IWAC Out Keypad

In-Wall Access Controller for Outdoors installation with Keypad

ZVIIWOK

USER MANUAL

Application Program Version: 1.2
User manual edition: [1.2]_a

www.zennio.com

CONTENTS

DOCUMENT UPDATES

Version	Changes	Pages(s)
[1.2]_a	• Number of codes is increased to 99 plus the master code. • Possibility to disable general door opening sending for each code. • New additional sending objects for each code (1 bit and scene). • Separation of code objects into write and read. • 1-bit object for deleting codes individually. • 1-bit object for independent block of codes. • Object for confirmation of intrusion alarm.	-
[1.1]_a	• Buttons calibration optimisation.	-

1 INTRODUCTION

1.1 IWAC Out Keypad

IWAC Out Keypad from Zennio is a KNX interface as an access control system to outdoor or indoor rooms through codes entered by keypad.

The most notable features of this device are:

- **Access control** to rooms using numeric codes entered by keypad.
- **Management of access codes** by object and by pulsation sequence (overwrite, delete, block, generate random codes...)
- **Anti-intrusion alarm.** In order to avoid brute force attacks, the possibility of protecting the device against the introduction of several wrong codes in a row is added.
- Possibility of **locking / unlocking the numeric keypad**.
- **Acoustic notification** to confirm user actions.
- **Keypad backlight and RGB LED notifications**. Used to notify access control events.
- **Heartbeat**.
- **Ambient luminosity sensor**
- **Proximity sensor.**
- **KNX Security.**

1.2 START-UP AND POWER LOSS

After download or device reset it is necessary to **wait for about 2 minutes without performing any action** in order to make it possible a proper calibration of:

- Proximity sensor.
- Luminosity sensor.
- Button presses.

For a correct calibration of the proximity and brightness sensors it is recommended not to remain too close or place anything less than 50 cm approximately.

1.3 SECURITY

In order to guarantee that the device performs its function properly without any outside agent being able to control it, it is strongly recommended to enable KNX security for all objects related to access control.

2 CONFIGURATION

2.1 GENERAL

2.1.1 CONFIGURATION

After importing the corresponding database in ETS and adding the device into the topology of the desired project, the configuration process begins by entering "Parameters tab of the device".

ETS PARAMETERISATION

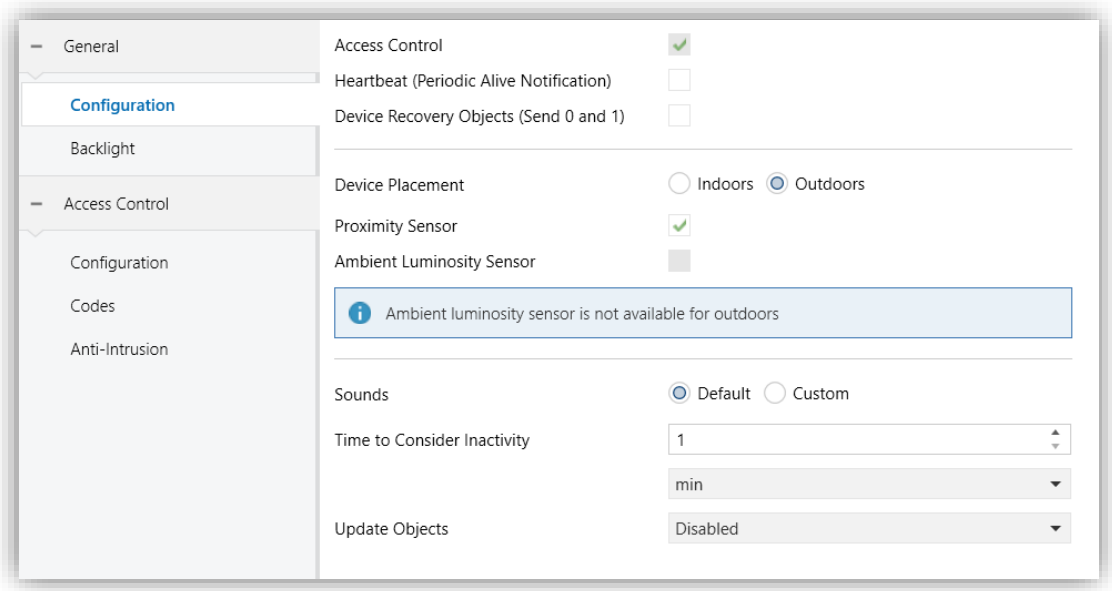

Figure 1. General Configuration.

- **Access Control** [*enabled*][1]: read-only parameter to enable the "Access Control" tab in the tab tree on the left. See section 2.2 for details.

- ***Heartbeat*** **(Periodic Alive Notification)** [*disabled / enabled*]: incorporates a one-bit object to the project (**"[Heartbeat] Object to Send '1'"**) that will be sent periodically with a value of "1" to notify that the device is still working.

[1] The default values of each parameter will be highlighted in blue in this document, as follows: [*default / rest of options*].

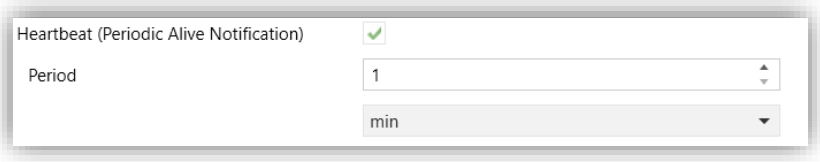

Figure 2. Heartbeat (Periodic Alive Notification)

Note: *the first sending after download or bus failure takes place with a delay of up to 255 seconds, to prevent bus overload. The following sendings match the period set.*

- **Device Recovery Objects (Send 0 and 1)** [*disabled / enabled*]: this parameter lets the integrator activate two new communication objects (**"[Heartbeat] Device Recovery"**), which will be sent to the KNX bus with values "0" and "1" whenever the device begins operation (for example, after a bus power failure). It is possible to parameterise a certain **delay** [*0…255*][*s*] to this sending.

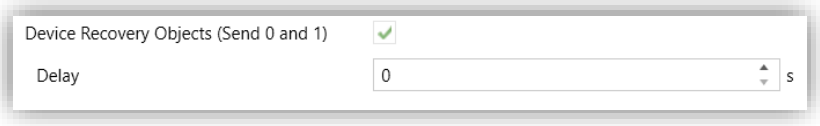

Figure 3. Device Recovery Object.

