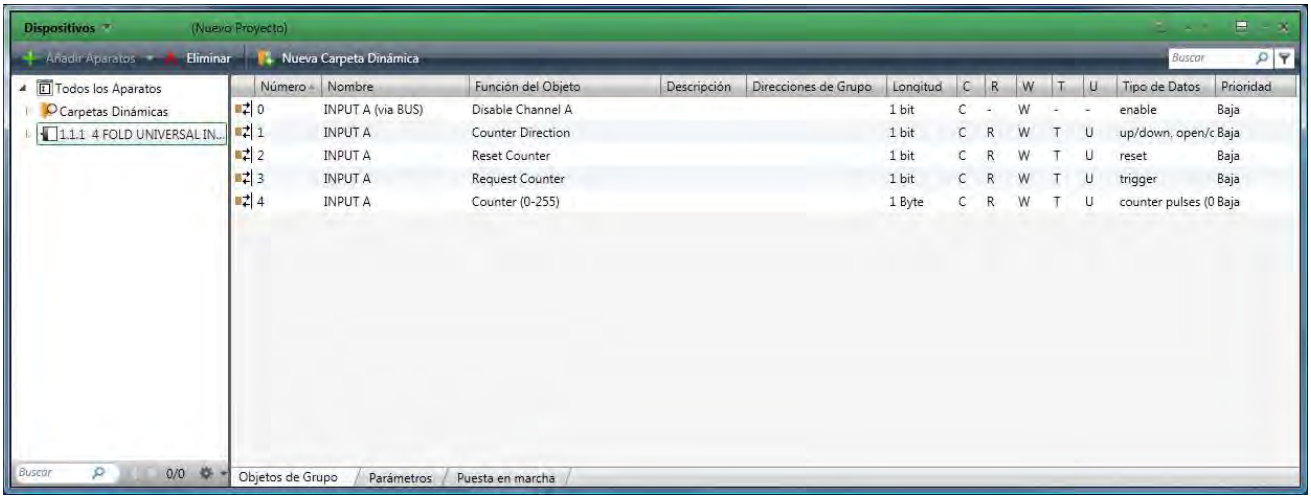
Start value (0-255)

Initial value of the counting process.

Contact type

Sets if are accounted the openings ("Normally CLOSED") or closings ("Normally OPEN").

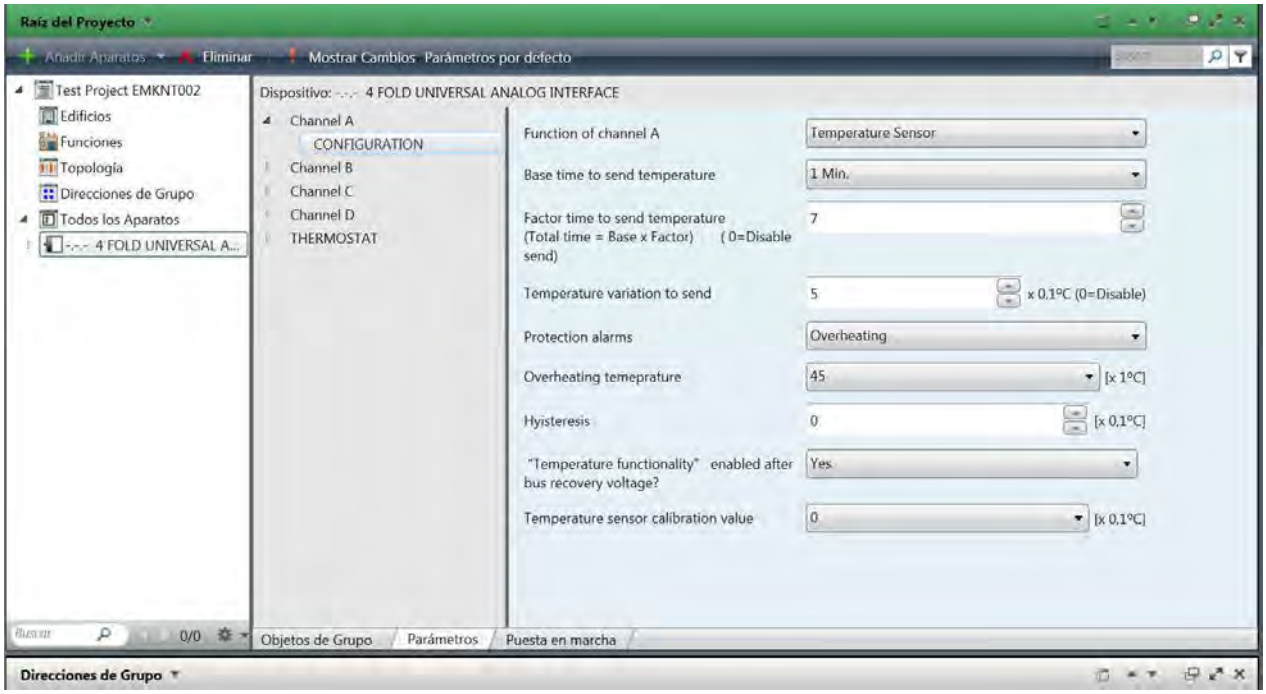
8.2 – **Communication Objects**



9 – Temperature sensor Function

9.1 - Parameters

When you choose this type of analog input, you can configure different parameters of temperature sensor.



