



ANALOG / DIGITAL INPUTS

USER MANUAL

INTRODUCTION

- The following manual describes the operation and configuration of the Analog or Binary Inputs which incorporate different DINUY sensors and actuators.
- This is a generic Manual; therefore, you may find some functions or objects that your device does not have.

CONFIGURATION

Main Parameters

- Each one of the Input channels has the following parameters:

- **Function of Input:** functionality of the input channel.

Function of Input 1	Not assigned
	Not assigned ✓
	Switch
	Dimmer
	Multiple Switch
	Sequential Switch
	Shutter / Blind
	Scene Control
	Fixed / Forced Value
	Counter
	Temperature Sensor
	Movement Sensor

- **Debounce time:** parameter to adjust the bounce suppression time when there is a switch. Prevents multiple unwanted actions, caused by the rebound when a contact is closed. Can be set between 10msec and 160msec.

Debounce time	10mSec
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Parameters of SWITCH Function

- Through this function, it is possible to connect pushbuttons, switches or motion detectors, with voltage-free contact, and send the corresponding telegrams to the Bus.
- This function allows switching the associated actuators through the object “[InX] Switch”:

SWITCH	
Enable object: Disable Input	<input type="checkbox"/>
Contact type	<input checked="" type="radio"/> Normally Open <input type="radio"/> Normally Closed
Distinction between Short and Long press	<input type="checkbox"/>
Cyclical transmission	No ▼
Action on Closing the contact	On ▼
Action on Opening the contact	On ▼
Transmit state after recovering bus voltage	<input type="checkbox"/>

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object “[InX] Disable Input”. Writing a “0” in this object, the channel will be enabled, while if a “1” is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Distinction between Short and Long press:** allows to distinguish between a short and a long press. This way, if the differentiation is made, two different actions can be made depending on the length of the pressing.
 - If there is **NO** distinction between a short or long press, the following parameters will be available:

Distinction between Short and Long press	<input type="checkbox"/>
Cyclical transmission	No ▼
Action on Closing the contact	On ▼
Action on Opening the contact	On ▼
Transmit state after recovering bus voltage	<input type="checkbox"/>

- **Cyclical transmission:** the object “[InX] Switch” is sent cyclically at set time intervals.

Cyclic transmission	<div style="border: 1px solid #ccc; padding: 5px;"> No ▼ No ✓ If OFF If ON Yes </div>
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It is possible to set:

- No: there is no cyclic transmission.
- If OFF: it is sent whenever the object “[InX] Switch” is “0”.
- If ON: it is sent whenever the object “[InX] Switch” is “1”.
- Yes: it is always sent, regardless of the state of the object “[InX] Switch”.

If any of the last 3 options is selected, it will be necessary to indicate the transmission period with the parameters "Cycle base time" and "Factor". The time interval between one transmission and another will be the result obtained from multiplying the two parameters.

Cycle base time	1 Sec
Factor (Total time = Base x Factor)	7

- **Action on Closing the contact:** action to be triggered when the contact is closed.

Action on Closing the contact	On
	On ✓
	Off
	Toggle
	Nothing

It is possible to set:

- On: each time the contact is closed, the value "1" is sent through the object "[InX] Switch".
- Off: each time the contact is closed, the value "0" is sent through the object "[InX] Switch".
- Toggle: each time the contact is closed, a "0" or a "1" is sent by the object "[InX] Switch", depending on the state which it was previously in.
- None: there is no change in the object "[InX] Switch".

- **Action on Opening the contact:** action to be triggered when the contact is opened.

Action on Opening the contact	Toggle
	On
	Off
	Toggle ✓
	Nothing

It is possible to set:

- On: each time the contact is open, the value "1" is sent through the object "[InX] Switch".
- Off: each time the contact is open, the value "0" is sent through the object "[InX] Switch".
- Toggle: each time the contact is open, a "0" or a "1" is sent by the object "[InX] Switch", depending on the state which it was previously in.
- None: there is no change in the object "[InX] Switch".