Note: *after download or bus failure, the sending takes place with a delay of up to 6,35 seconds plus the parameterised delay, to prevent bus overload.*

- **Device placement** [*Indoors / Outdoors*]: allows setting the place in which the device is installed.

- **Proximity Sensor** [*disabled / enabled*]: enables the proximity sensor. This functionality permits "waking up" the device when detecting presence.

  Please refer to the specific manual "**Proximity and Luminosity Sensor**" (available in IWAC Out Keypad product section at the Zennio homepage, www.zennio.com) for detailed information about the functionality and the configuration of the related parameters.

- **Ambient Luminosity Sensor** [*disabled / enabled*]: enables or disables the "Ambient Luminosity Sensor" tab in the tree on the left, depending on whether

the ambient luminosity sensor will or will not be activated. See section 2.1.3 for details.

- **Sounds** [*Default / Custom*]: enables or disables the "Sounds" tab in the tree on the left, depending on whether the custom sounds will or will not be activated. See section 2.1.4 for details.

- **Time to Consider Inactivity** [*1…65535*][s / min / h]: allows setting a time after which, if no pulsation or proximity detection has occurred, the LEDs turn off (or acquire the brightness level configured, see section 2.1.2)

- **Update Objects**: enables the sending of read requests to update status objects and indicators. There are four options available, some of them with a configurable **delay**:

  - [*Disabled*]: no read request, therefore objects are not updated.

  - [*After Programming*]: read requests are sent after a complete or partial download, after the parameterised **delay** ([*1…10…65535*][*s/min/h*])

  - [*After Reset*]: read request are sent when a reset occurs (bus failure or the Reset Device ETS option), after the parameterised delay ([*1…10…65535*] [*s / min / h*])

  - [*After Programming and Reset*]: combination of the two above options.

The project topology shows by default the following objects:

- **"[General] Scene: Send"** and **"[General] Scene: Receive"**: objects for respectively sending and receiving scene values from/to the KNX bus whenever it is necessary.

- **"[General] Keypad-Backlight":** object with which the brightness of the buttons can be configured.

- "**[General] Activity":** object to send activity/inactivity status to the device.

2.1.2 BACKLIGHT

IWAC Out Keypad incorporates a configurable LED to notify the access events and the management of access codes.

On one side, it has a RGB LED guide on the upper part of the device which serves to notify the status of the access control (access granted, denied, code change...).

LEDs brightness level and “Night Mode” can be also parameterised. Please refer to the specific manual “**Brightness**” (available in IWAC Out Keypad product section at the Zennio website, www.zennio.com) for detailed information about the functionality and the configuration of the related parameters.

ETS PARAMETERISATION

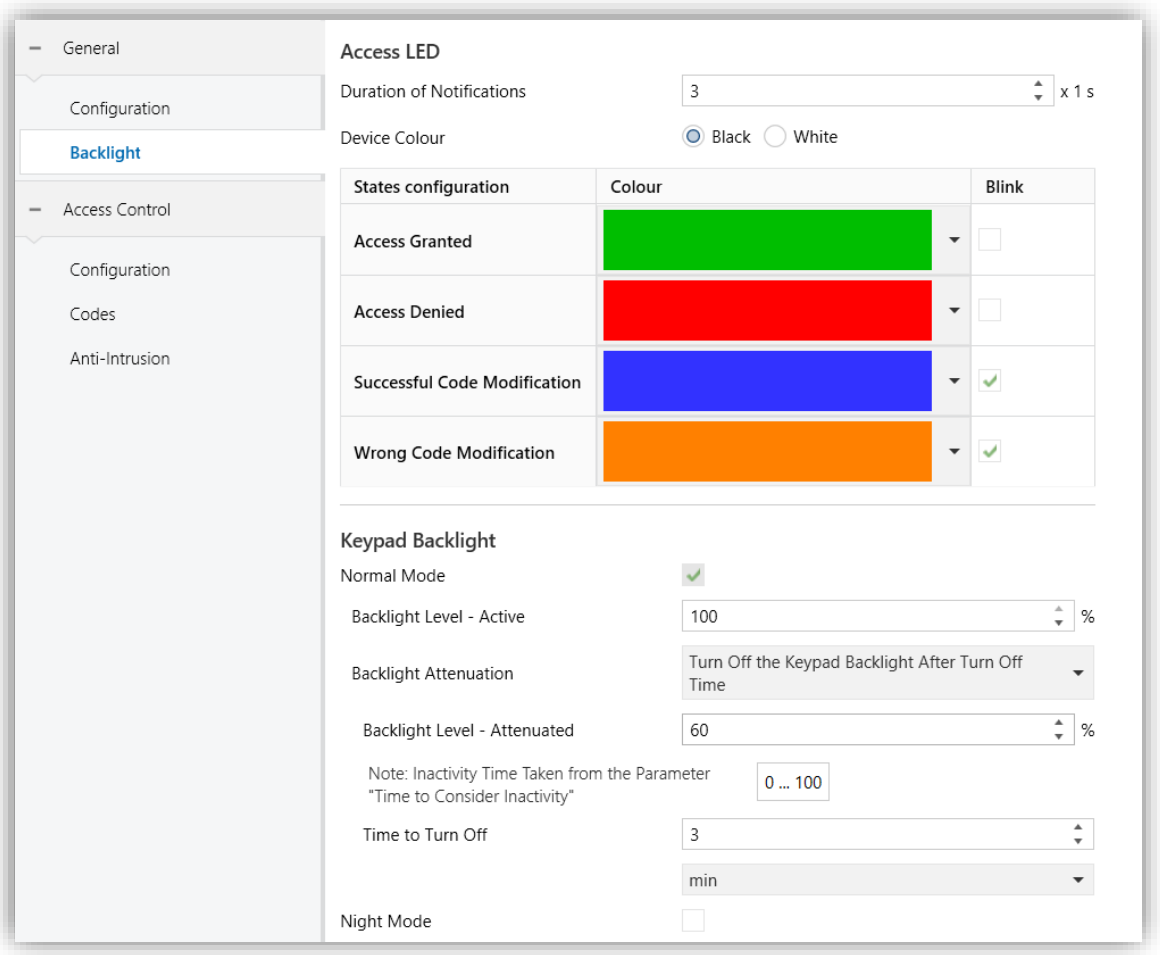

Figure 4. Backlight.