Base time to send temperature

Temperature sending period. You can select between 1 second, 10 seconds, 1 minute, 10 minutes and 1 hour. This time period is multiplied by the "time factor" that goes from 0 to 255. So we select a cycle time for periodically sending the currently measured temperature value to the KNX bus. If this parameter is set 0, periodically sending temperature value will be disabled.

Temperature variation to send

Send with a temperature change. Set if you want to be sent to the KNX bus current temperature measurement in the event that the offset to the last measurement in degrees exceeds the quantity specified in this parameter (for example > 0.5 ° C). This is independent of the temperature sending period before. You can choose in this box between 0.5 º C and 20 º C of temperature variation. If this parameter is set 0, sending temperature value will be disabled.

Protection alarms

Temperature protection. Parameter that lets you to activate protection in case of:

- Overheating.
- Overcooling.
- Overheating and overcooling.

Overheating/Overcooling temperature

You need to define the temperature in Celsius degrees of overheating or overcooling or both.

Hysteresis

It is related to the overheating or overcooling temperature. Is a hysteresis value in tenths of a degree to prevent successively sending the object when the room temperature keeps moving around the parameterised temperature limit.

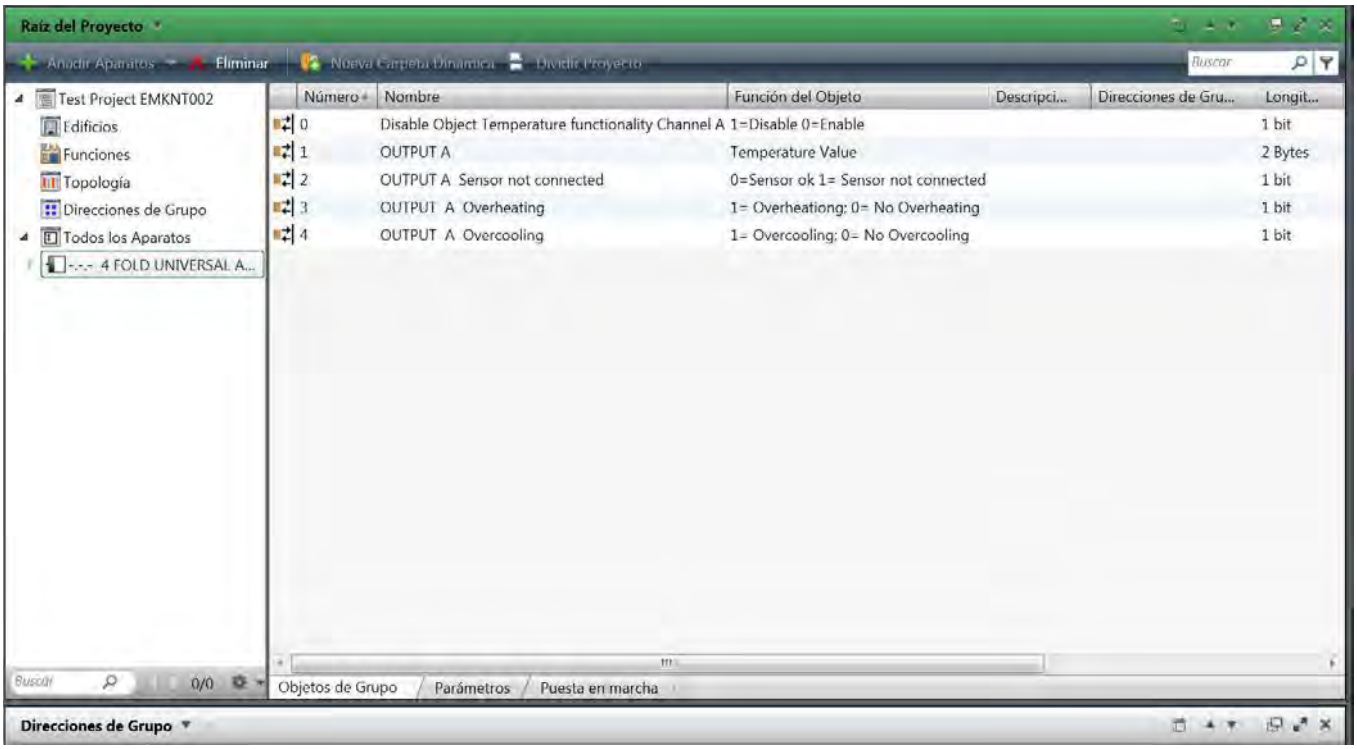
"Temperature functionality" enabled after bus recovery voltage

Determines if we enable the object temperature function object when return the KNX bus voltage.