- **Transmit state after recovering bus voltage:** this option will be available as long as the cyclical transmission is not selected. After recovering from a bus power failure, it is possible to configure if the current status of the object "[InX] Switch" is sent again or not.

- If there is (**YES**) distinction between a short or long action, the following parameters will be available:

Distinction between Short and Long press	<input checked="" type="checkbox"/>
Number of objects for Short/Long press	<input checked="" type="radio"/> 1 <input type="radio"/> 2
Long press after	0,3 sec
Long press	On
Short press	Toggle

- **Number of objects for Short/Long press:** a single object is used for both the short press and the long press, "[InX] Switch", or 2 objects are used, one for the short action "[InX] Switch" and another for the long press "[InX] Long Switch".
- **Long press after:** sets the minimum time that a press should last to consider it a long action. This time can be set between 0.3 and 4 seconds.
- **Long press:** action to be triggered when a long press is detected.

Long press	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #e0e0e0; padding: 2px;">On</div> <div style="background-color: #e0e0e0; padding: 2px; border: 1px solid #ccc;">On ✓</div> <div style="padding: 2px;">Off</div> <div style="padding: 2px;">Toggle</div> <div style="padding: 2px;">Nothing</div> </div>
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It is possible to set:

- **On:** each time a long press is carried out, the value "1" is sent through the object "[InX] Long Switch".
- **Off:** each time a long press is carried out, the value "0" is sent through the object "[InX] Long Switch".
- **Toggle:** each time a long press is carried out, a "0" or a "1" is sent by the object "[InX] Long Switch", depending on the state which it was previously in. This function enables the input object "[InX] Switch Long Feedback", which allows to be informed about the state which the actuator is in.
- **None:** there is no change in the object "[InX] Long Switch".
- **Short press:** action to be triggered when a short press is detected.

Short press	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #e0e0e0; padding: 2px;">Toggle</div> <div style="padding: 2px;">On</div> <div style="padding: 2px;">Off</div> <div style="background-color: #e0e0e0; padding: 2px; border: 1px solid #ccc;">Toggle ✓</div> <div style="padding: 2px;">Nothing</div> </div>
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It is possible to set:

- **On:** each time a short press is carried out, the value "1" is sent through the object "[InX] Switch".
- **Off:** each time a short press is carried out, the value "0" is sent through the object "[InX] Switch".
- **Toggle:** each time a short press is carried out, a "0" or a "1" is sent by the object "[InX] Switch", depending on the state which it was previously in. This function enables the input object "[InX] Switch Feedback", which allows to be informed about the state which the actuator is in.
- **None:** there is no change in the object "[InX] Switch".

Communication Objects of SWITCH Function

	Number *	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■ ↕	40	[In1] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
■ ↕	41	[In1] Switch	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	42	[In1] Long Switch	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	43	[In1] Switch Feedback	1 = On, 0 = Off			1 bit	C	-	W	-	-	switch	Low
■ ↕	44	[In1] Long Switch Feedback	1 = On, 0 = Off			1 bit	C	-	W	-	-	switch	Low

Number	Name	Object Function	Description
40	[InX] Disable Input	I = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: <ul style="list-style-type: none"> · Object 0 → Input Enabled · Object 1 → Input Disabled
41	[InX] Switch	I = On, 0 = Off	I-bit output object ON/OFF. If a single object is used for both the short and long action, this will be the common object. If 2 objects are used, this will correspond to the short action
42	[InX] Long Switch	I = On, 0 = Off	I-bit output object ON/OFF for long pressing
43	[InX] Switch Feedback	I = On, 0 = Off	Object to inform the switch input about the switching state of the associated actuator
44	[InX] Long Switch Feedback	I = On, 0 = Off	Object to inform the long switch input about the switching state of the associated actuator

Parameters of DIMMER Function

- Using this function, it is possible to connect pushbuttons and send the corresponding telegrams to the Bus.
- This function allows the switching and dimming of the actuators through the objects “[InX] Switch” and “[InX] Dimming Control”:

DIMMER

Enable object: Disable Input

Contact type Normally Open Normally Closed

Dimming functionality Dimming and Switching Only Dimming

Long press after 0,3 sec ▼

Short press Toggle ▼

Action on Long press Dim Brighter / Darker ▼

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object “[InX] Disable Input”. Writing a “0” in this object, the channel will be enabled, while if a “1” is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Dimming functionality:** allows selecting if only dimming telegrams will be sent or also switching ones.
 - If “Dimming and Switching” is selected:

Dimming functionality Dimming and Switching Only Dimming

Long press after 0,3 sec ▼

Short press Toggle ▼

Action on Long press Dim Brighter / Darker ▼

- Long press after: sets the minimum time that a press should last to consider it a long action.
- Short press: defines the action to be made with an active input for less time than established in the previous parameter: On, Off, Toggle or None.
- Action on Long press: determines the action to be made with a long action: Dim Brighter / Darker, Dim Brighter or Dim Darker.

- If “Only Dimming” is selected:

Dimming functionality Dimming and Switching Only Dimming

Action on press Dim Brighter / Darker ▼

Dim Brighter / Darker ✓

Dim Brighter

Dim Darker

- Action on press: defines the action to be made with a short or long pressing: Dim Brighter / Darker, Dim Brighter or Dim Darker.

Communication Objects of DIMMER Function

	Number *	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■ ↕	40	[In1] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
■ ↕	41	[In1] Switch	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	42	[In1] Dimming Control	Dimming control			4 bit	C	-	-	T	-	dimming control	Low
■ ↕	43	[In1] Switch Feedback	1 = On, 0 = Off			1 bit	C	-	W	-	-	switch	Low

Number	Name	Function	Description
40	[InX] Disable Input	I = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: <ul style="list-style-type: none"> · Object 0 → Input Enabled · Object 1 → Input Disabled
41	[InX] Switch	I = On, 0 = Off	1-bit output Switching object controlled by short press
42	[InX] Dimming Control	Dimming control	4-bit output Dimming object controlled by long press
43	[InX] Switch Feedback	I = On, 0 = Off	Object to inform the switch input about the switching state of the associated actuator

Parameters of MULTIPLE SWITCH Function

- This function allows making different operations after a certain number of pressing on the input:

MULTIPLE SWITCH	
Enable object: Disable Input	<input checked="" type="checkbox"/>
Contact type	<input checked="" type="radio"/> Normally Open <input type="radio"/> Normally Closed
Maximum time between two press	0,5 sec
Number of press	2
Switch 1 action	On
Switch 2 action	On

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object "[InX] Disable Input". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Maximum time between two press:** sets the maximum time between two consecutive pressing to interpret that they belong to the same sequence. Adjustable between 0,5sec and 3sec.
- **Number of press:** number of pressing which form the sequence. Adjustable between 2 and 4.
- **Switch 1 action:** operation to be carried out with 1 pressing.
- **Switch 2 action:** operation to be carried out with 2 consecutive pressing.
- **Switch 4 action:** operation to be carried out with 3 consecutive pressing.
- **Switch 4 action:** operation to be carried out with 4 consecutive pressing.

Communication Objects of MULTIPLE SWITCH Function

	Number ^	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
↔	40	[In1] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
↔	41	[In1] Switch	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
↔	42	[In1] Switch 2	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
↔	43	[In1] Switch 3	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
↔	44	[In1] Switch 4	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low

Number	Name	Function	Description
40	[InX] Disable Input	1 = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: · Object 0 → Input Enabled · Object 1 → Input Disabled
41	[InX] Switch	1 = On, 0 = Off	Communication object with press 1
42	[InX] Switch 2	1 = On, 0 = Off	Communication object with 2 consecutive press
43	[InX] Switch 3	1 = On, 0 = Off	Communication object with 3 consecutive press
44	[InX] Switch 4	1 = On, 0 = Off	Communication object with 4 consecutive press

Parameters of SEQUENTIAL SWITCH Function

- This function allows to trigger sequential switching after making a certain number of actions on the input:

SEQUENTIAL SWITCH

Enable object: Disable Input

Contact type Normally Open Normally Closed

Number of objects

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object "[InX] Disable Input". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Number of objects:** determines the maximum number of levels. Adjustable between 2 and 5.