- **Duration of Notifications** [*2…3…5*][*s*]: sets the time during which the user’s actions will be notified.

- **Device colour** [*Black / White*]: allows setting the colour of the external enclosure of the device. The value of this parameter shall be considered for the correct display of the colours of the notifications.

- **Colour** [*Colour select by dropdown*]: allows the colour associated with each status to be modified.

- **Blink** [*disabled / enabled*]: establishes whether the LED will flash during the notification or not.

2.1.3 AMBIENT LUMINOSITY AND PROXIMITY SENSOR

IWAC Out Keypad incorporates a functional module for ambient luminosity measurement.

In case of setting the **Device Location** parameter to *Outdoor:*

- The luminosity sensor is disabled.

- The object **"[General] Proximity Detection**" is hidden. Despite this, the sensor can still be enabled and work normally.

Please refer to the specific manual "**Proximity and Luminosity Sensor**" (available in IWAC Out Keypad product section at the Zennio website, www.zennio.com) for detailed information about the functionality and the configuration of the related parameters.

2.1.4 SOUNDS

IWAC Out Keypad has a buzzer that will be activated in the following cases:

- **After an access attempt**: the sound will indicate to the user the result of the access attempt. One sound will let the user know that the result of the access is positive, and the other sound will let the user know that the access is restricted.

- **When pressing the keypad buttons**.

- **During the anti-intrusion alarm.**

It is possible to choose between two different sounds for the notifications of all these actions.

The enabling and disabling of this function can be done both per parameter and per object, and it can also be defined per parameter if the sounds must be initially enabled or not. In the same way, the sounds can be muted via the 1-bit communication object or via the ETS parameterisation.

ETS PARAMETERISATION

If the **"Configuration"** tab is set to *Custom*, the **"Sounds"** tab will appear. This tab contains the following parameters:

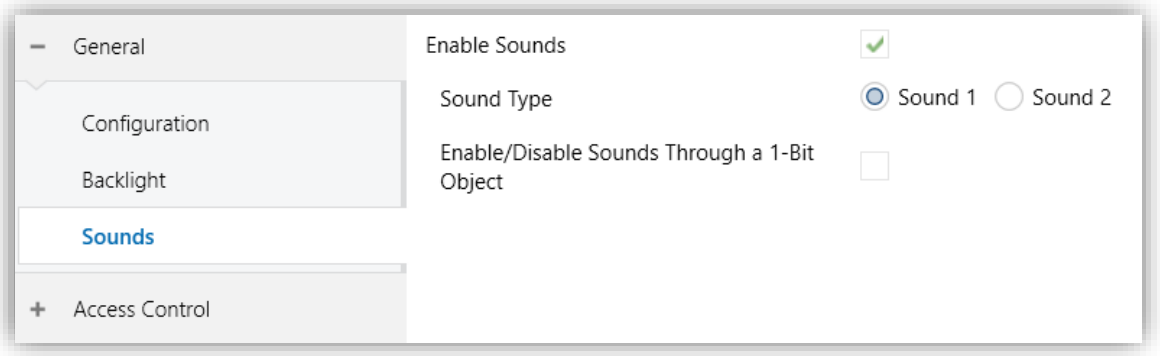

Figure 5. Sounds.

- **Enable Sounds** [*disabled / enabled*]: allows the user to enable or disable the device sounds.
- **Sound Type** [*Sound 1 / Sound 2*]: sets which sound incorporates the device.
- **Enable/Disable Sounds through a 1-Bit Object** [*disabled* / enabled]: incorporates the object **"[General] Sounds – Disabling Sound**".
  - **Value** [0 = Disable; 1 = Enable / 0 = Enable; 1 = Disable]: polarity of the object.
  - **Sound (After Download)** [*disabled / enabled*]: sets whether the buzzing function should start up enabled (default option) or disabled after an ETS download. In this case, it should be enabled with the previous object.

2.2 ACCESS CONTROL

El IWAC Out Keypad from Zennio is a KNX interface as an access control system to outdoor or indoor rooms through codes entered by keypad.

The device is able to operate using 99 different numeric codes in addition to the master code. The numeric codes can be pre-configured or configured by objects.

These codes can be overwritten, deleted and/or blocked at runtime, using objects or sequences of taps. In addition, random codes can also be generated to overwrite these codes.

In order to open the door, it will be necessary to enter any of the numeric codes, followed by a tap on the “#“ key.

Note: *after 10 seconds after the last keystroke, the sequence of keystrokes is restarted.*

On a successful code, the 1-bit object **"[Access] General Opening"** will be sent with the parameterized value. In addition, it is notified by the upper LED guide with the value configured for granted access and the associated sound signal.

If an incorrect code is entered, this is indicated by the LED guide with its parameterised value and a corresponding sound signal.

To learn more about how the codes work and how to manage them, see the section 2.2.2

There are several important things to note about the **"[Access] General Opening"** object:

- It is highly recommended to configure it as a **secure KNX object**, which will require that the target actuator object is also secure.
- IWOK only sends this object when it grants access but **does not manage how long the lock must remain open.**

Furthermore, it is also recommended to set the objects related to the "Anti-intrusion" function as secure. Otherwise, the security of the system would be compromised.

2.2.1 CONFIGURATION

Allows you to configure the security settings of the device.

ETS PARAMETERISATION

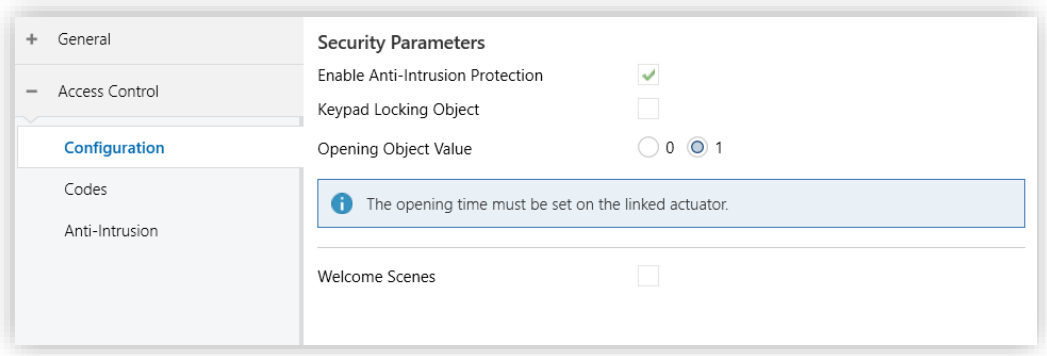

Figure 6. General access control configuration.