Temperature sensor calibration value

This option is provided to perform a permanent correction (between -50 and +49 tenths of a degree) over the measurements received from the sensor, in case the installer has an evidence of a deviation between them and the actual temperature of the room.

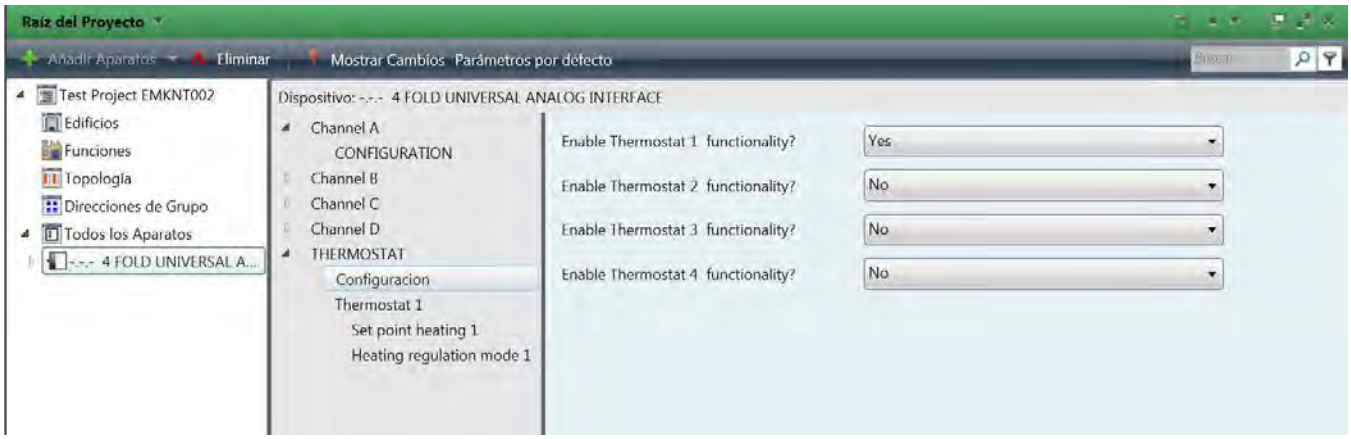
9.2 – Communication Objects



THERMOSTAT FUNCTION

1 – ETS Parameterization window

We will describe a number of basic concepts related to the thermostat setting. You can configure up to 4 independent thermostats:

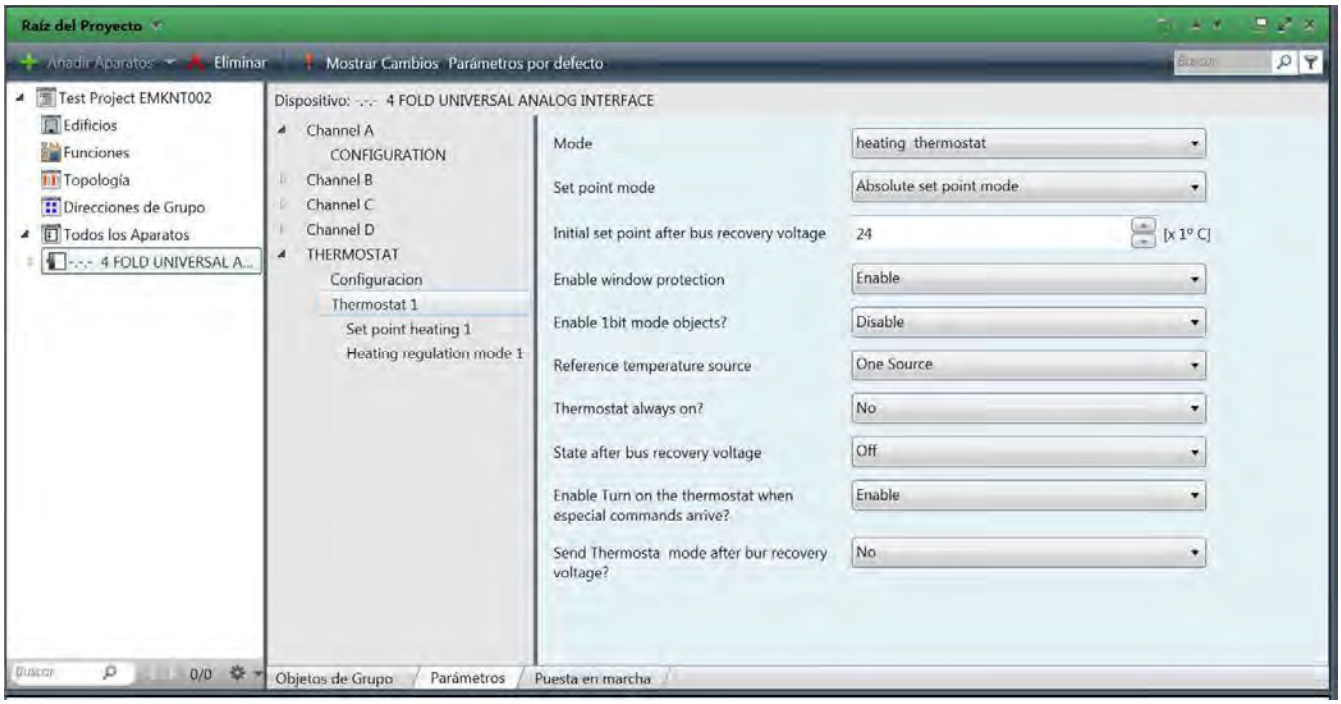


Mode:

You have to set the operating mode of the thermostat, you can choose between:

- Cooling thermostat.
- Heating thermostat.
- Cooling and heating thermostat.

Depending on the mode selected the thermostat will act in situations of only cooling, only heating or both..



Set point mode:

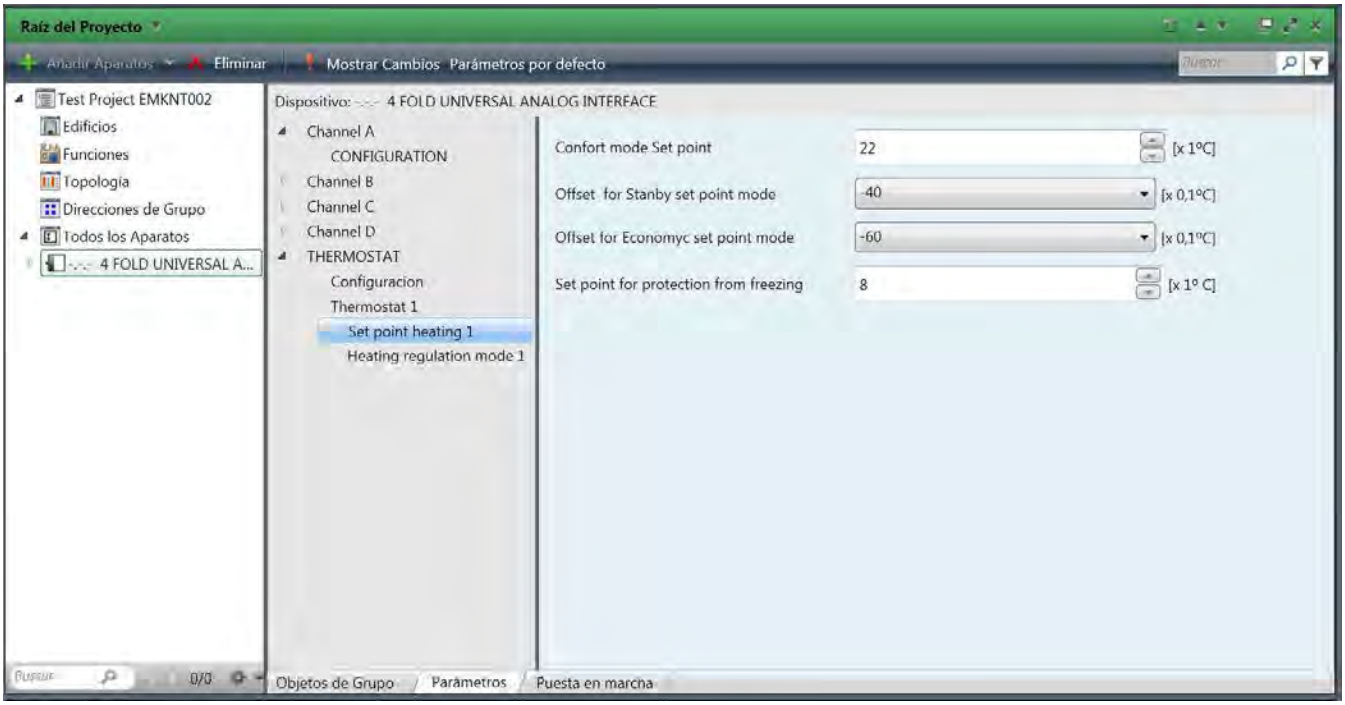
The set point temperature value can be:

- **Absolute set point mode:** This method permits a total control of the value of the desired temperature in the room, as the thermostat regulates the temperature stays depending on the set point temperature you are instructed at every time. A set point on the special Comfort mode is defined, from which the set points of other special modes are defined: Standby, Economic and cooling or overheating protection mode.

- **Relative set point mode:** This method, which is intended for systems with greater complexity permits controlling the target temperature in relative terms , so that is, be defined by basic temperature set point parameter and every one of the set points of the modes is established by an offset relative to this base temperature, both for cooling and for heating.