Communication Objects of SEQUENTIAL SWITCH Function

	Number ^	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■ ↕	40	[In1] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
■ ↕	41	[In1] Switch	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	42	[In1] Switch 2	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	43	[In1] Switch 3	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	44	[In1] Switch 4	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	45	[In1] Switch 5	1 = On, 0 = Off			1 bit	C	-	-	T	-	switch	Low
■ ↕	46	[In1] Increase/Decrease	0 = Up, 1 = Down			1 bit	C	-	W	-	-	up/down	Low

Number	Name	Function	Description
40	[InX] Disable Input	1 = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: · Object 0 → Input Enabled · Object 1 → Input Disabled
41	[InX] Switch	1 = On, 0 = Off	Switching Object for the first press. It will change its value with the first action
42	[InX] Switch 2	1 = On, 0 = Off	Switching Object for the second press. It will change its value with the second action
43	[InX] Switch 3	1 = On, 0 = Off	Switching Object for the third press. It will change its value with the third action
44	[InX] Switch 4	1 = On, 0 = Off	Switching Object for the fourth press. It will change its value with the fourth action
45	[InX] Switch 5	1 = On, 0 = Off	Switching Object for the fifth press. It will change its value with the fifth action
46	[InX] Increase/Decrease	0 = Up, 1 = Down	Direction of actions, from 1 to 4, or from 4 to 1

Parameters of SHUTTER/BLIND Function

- This function allows the control of a blind or roller shutter:

SHUTTER / BLIND	
Enable object: Disable Input	<input type="checkbox"/>
Contact type	<input checked="" type="radio"/> Normally Open <input type="radio"/> Normally Closed
Functional Construction	1 Pushbutton
Shutter functionality	Short = Step, Long = Move
Long press after	0,3 sec

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object "[InX] Disable Input". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Functional Construction:** determines the operation of the input, such as Pushbutton or Switch, single or double.

Functional Construction	1 Pushbutton
	<ul style="list-style-type: none"> 1 Pushbutton ✓ 1 Switch Move 2 Pushbuttons 2 Switches Move 2 Pushbuttons Step 2 Pushbuttons Move

- Configuration as "1 Pushbutton": sends Move Up/Down or Step telegrams, depending on the duration of the press. This function is useful when a blind must be controlled from a single button.

Functional Construction	1 Pushbutton
Shutter functionality	Short = Step, Long = Move
	<ul style="list-style-type: none"> Short = Step, Long = Move ✓ Short = Move, Long = Step Up - Stop - Down - Stop

- Configuration as "1 Switch Move": sends Move Up/Down telegrams. This function is useful when a blind must be controlled from a single switch.
- Configuration as "2 Pushbuttons": sends Move Up/Down or Step telegrams, depending on the duration of the press. This function is useful when a blind must be controlled by two different buttons, one for Move Up and another one for Move Down.

Functional Construction	2 Pushbuttons
Action on Short press	<input checked="" type="radio"/> Step Down <input type="radio"/> Step Up
Action on Long press	<input checked="" type="radio"/> Move Up <input type="radio"/> Move Down
Long press after	0,3 sec

- Configuration as “2 Switches Move”: sends Move Up/Down telegrams. This function is useful when a blind must be controlled by two different switches, one for Move Up and another one for Move Down.

Functional Construction	2 Switches Move
Action on press	<input checked="" type="radio"/> Move Up <input type="radio"/> Move Down

- Configuration as “2 Pushbuttons Step”: sends Step Up/Down telegrams. This function is useful when a blind must be controlled by two different buttons, one for Step Up and another one for Step Down.