- **Enable Anti-Intrusion Protection** [*disabled / enabled*]: allows you to enable this protection which is configured in its individual tab (see section 2.2.3).

- **Keypad Lock Object** [*disabled / enabled*]**:** when enabled, a 1-bit object appears that allows locking and unlocking the keypad buttons. When the object **"[Keypad] Lock"** is received with a value of "Lock", pushes will be ignored until it receives the same object with a value of "Unlock", at which point it will detect pushes normally again.

  - **Lock Object Polarity** [0 = Unlock; 1 = Lock / 0 = Lock; 1 = Unlock]**:** Allows to choose with which value the keypad is locked/unlocked.

- **Opening Object Value** [*0 / 1*]**:** this is the value to be sent by the **"[Access] Open Door"** object when an access granted has been detected.

- **Welcome Scenes** [*disabled / enabled*]**:** allows you to enable this functionality which is configured in its individual tab (see section 2.2.4).

2.2.2 CODES

Codes consist of numeric pins of 4 to 8 digits. Depending on the value set, your system will be more or less secure.

In addition, there is a master code which is just another access code but has more permissions to execute delete/overwrite/block actions with sequences or tap on the device.

A code is considered valid when:

- It is between 4 and 8 digits long.
- Has only numeric characters.

If an invalid code is entered, it will not be configured on the device.

It is possible to configure the number of available codes in a range from 1 to 99 codes. Thus, 99 string objects of 14 bytes denominated **"[Access] Code X"** can be made available for each of the codes, and their corresponding status objects **"[Access] Code X – Status"**. These objects shall always be accessible (depending on the number of available codes parameterised).

In addition, the equivalent objects for the master code shall also be available: **"[Access] Master Code"** and **"[Access] Master Code – Status"**, which shall always be visible.

It is possible to modify the value of the codes at runtime. There are two options for this:

- **By dedicated object.** Writing in **"[Access] Code X / [Access] Master Code".**
- **By sequence of taps:**
  - **Overwrite generic code**: ****MASTER_CODE*POS*NEW_CODE#***.
  - **Overwrite master code:** ****MASTER_CODE**NEW_MASTER_CODE#.***

When it is time to delete codes, we have different options:

- **Use the 1-bit object "[Access] Delete All Codes"**:
  - Sending a one for this object deletes all codes that are configured.
- **Using the 14-byte object "[Access] Delete Code".**

- If a code that matches any of the defined codes is written to this object, that code is deleted.

- **By sequence of taps** → ****MASTER_CODE*POS#***
- **Using the independent 1-bit object for each code "[Access] Code X: Delete Code" (if it is enabled by parameter):**

  - Sending a one for this object, Code X is deleted.

If a code has been successfully deleted, the status object of the code in question, **"[Access] Code X – Status"**, is updated and sent with the value *NULL*.

If a code is not configured, the delete action (regardless of the method used) shall have no effect.

As for the code lock, it can only be performed if it is enabled by parameter. In this case, 1-bit objects **"[Access] Code X: Lock Code"** appear (as many as the number of available codes configured). The polarity can be selected to activate the code lock.

When the corresponding value is sent by the object **"[Access] Code X: Lock Code"**, the code X will not allow access, nor will it send the objects that have been parameterised, but it will execute the access denied actions.

All other actions on the code can continue to be executed even if the code is locked, it can be deleted or overwritten. When deleting a locked code, this code will be eliminated as normally (if subsequently unlocked, the code will not allow access because it has been deleted). When overwriting a locked code, the new code will be the locked code and the old code will be deleted.

After bus failure, the locked status of each code is maintained.

The master code can't be deleted or blocked.

On the other hand, random code generation can be enabled. If a 1 is sent for the object **"[Access] Code X: Generate Random Code",** the code will be overwritten with a random value of the configured size.

The following table gives an overview of the actions that can be performed by keystroke sequence:

Action	Sequence
Access attempt	***CODE#***
Delete code	****MASTER_CODE*POS#***
Change code	****MASTER_CODE*POS*NEW_CODE#***
Change master code	****MASTER_CODE**NEW_ MASTER_CODE#***

Table 1. Code settings.

An example of code modification by keystroke sequence is shown below:

A device has a Master Code 1234 and wants to modify Code 2 and change it to 6789. Perform the following sequence of keystrokes:

**1234*2*6789#*

After entering modification sequences, the result will be reported via the upper LED guide.

The device has the 14-byte object **"[Access] Log"**, in order to report different actions that are performed. These actions would be:

- **Access granted**: **CODE**
- **Access denied**: ****CODE**
- **Deleted generic code**: **-CODE**
- **Generic code added**: **+CODE**
- **Master code deleted: -*MASTER_CODE***
- **Added master code: +*MASTER_CODE***

ETS PARAMETERISATION

The configuration of the codes is done in a tab dedicated for this purpose:

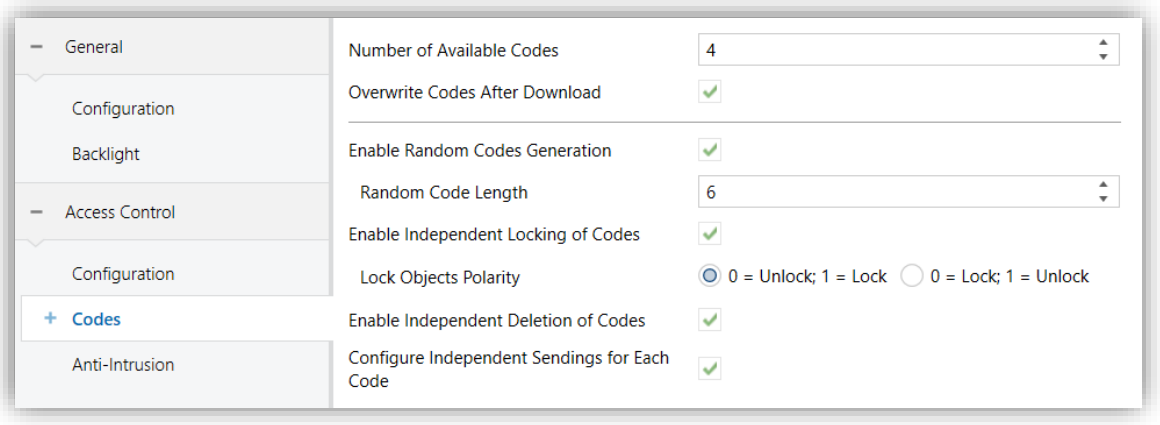

Figure 7. Code settings.