Special modes

If we choose the absolute set point mode, we have to define the value of these special modes::



- **Comfort Mode:** The temperature should be adjusted to a suitable value to achieve the comfort of users that are inside the room. This mode is normally activated when the room is being used.
- **Standby Mode:** This value is set by a offset relative to absolute set point for comfort mode defined by working mode parameterized (Cool, heat or both, in which case it is necessary to define a Comfort set point for heating and one for cooling). This mode is typically used when the room will be empty for a short period of time.
- **Economy Mode:** This value is set by a offset relative to absolute set point for comfort mode defined by working mode parameterized (Cool, heat or both, in which case it is necessary to define a Comfort setpoint for heating and one for cooling). This mode is typically used when the stay will be conditioned to be empty for longer periods of time, for example, when people won´t come back to use the room until the next day.
- **Protection Mode:** This value will be activated in case of abnormal climate conditions, from excessive heat or cold, mainly due to some abnormal external environment (such as a breaking of a window) or because the stay will remain empty for a long time. The thermostatic control is activated only if the thermostat is ON and with protection mode ON and when the temperature of the room is actually above or below the set point values parameterized protection, preventing excessive energy consumption.

Initial set point after bus recovery voltage

In this box you must enter the initial set point, which is the desired temperature that is to have the room to return KNX bus voltage.

Enable window protection

In this box you enable or disable protection mode when an abnormal situation, for example, an opening or window breakage. It is a protection preferentially to other modes, so any special mode can be activated until the window state to pass the value "0".

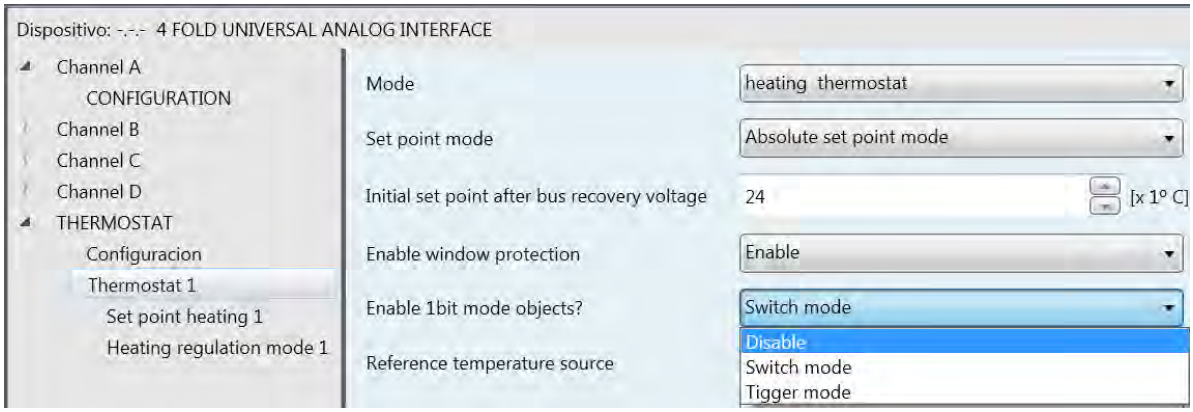
Enable 1 bit mode objects

The thermostat EM KNT 002 will always be running in some way (Protection, Economy, Standby or Comfort). The thermostat is located on one of the modes depending on the HVAC required.

Mode switching can also be made through individual 4 objects mode, the working operation may be set by parameter. Is this box you can choose how the switching are used between the 4 modes (Protection, Economy, Standby or Comfort):

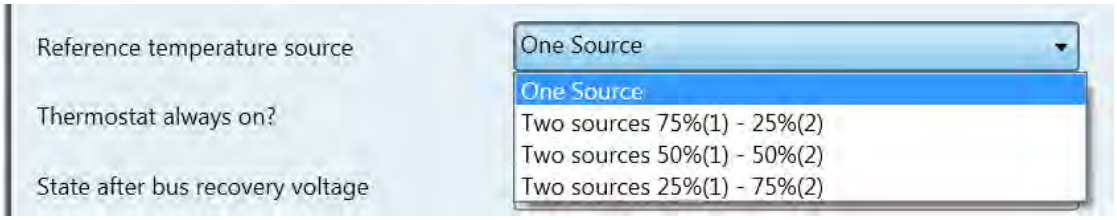
- Trigger: activating one special mode requires sending the value "1" through the object corresponding to that mode. Sending one "0" will have no effect.
- Switch: activating one special mode requires sending the value "1" through the object corresponding to that mode provided that there are no other mode objects with a higher priority and with value "1" at the same time (therefore, the value "0" completely deactivates a mode). The priority order of the special modes is as follows: **1- Protection / 2- Comfort / 3- Standby / 4- Economy**. Sending one "0" will have no effect.

You may also be known at all times the current mode of working operation associated with a state object.
In turn manual mode changes may be made by writing the value associated with the mode being activated in the communication object enabled for it.