Functional Construction	2 Pushbuttons Step
Action on Short press	<input checked="" type="radio"/> Step Down <input type="radio"/> Step Up

- Configuration as “2 Pushbuttons Move”: sends Move Up/Down telegrams. This function is useful when a blind must be controlled by two different buttons, one for Move Up and another one for Move Down.

Functional Construction	2 Pushbuttons Move
Action on Long press	<input checked="" type="radio"/> Move Up <input type="radio"/> Move Down

Communication Objects of SHUTTER/BLIND Function

	Number ^	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■ ↕	40	[In1] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
■ ↕	41	[In1] Stop / Step	0 = Step Up, 1 = Step Down			1 bit	C	-	-	T	-	step	Low
■ ↕	42	[In1] Move	0 = Up, 1 = Down			1 bit	C	-	-	T	-	up/down	Low

Number	Name	Function	Description
40	[InX] Disable Input	I = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: <ul style="list-style-type: none"> · Object 0 → Input Enabled · Object I → Input Disabled
41	[InX] Stop / Step	0 = Step Up, I = Step Down	Step Up/Down or Stop object
42	[InX] Move	0 = Up, I = Down	Move Up/Down object

Parameters of SCENE Function

- This function allows managing Scenes:

SCENE	
Enable object: Disable Input	<input type="checkbox"/>
Contact type	<input checked="" type="radio"/> Normally Open <input type="radio"/> Normally Closed
Type of Scene Control	<input checked="" type="radio"/> 8 Bits Scene <input type="radio"/> 1 Bit Scene
Scene Number	<input type="text" value="1"/>
Action on Short press	<input checked="" type="radio"/> Call <input type="radio"/> Ignore
Save Scene	<input type="text" value="No"/>

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object "[InX] Disable Input". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Type of Scene Control:** Scene object length: 1 or 8 Bits.
- **Scene Number:** assigns a Scene number to the input. It can be an 8-bit (1 to 64) or 1-bit (1 or 2) scene.
- **Action on Short press:** allows assigning a specific function to a short pressing: recover a scene or ignore.
- **Save Scene:** establishes the action to be taken to save a Scene and be able to recover it later.

Save Scene	<input type="text" value="No"/> <ul style="list-style-type: none"> No Long press With object value = 1 On Long press if object value = 1
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- No: one scene cannot be saved.
- Long press: the scene is saved with a long pressing.
- With object value = 1: the scene is saved setting to "1" the object "[InX] Save Scene".
- On Long press if object value = 1: the scene is saved with a long pressing if the object "[InX] Save Scene" is "1".

Communication Objects for SCENE Function

	Number ^	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■ ↻	40	[In] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
■ ↻	41	[In] Scene control 8 Bits	Scene Control			1 byte	C	-	-	T	-	scene control	Low
■ ↻	42	[In] Save Scene	0 = No action, 1 = Save Scene			1 bit	C	-	W	-	-	enable	Low

Number	Name	Function	Description
40	[InX] Disable Input	1 = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: <ul style="list-style-type: none"> · Object 0 → Input Enabled · Object 1 → Input Disabled
41	[InX] Scene Control 8 Bits	Scene Control	Output object for Scene control. It can be a 1 Byte or 1 Bit object
42	[InX] Save Scene	0 = No action, 1 = Save Scene	1-bit object for saving Scenes

Parameters of FIXED/FORCED VALUE Function

- This function allows enabling the Fixed or Forced Value function, which consists in sending a previously established value:

FIXED / FORCED VALUE

Enable object: Disable Input

Contact type Normally Open Normally Closed

Distinction between Short and Long press

Value type on press 1 Bit

Bit value 0 1

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object "[InX] Disable Input". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Distinction between Short and Long press:** allows to distinguish between a short and a long pressing. This way, if the differentiation is made, two different actions can be carried out depending on the length of the press. Two different objects will be available.
- **Value type on Short press:** determines the type of value that will be sent via the object "[InI] X Value on press".

Value type on Short press 1 Bit

1 Bit ✓

2 Bits

1 Byte

2 Bytes signed

2 Bytes unsigned

2 Bytes floating

4 Bytes unsigned

- **Value type on Long press:** determines the type of value that will be sent via the object "[InI] X Value on Long press".