- **Number of Available Codes** [*1…4…99*]: allows selection of the number of codes enabled on the device. Depending on the number defined, the corresponding objects **"[Access] Code X"** and **"[Access] Code X – Status"** will appear.

- **Overwrite Codes After Download** [*disabled / enabled*]: with this parameter you decide if you want to keep the previous codes (including the master code) after a download or if you want to set the parameterised values.

  If enabled, fields for configuring each of the codes will be available in the individual code tabs (grouped in sets of 15) and also in the tab for configuring the master code.

  If overwriting has not been enabled, the field to configure each code (and master code) will not be available in the tabs of the codes (and of the master code), as the values that the device previously had will be maintained.

  Note: *in case of downloading without any change in the parameterisation compared to the previous download, the device codes are not overwritten, as ETS does not perform the download.*

- **Enable Random Code Generation** [*disabled / enabled*]: enables the possibility to generate random codes for the generic codes.

  - **Random Code Length** [*4…6…8*] defines the length of the random codes. This will be considered for any random code generated by the application.

- **Enable Independent Locking of Codes** [*disabled / enabled*]: if this parameter is enabled, the 1-bit objects **"[Access] Code X: Lock Code"** appear for the available codes.

  - **Lock Objects Polarity** [*0 = Unlock; 1 = Lock / 0 = Lock; 1 = Unlock*]

- **Enable Independent Deletion of Codes** [*disabled / enabled*]: if this parameter is enabled, the 1-bit objects **"[Access] Code X: Delete Code"** will appear for the available codes.

- **Configure Independent Sendings for Each Code** [*disabled / enabled*]: allows enabling specific sendings for the available codes, which can be configured in the configuration tabs of each code (including the master code). If not enabled, by default all codes (including the master code) send **"[Access] General Opening"** object.

2.2.2.1 CÓDIGO MAESTRO / CÓDIGO X

The sendings executed when access is granted can be configured, allowing to disable/enable the general opening of the door, send a 1-bit object and/or a scene.

In the event of an access of:

- **Correct code:**

  - 1-bit object **"[Access] General Opening"** will be sent with the parameterised value (if enabled for the code entered).

  - 1-bit object **"[Access] Master Code/X: 1-Bit Sending"** will be sent with the parameterised value (if enabled for the entered code).

  - General object **"[General] Scene: Send"** will be sent with the parameterised value (if enabled for the entered code).

  - The upper LED guide is notified with the parameterised value for access granted.

  - An audible warning associated with granted access is emitted.

- **Incorrect code:**

- It is notified in the upper LED guide with the parameterised value for access denied.
- An audible warning associated with access denied is emitted.

ETS PARAMETERISATION

"Master Code / Code X" tab will only have visible parameters when the parameters **Overwrite Codes After Download** and/or **Configure Independent Sendings for Each Code** are enabled. If these parameters are not enabled, "Master Code / Code X" tab will only display the warning "This setting is only available if *"Overwrite Codes After Download"* or *"Configure Independent Sendings for Each Code" are enabled".*