Reference temperature source

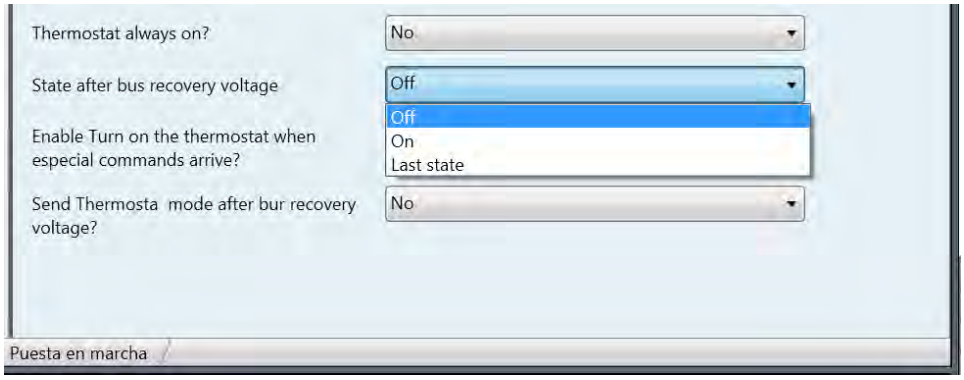
In this box you active proportion for the reference temperature. The reference temperature is the actual ambient temperature registered in the room at a certain time. It will be used as reference when making changes to automatic mode. This temperature can be provided by an external KNX device capable of measuring temperatures. It will also be used as reference temperature a mixture of temperatures measured from two different sources (either from the internal probe incorporating some devices or from two external sources):



Thermostat always on:

In this box allows you to choose whether we want the thermostat is always ON "YES" or if it will turn ON to some external events “NO”. If you choose "NO" 2 new configuration tabs will be displayed:

- State after bus recovery voltage:
  - ON.
  - OFF.
  - Last state.
- Enable Turn ON the thermostat when especial commands arrive:
  - Enable.
  - Disable.



Send thermostat mode after bus recovery voltage:

In this box you indicate if you want “YES” or “NO” send thermostat mode after KNX bus recovery voltage.

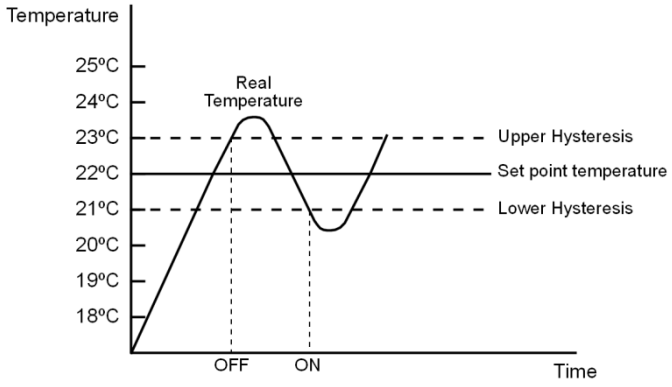
Regulation mode screen to thermostatic control in the installation

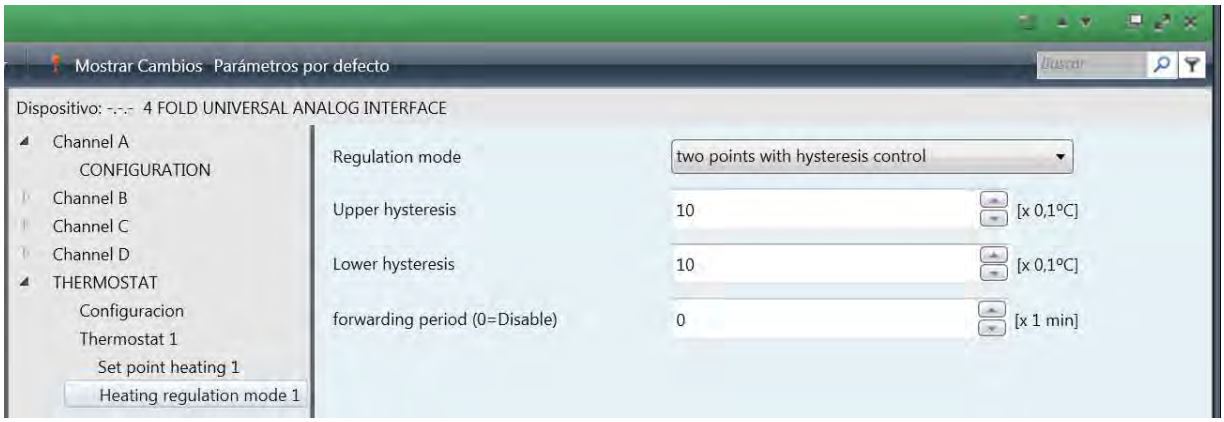
Using this screen you can choose the control method for regulating the installation of thermostatic control (for heating or cooling or both). In this example we will do to heat.

We can choose between 2 points with hysteresis control or PI (Proportional Integral control).

- **TWO POINTS WITH HYSTERESIS CONTROL**

  This is an easy control method, widely used in conventional thermostats, which takes into account the set point temperature and two hysteresis values, which vary between the real temperature, avoiding numerous commutations.