Value type on Long press 1 Bit

1 Bit ✓

2 Bits

1 Byte

2 Bytes signed

2 Bytes unsigned

2 Bytes floating

4 Bytes unsigned

- **Long press after:** sets the minimum time that a pressing should last to consider it a long action.

Communication Objects of FIXED/FORCED VALUE Function

	Number ^	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
↔	40	[InI] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
↔	41	[InI] 1 Bit value on press	Bit value			1 bit	C	-	-	T	-	state	Low
↔	42	[InI] 1 Bit value on Long press	Bit value			1 bit	C	-	-	T	-	state	Low

Number	Name	Function	Description
40	[InX] Disable Input	I = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: <ul style="list-style-type: none"> · Object 0 → Input Enabled · Object I → Input Disabled
41	[InX] X value on press	X value	Output object which is sent after a Short press
42	[InX] X value on Long press	X value	Output object which is sent after a Long press

Parameters of COUNTER Function

- This function allows counting the number of actions performed in the corresponding input:

COUNTER

Enable object: Disable Input

Contact type Normally Open Normally Closed

Transmit state after recovering bus voltage

Data counter width

Start value (0-255)

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object "[InX] Disable Input". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
- **Contact type:** selects if it is a Normally Open or Normally Closed contact.
- **Transmit state after recovering bus voltage:** allows to enable the transmission of the existing value in the counter after recovering the bus voltage.
- **Data counter width:** 8, 16 or 32 Bits.
- **Start value (0-255):** sets the initial value of the counter.

Communication Objects of COUNTER Function

Number ^	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
40	[In1] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
41	[In1] Counter direction	0 = Up, 1 = Down			1 bit	C	-	W	-	-	up/down	Low
42	[In1] Reset Counter	0 = No action, 1 = Reset			1 bit	C	-	W	-	-	reset	Low
43	[In1] Request Counter	1 = Trigger			1 bit	C	-	W	-	-	trigger	Low
44	[In1] Counter 8 Bits	Counter (0-255)			1 byte	C	R	-	T	-	counter pulses (0..255)	Low

Number	Name	Function	Description
40	[InX] DisableInput	I = Disable, 0 = Enable	Input object that allows to enable or disable the corresponding input: <ul style="list-style-type: none"> · Object 0 → Input Enabled · Object I → Input Disabled
41	[InX] Counter direction	0 = Up, 1 = Down	Sets if the counter is upward, 0, or downward, 1
42	[InX] Reset Counter	0 = No action, 1 = Reset	Object for resetting the Counter
43	[InX] Request Counter	I = Trigger	Ask for the value of the Counter
44	[InX] Counter 8 Bits	Counter (0...Y)	Counter value

Parameters of TEMPERATURE SENSOR Function

- The input can be connected to an external temperature probe DINUY (ST KNT 001 or ST KNT 002):

TEMPERATURE SENSOR	
Enable object: Disable Temperature Functionality	<input type="checkbox"/>
Enable object: Sensor not connected	<input type="checkbox"/>
Temperature sending base time	1 min
Temperature sending factor time	7
Temperature variation to send	5 x 0,1°C (0=Disable)
Protection Alarms	No protection
"Temperature functionality" enabled after recovering bus voltage	<input checked="" type="checkbox"/>
Temperature Sensor calibration value	0 [x 0,1°C]

- **Enable object: Disable Temperature Functionality:** allows to activate or deactivate the channel through the object "[InX] Disable Temperature Functionality". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
- **Enable object: Sensor not connected:** enables the object "[InX] Sensor not connected", which allows to know if there is a problem with the external probe.
- **Temperature sending base time:** time base to set the sending period of the temperature value measured by the probe connected to the input.
- **Temperature sending factor time (Total time = Base x Factor):** time factor to set the sending period of the temperature value measured by the probe connected to the input. If a 0 is set, the temperature is not periodically sent.
- **Temperature variation to send:** temperature variation that must decrease/increase to send its value. If it is set to 0, the value is not sent when there is a temperature change.
- **Protection alarms:** allows to enable Over-Heating or / and Over-Cooling alarm objects. Once the desired alarm (s) has been chosen, it will be necessary to define the threshold temperature of the alarm and if a hysteresis must be applied.