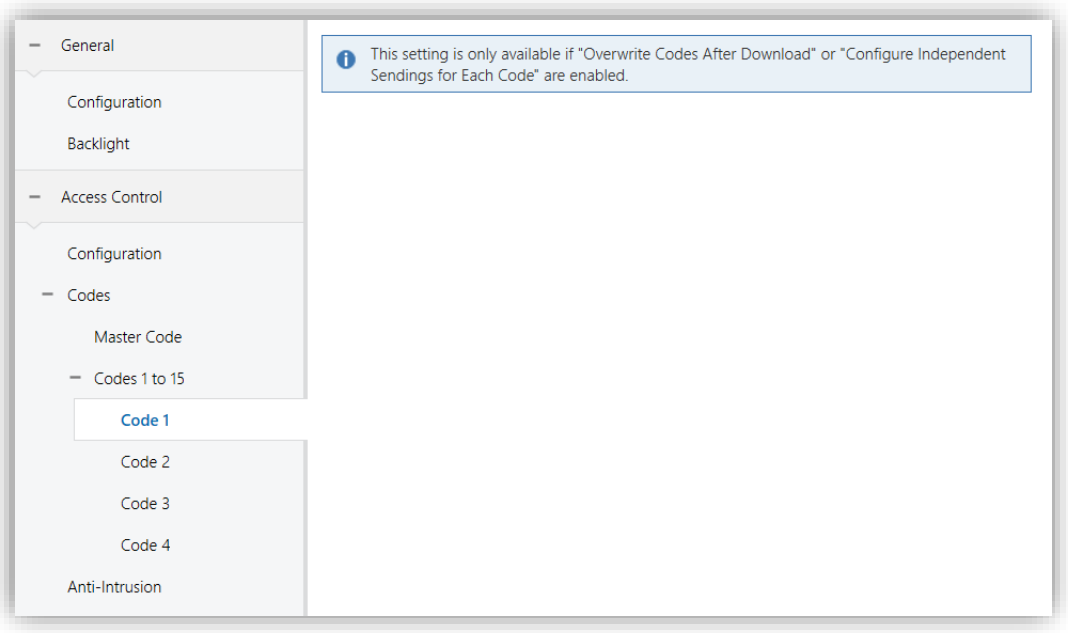

Figure 8. Warning on Code 1 tab

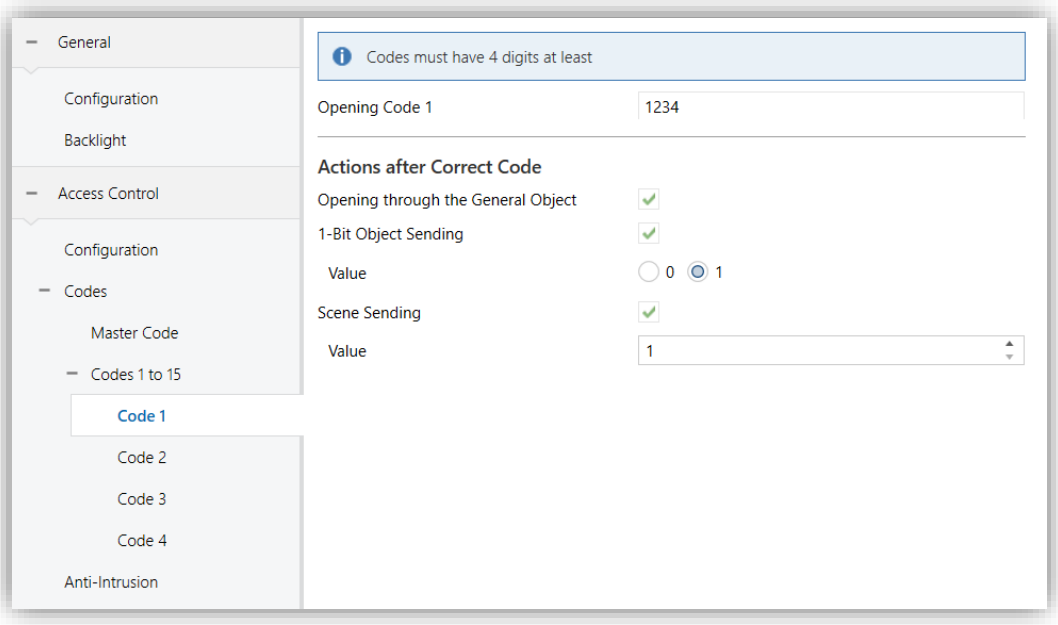

Figure 9. Code 1 Configuration

- **Master Code / Opening Code X** [*4 to 8 numeric digits*]: parameter to define the opening code after downloading. Default is *1234*. This parameter is only available if **Overwrite Codes After Download** is enabled.

  If an invalid code is entered, an error message will be displayed and the code will not be set in the device:

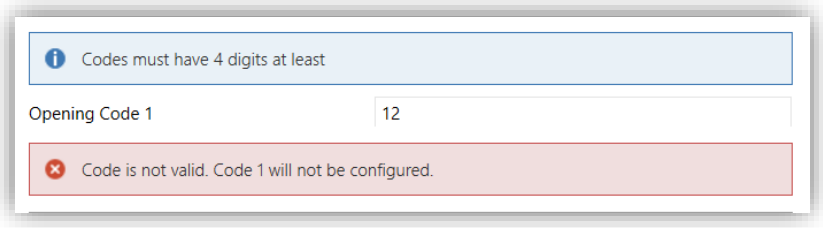

Figure 10. Invalid value for Code 1

If "**Configure Independent Sendings for Each Code**" is enabled, the following parameters will be displayed for each code:

- **Opening through the General Object** [*disabled / enabled*]: enables the sending of the object "[Access] General Opening" via the bus in case of correct entry of the parameterised code.

  ***Note*:** *The object "[Access] General opening" is common for all codes, it will be sent if a correct code is entered and the parameter "Opening through General*

Object" is set for that code or if "Configure Independent Sendings for Each Code" has not been enabled.

- **1-Bit Object Sending** [*disabled / enabled*]: enables 1-bit object "**[Access] Master Code/Code X: 1-Bit Sending**", which will be sent with the value you set (0/1) if you enter the opening code followed by pad.

  - **Value** [*0 / 1*]: to choose whether to send 0 or 1.

- **Scene Sending** [*disabled / enabled*]:

  - **Value** [*1…64*]: scene value to be sent.

2.2.3 ANTI-INTRUSION

To prevent brute force attacks, the possibility to protect the device against multiple wrong codes in a row is added.

To enter the intrusion state, this functionality must be enabled and the configured number of denied accesses must occur in a shorter time than the configured time. Granted accesses reset the counter.

When the device enters an intrusion state:

- Any tap on the keypad is blocked.
- A 1 is sent for the object **"[Access] Anti-Intrusion: Alarm"**.
- If **Sound Notification on Anti-Intrusion Protection** parameter is enabled, the device starts to beep intermittently regardless of the sound enable status.
- If **LEDs Notification on Anti-Intrusion Protection** parameter is enabled, the keypad backlight starts flashing regardless of the keypad brightness setting:
  - In day mode it blinks between 100% - 1%.
  - In night mode it blinks between 50% - 1%.

  Note: *changing the brightness via the object "[General] Keypad - Backlight" does affect the intrusion blink rates.*

Once the intrusion state has exceeded this time duration, the device is returned to its normal state:

- The keypad lock returns to its normal state, which will depend on the value of the dedicated object.
- A 0 is sent for the object **"[Access] Anti-Intrusion: Alarm".**
- Sound notification stops if there is one.
- Keypad backlighting returns to normal brightness, which depends on activity status.