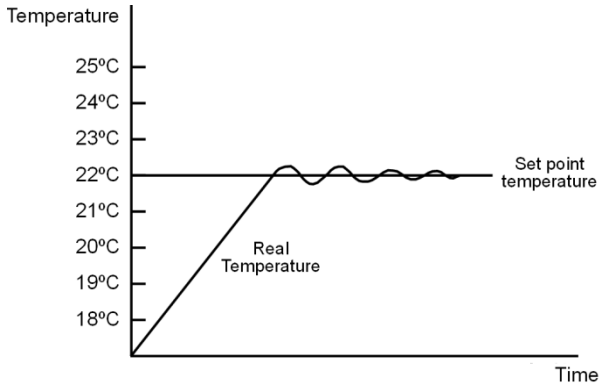


Forwarding period: establishes a forwarding period, in minutes, of the variable associated control (writing a value different than 0 in the "forwarding period" field). This forwarding period only applies when the thermostat is turned on.

- **PI CONTROL**

Most advanced linear and accurate control than “Control 2 points with hysteresis”, as well as taking into account the difference between the set temperature and the actual temperature, takes into account the state at all times.

In this way, the oscillations about the set point is considerably reduced and the actual temperature is gradually stabilized.



There are 4 parameters to be configured:

• PI cycle time: the time for updating and data capture.

• Proportional band: resulting value between the set temperature and the actual temperature from which the proportional integral value is applied.

• Attenuation factor: attenuation applied to the integral value before adding the proportional value.

• Maximum integral component (%): limitation of the integral value.

Parameter description and calculation:

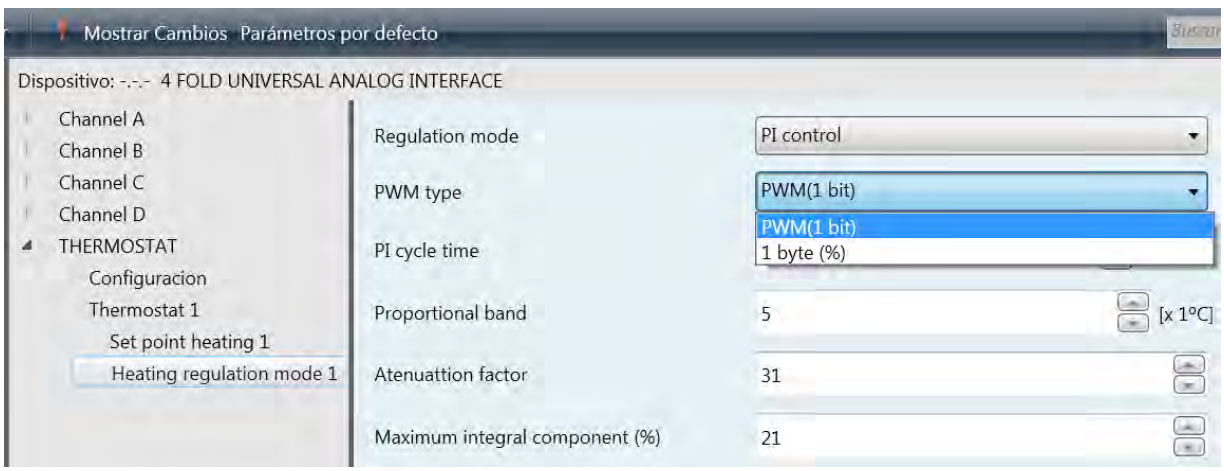
o If the difference between the “actual temperature” and the “setpoint temperature” is greater than the "proportional band" parameter, the thermostat output will be 100%.

o If the difference between the “actual temperature” and the “setpoint temperature” is lower than the "proportional band" parameter, the thermostat output is the sum of two values:

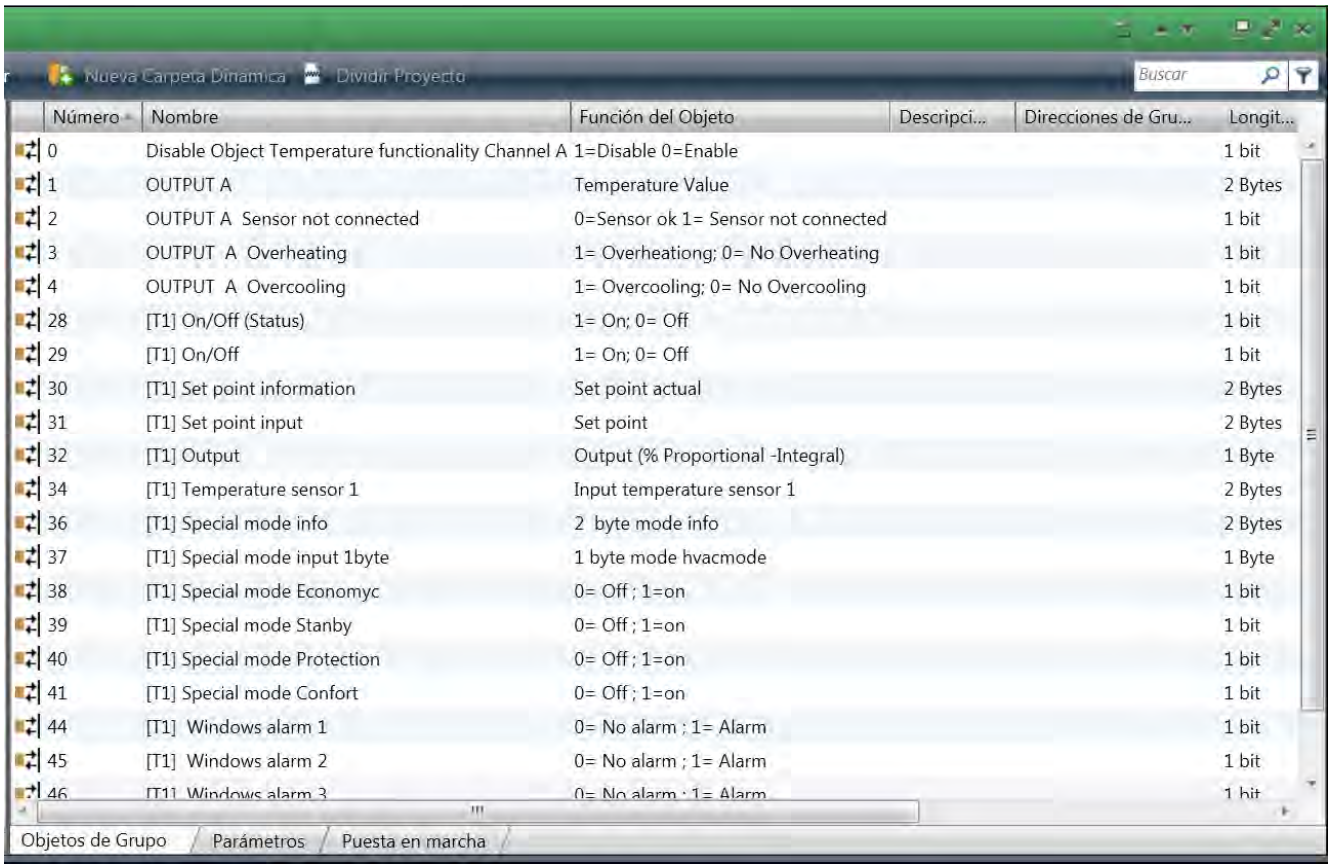
- A. The Proportional Value: The Proportional value (rule of three) between the difference "Setpoint temperature" - "Actual temperature" in the case of heating thermostat, or "Actual temperature" - "Setpoint temperature" if cooling thermostat, in respect of the "proportional band" parameter.

- B. The Integral Value: This value is the result of add up each integration cycle the difference between the "Actual temperature" and "Setpoint temperature". To this sum is applied the "Attenuation Factor" and the resulting value is added to "Proportional Value" if this is less than the value "Maximum integral value". Otherwise, the "Integral Maximum Value" is added.

The result can never be greater than 100%.



2 – Communication Objects



Número	Nombre	Función del Objeto	Descripci...	Direcciones de Gru...	Longit...
0	Disable Object Temperature functionality Channel A	1=Disable 0=Enable			1 bit
1	OUTPUT A	Temperature Value			2 Bytes
2	OUTPUT A Sensor not connected	0=Sensor ok 1= Sensor not connected			1 bit
3	OUTPUT A Overheating	1= Overheationg; 0= No Overheating			1 bit
4	OUTPUT A Overcooling	1= Overcooling; 0= No Overcooling			1 bit
28	[T1] On/Off (Status)	1= On; 0= Off			1 bit
29	[T1] On/Off	1= On; 0= Off			1 bit
30	[T1] Set point information	Set point actual			2 Bytes
31	[T1] Set point input	Set point			2 Bytes
32	[T1] Output	Output (% Proportional -Integral)			1 Byte
34	[T1] Temperature sensor 1	Input temperature sensor 1			2 Bytes
36	[T1] Special mode info	2 byte mode info			2 Bytes
37	[T1] Special mode input 1byte	1 byte mode hvacmode			1 Byte
38	[T1] Special mode Economyc	0= Off ; 1=on			1 bit
39	[T1] Special mode Stanby	0= Off ; 1=on			1 bit
40	[T1] Special mode Protection	0= Off ; 1=on			1 bit
41	[T1] Special mode Confort	0= Off ; 1=on			1 bit
44	[T1] Windows alarm 1	0= No alarm ; 1= Alarm			1 bit
45	[T1] Windows alarm 2	0= No alarm ; 1= Alarm			1 bit
46	[T1] Windows alarm 3	0= No alarm ; 1= Alarm			1 bit