Protection Alarms	Over-Heating and Over-Cooling
Over-Heating Temperature	-30 [x 1°C]
Over-Cooling Temperature	-30 [x 1°C]
Hysteresis	0 [x 0,1°C]

- **"Temperature functionality" enabled after recovering bus voltage:** determines if the temperature functionality will be active after the bus voltage is restored.
- **Temperature Sensor calibration value:** allows to calibrate the temperature probe in case of deviation.

Communication Objects of TEMPERATURE SENSOR Function

Number *	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
40	[In1] Disable Temperature Functionality	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
41	[In1] Temperature value	Temperature value			2 bytes	C	-	-	T	-	temperature (°C)	Low
42	[In1] Sensor not connected	0 = Sensor Ok, 1 = Sensor not connected			1 bit	C	-	-	T	-	state	Low
43	[In1] Over-Heating Output	1 = Over-Heating, 0 = No Over-Heating			1 bit	C	-	-	T	-	alarm	Low
44	[In1] Over-Cooling Output	1 = Over-Cooling, 0 = No Over-Cooling			1 bit	C	-	-	T	-	alarm	Low

Number	Name	Function	Description
40	[InX] Disable Temperature Functionality	1 = Disable, 0 = Enable	Enables or disables the temperature functionality
41	[InX] Temperature value	Temperature value	Output object of 2 bytes with the measured temperature value
42	[InX] Sensor not connected	0 = Sensor Ok, 1 = Sensor not connected	1-bit object that determines if the probe is correctly connected or not. If the impedance of the probe is wrong or it is in invalid values, this object is activated 1
43	[InX] Over-Heating Output	1 = Over-Heating, 0 = No Over-Heating	Object of alarm due to over temperature
44	[InX] Over-Cooling Output	1 = Over-Cooling, 0 = Over-Cooling	Object of alarm due to under temperature

Parameters of MOVEMENT SENSOR

- The Movement Sensor function allows the physical connection of the Infrared motion detector DINUY DM KNT 004 to one of the binary inputs.

MOVEMENT SENSOR

Enable object: Disable Input

Number of Movement Detectors 1 2

Lag time adjustable by ETS Potentiometer

Number of objects

Object 1

Object type

Send after detection

Cyclical sending after detection

Send after lag time

Cyclical sending after lag time

- **Enable object: Disable Input:** allows to activate or deactivate the channel through the object "[InX] Disable Input". Writing a "0" in this object, the channel will be enabled, while if a "1" is written the channel will be disabled and will not send telegrams to the bus.
 - **Number of Movement Detectors:** sets the number of detectors that will be connected in parallel to the same input.
 - **Lag time adjustable by:** sets the time delay since the last motion detection. If only 1 detector is connected to the same input, this time can be set by parameter or potentiometer. If 2 detectors are connected to the same input, the time must be set by parameter
 - **Number of objects:** determines the number of output objects that the corresponding channel will have (1, 2 or 3).
- Each object can be configured independently:
- **Object type:** sets the type of object that will be sent after each movement detection.

Object type

Switch

Dimming value

Scene

HVAC mode

- Switch: 1-bit object "[InX] Switch Telegram" is enabled.
 - Dimming value: 1-byte object "[InX] Dimming value" is enabled.
 - Scene: 1-byte object "[InX] Scene number" is enabled.
 - HVAC mode: 1-byte object "[InX] HVAC mode" is enabled.
- **Send after detection:** determines the value of the object that will be sent after each movement detection.