ETS PARAMETERISATION

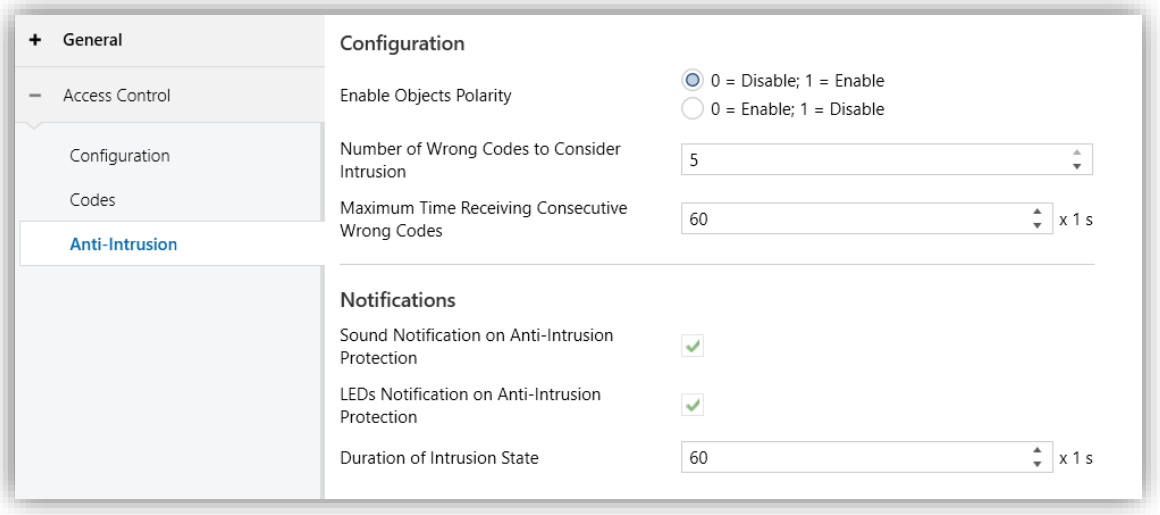

Figure 11. Intrusion protection settings.

- **Enable objects Polarity** [*0 = Disable; 1 = Enable / 0 = Enable; 1 = Disable*]**:** allows to choose the polarity of the intrusion enabling objects.

  - **"[Access] Anti-Intrusion: Enable - Control":** Enables/Disables intrusion protection.
  - **"[Access] Anti-Intrusion: Enable - Status":** informs about the status of the anti-intrusion protection enablement**.**

- **Number of wrong codes to consider intrusion** [*3…5*]: it is the number of denied access attempts required to enter the intrusion state.

- **Maximum time receiving consecutive wrong codes** [*10…60…600*][*s*]: it is the maximum time for adding up incorrect accesses in order to enter the intrusion state.

- **Sound notification on anti-intrusion protection** [*disabled / enabled*]: when it is enabled the device starts beeping intermittently independently of the sound enabled status.

- **LEDs notification on anti-intrusion protection** [*disabled / enabled*]: when it is enabled, the keypad backlighting starts to blink. Independent of the keyboard brightness setting:

  - In day mode it blinks between 100% - 1%.
  - In night mode it blinks between 50% - 1%.

Note: *changing the brightness via the object "[General] Keypad - Backlight" does affect the intrusion blink rates.*

- **Duration of the intrusion state** [*10…60…600*][*s*]: determines the duration of the intrusion state.

2.2.4 WELCOME SCENES

This functionality sends scenes via the generic scene objects. These scenes will be sent when a notification is received through the 1-bit trigger object **("[Access] Welcome Scenes: trigger"**) or the general scene trigger object **("[General] Scenes: Receive"**).

Once this trigger is received, the configured scene will be sent to the bus, being possible to send different scenes depending on whether the device is in day or night mode.

ETS PARAMETERISATION

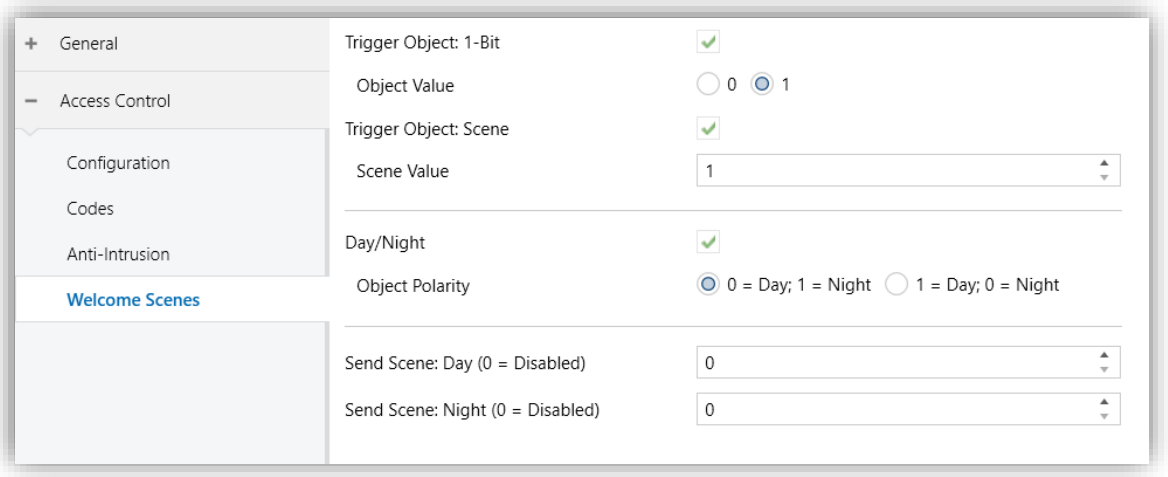

Figure 12. Configuration of Welcome Scenes.

After enabling the functionality, a new configuration tab appears:

- **Trigger Object: 1- Bit** [*disabled / enabled*]: enables the 1-bit object trigger.
  - **Object Value** [*0 / 1*]: allows the selection of the trigger polarity for the object **"[Access] Welcome Scenes: Trigger"**.
- **Trigger Object: Scene** [*disabled / enabled*]: enable scene object triggering.

- **Scene Value** [*1…64*]: scene number that will trigger the welcome action.

- **Day/Night** [*disabled / enabled*]: allows you to choose different scenes depending on whether it is day or night, or always use the same scenes.

  - **Object Polarity** [*0=Día;1=Noche / 1=Día;0=Noche*]: allows you to choose the polarity for switching between day/night via the object **"[Access] Welcome Scene: Day/Night"**.

- **Send Scene** [*0…64*]: scene value to send with the welcome trigger. If the **Day/Night** parameter is enabled, 2 scenes can be configured, one for day mode and one for night mode.

ANNEX I. COMMUNICATION OBJECTS

- "**Functional Range**": shows the values that, with independence of any other values permitted by the bus according to the object size, may be of any use or have a particular meaning because of the specifications or restrictions from both the KNX standard or the application program itself.