- If object type is Switch:

Send after detection	On
	Off
	On ✓
	No telegram

- If object type is Dimming value:

Send after detection	100%
	100% ✓
	90%
	80%
	70%
	60%
	50%
	40%
	30%
	20%
	10%
	Off
	No telegram

- If object type is Scene:

Send after detection	Scene 1
	Scene 1 ✓
	Scene 2
	Scene 3
	Scene 4
	Scene 5
	Scene 6
	Scene 7
	Scene 8
	Scene 9
	Scene 10
	Scene 11
	Scene 12
	Scene 13
	Scene 14
	Scene 15
	Scene 16
	Scene 17
	Scene 18

- If object type is HVAC mode:

Send after detection	<div style="border: 1px solid #ccc; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px;">Comfort</div> <div style="background-color: #e0e0e0; padding: 2px; border: 1px solid #ccc;">Comfort ✓</div> <div style="padding: 2px;">Stand-by</div> <div style="padding: 2px;">Economy</div> <div style="padding: 2px;">Protection</div> <div style="padding: 2px;">No telegram</div> </div>
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- **Cyclical sending after detection:** allows a cyclic sending of the corresponding value after each detection. This sending time is the result obtained from multiplying the "Time base" by the "Time factor".

Cyclical sending after detection	<input checked="" type="checkbox"/>
Time base for cyclical transmission	10 sec
Time factor for cyclical transmission	1

- **Send after lag time:** determines the value of the object that will be sent after the delay time set in the detector's potentiometer has elapsed. This time is reset each time a new movement is detected, therefore, this value will be sent after the delay time since the last detection.

- If object type is Switch:

Send after lag time	<div style="border: 1px solid #ccc; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px;">Off</div> <div style="background-color: #e0e0e0; padding: 2px; border: 1px solid #ccc;">Off ✓</div> <div style="padding: 2px;">On</div> <div style="padding: 2px;">No telegram</div> </div>
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- If object type is Dimming value:

Send after lag time	<div style="border: 1px solid #ccc; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px;">Off</div> <div style="padding: 2px;">100%</div> <div style="padding: 2px;">90%</div> <div style="padding: 2px;">80%</div> <div style="padding: 2px;">70%</div> <div style="padding: 2px;">60%</div> <div style="padding: 2px;">50%</div> <div style="padding: 2px;">40%</div> <div style="padding: 2px;">30%</div> <div style="padding: 2px;">20%</div> <div style="padding: 2px;">10%</div> <div style="background-color: #e0e0e0; padding: 2px; border: 1px solid #ccc;">Off ✓</div> <div style="padding: 2px;">No telegram</div> </div>
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- If object type is Scene:

Send after lag time	Scene 2
	Scene 2 ✓
	Scene 3
	Scene 4
	Scene 5
	Scene 6
	Scene 7
	Scene 8
	Scene 9
	Scene 10
	Scene 11
	Scene 12
	Scene 13
	Scene 14
	Scene 15
	Scene 16
	Scene 17
	Scene 18
	Scene 19

- If object type is HVAC mode:

Send after lag time	Stand-by
	Comfort
	Stand-by ✓
	Economy
	Protection
	No telegram

- **Cyclic sending after lag time:** allows a cyclic sending of the corresponding value after the delay time since the last detection. This sending time is the result obtained from multiplying the "Time base" by the "Time factor".

Cyclical sending after lag time	<input checked="" type="checkbox"/>
Time base for cyclical transmission	10 sec
Time factor for cyclical transmission	1

Communication Objects of MOVEMENT SENSOR Function

	Number ^	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
↔	40	[In1] Disable Input	1 = Disable, 0 = Enable			1 bit	C	-	W	-	-	enable	Low
↔	41	[In1] HVAC mode	HVAC mode			1 byte	C	-	-	T	-	HVAC mode	Low

Número	Nombre	Función	Descripción
40	[InX] Disable Input	I = Disable, 0 = Enable	Object that allows to enable or disable the corresponding input: <ul style="list-style-type: none"> · Object = 0 → Input enabled · Object = 1 → Input disabled
42	[InX] HVAC mode	HVAC mode	Output object that is sent after each detection and after the delay time since the last detection