Number	Size	I/O	Flags	Data type (DPT)	Functional Range	Name	Function
1	1 Bit	O	C R - T -	DPT_Trigger	0/1	[Heartbeat] Object to Send '1'	Sending of '1' Periodically
2	1 Bit	O	C R - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 0
3	1 Bit	O	C R - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 1
4	1 Byte	O	C R - T -	DPT_SceneNumber	0 - 63	[General] Scene: Send	Scene Value
5	1 Byte	I	C - W - -	DPT_SceneNumber	0 - 63	[General] Scene: Receive	Scene Value
6	1 Bit	I	C - W - -	DPT_State	0/1	[General] Activity	0 = Inactivity; 1 = Activity
7	1 Bit	I	C - W - -	DPT_Enable	0/1	[General] Sounds - Disabling Sound	0 = Disable Sound; 1 = Enable Sound
	1 Bit	I	C - W - -	DPT_Enable	0/1	[General] Sounds - Disabling Sound	0 = Enable Sound; 1 = Disable Sound
8	1 Bit	I	C - W T U	DPT_Enable	0/1	[Keypad] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W T U	DPT_Enable	0/1	[Keypad] Lock	0 = Lock; 1 = Unlock
9	1 Bit	O	C - - T -	DPT_Ack	0/1	[Access] General Opening	1 = Open Door
	1 Bit	O	C - - T -	DPT_Ack	0/1	[Access] General Opening	0 = Open Door
10	14 Bytes	O	C - - T -	DPT_String_ASCII		[Access] Log	Text String
11	14 Bytes	I	C - W - -	DPT_String_ASCII		[Access] Master Code	Text String
12	14 Bytes	O	C R - T -	DPT_String_ASCII		[Access] Master Code - Status	Text String
13	1 Bit	O	C - - T -	DPT_Ack	0/1	[Access] Master Code: 1-Bit Sending	Send 1
	1 Bit	O	C - - T -	DPT_Ack	0/1	[Access] Master Code: 1-Bit Sending	Send 0
14, 20, 26, 32, 38, 44, 50, 56, 62, 68, 74, 80, 86, 92, 98	14 Bytes	I	C - W - -	DPT_String_ASCII		[Access] Code x	Text String
15, 21, 27, 33, 39, 45, 51, 57, 63, 69, 75, 81, 87, 93, 99	14 Bytes	O	C R - T -	DPT_String_ASCII		[Access] Code x - Status	Text String
16, 22, 28, 34, 40, 46, 52, 58, 64, 70, 76, 82, 88, 94, 100	1 Bit	I	C - W - -	DPT_Ack	0/1	[Access] Code x: Generate Random Code	1 = Generate Code
17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95, 101	1 Bit	I	C - W T U	DPT_Enable	0/1	[Access] Code x: Lock Code	0 = Unlock Code; 1 = Lock Code
	1 Bit	I	C - W T U	DPT_Enable	0/1	[Access] Code x: Lock Code	0 = Lock Code; 1 = Unlock Code
18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96, 102	1 Bit	I	C - W - -	DPT_Ack	0/1	[Access] Code x: Delete Code	1 = Delete Code
19, 25, 31, 37, 43, 49, 55, 61, 67, 73, 79, 85, 91, 97, 103	1 Bit	O	C - - T -	DPT_Ack	0/1	[Access] Code x: 1-Bit Sending	Send 1
	1 Bit	O	C - - T -	DPT_Ack	0/1	[Access] Code x: 1-Bit Sending	Send 0
608	1 Bit	I	C - W - -	DPT_Ack	0/1	[Access] Delete All Codes	1 = Delete Codes
609	14 Bytes	I	C - W - -	DPT_String_ASCII		[Access] Delete Code	Text String

610	1 Bit	I	C - W T U	DPT_Enable	0/1	[Access] Intrusion: Enable - Control	0 = Enable; 1 = Disable
	1 Bit	I	C - W T U	DPT_Enable	0/1	[Access] Anti-Intrusion: Enable - Control	0 = Disable; 1 = Enable
611	1 Bit	O	C R - T -	DPT_Enable	0/1	[Access] Intrusion: Enable - Status	0 = Enabled; 1 = Disabled
	1 Bit	O	C R - T -	DPT_Enable	0/1	[Access] Anti-Intrusion: Enable - Status	0 = Disabled; 1 = Enabled
612	1 Bit	O	C R - T -	DPT_Bool	0/1	[Access] Anti-Intrusion: Alarm	0 = No Alarm; 1 = Alarm
613	1 Bit	I	C - W - -	DPT_Bool	0/1	[Access] Anti-Intrusion: Alarm Confirmation	0 = No Action; 1 = Confirm
614	1 Bit	I	C - W - -	DPT_Ack	0/1	[Access] Welcome Scenes: Trigger	0 = Send Welcome Scene
	1 Bit	I	C - W - -	DPT_Ack	0/1	[Access] Welcome Scenes: Trigger	1 = Send Welcome Scene
615	1 Bit	I	C - W - -	DPT_DayNight	0/1	[Access] Welcome Scenes: Day/Night	0 = Day; 1 = Night
	1 Bit	I	C - W - -	DPT_DayNight	0/1	[Access] Welcome Scenes: Day/Night	1 = Day; 0 = Night
616	1 Bit	I	C - W - -	DPT_DayNight	0/1	[General] Backlight Mode	0 = Night Mode; 1 = Normal Mode
	1 Bit	I	C - W - -	DPT_DayNight	0/1	[General] Backlight Mode	0 = Normal Mode; 1 = Night Mode
617	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[General] Keypad - Backlight	0% ... 100%
618	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[General] Display - Contrast	0% ... 100%
619	1 Bit	I	C - W - -	DPT_Enable	0/1	[General] Proximity Sensor	0 = Disable; 1 = Enable
620	1 Bit	I	C - W - -	DPT_Start	0/1	[General] External Proximity Detection	1 = Detection
621	1 Bit	O	C - - T -	DPT_Start	0/1	[General] Proximity Detection	Send 1 when Proximity is Detected
622	1 Bit	O	C - - T -	DPT_Bool	0/1	[General] Luminosity (1-Bit)	0 = Over Threshold; 1 = Under Threshold
	1 Bit	O	C - - T -	DPT_Bool	0/1	[General] Luminosity (1-Bit)	0 = Under Threshold; 1 = Over Threshold
623	1 Byte	O	C R - - -	DPT_Scaling	0% - 100%	[General] Luminosity (Percentage)	0% ... 100%
624	2 Bytes	O	C R - - -	DPT_Value_Lux		[General] Luminosity (Lux)	0 Lux ... 670760 Lux

Join and send us your inquiries about Zennio devices:

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