BIN- T 8X / 6X / 4X / 2X

Universal Interface with 8/6/4/2 Binary Inputs/LED Outputs and 1 Temperature Probe Input

ZIOBINT8
ZIOBINT6
ZIOBINT4
ZIOBINT2

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CONTENTS

1 INTRODUCTION

1.1 BIN-T

The BIN-T product family from Zennio consists of a variety of small-size KNX interfaces, designed to be installed, for instance, inside electric appliance boxes. They allow connecting a variable number of **binary inputs** (pushbuttons, switches) while they also provide **LED and electronic relay control outputs** (up to 12V DC, 2 mA). Therefore, the same device can provide feedback to the LED indicators incorporated by many pushbuttons and switches or to operate low-current relays (e.g., heating system relays).

The most outstanding features are:

- **2 / 4 / 6 / 8 channels** parameterisable as:

  - ➢ **Binary Inputs**

  - ➢ **LED Lighting Output**

  - ➢ **Electronic Relay Control**

- 1 Temperature Probe input

- 1 Zennio Thermostat

- **Heartbeat** or periodic "still-alive" notification.

- **KNX Security**. For detailed information about the functionality and configuration of KNX security, consult the specific user manual "KNX Security", available in the product section of the Zennio web portal (www.zennio.com).

2 CONFIGURATION

2.1 GENERAL

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

ETS PARAMETERISATION

The only parameterizable screen available by default is General. From this screen it is possible to activate/deactivate all the required functionality.
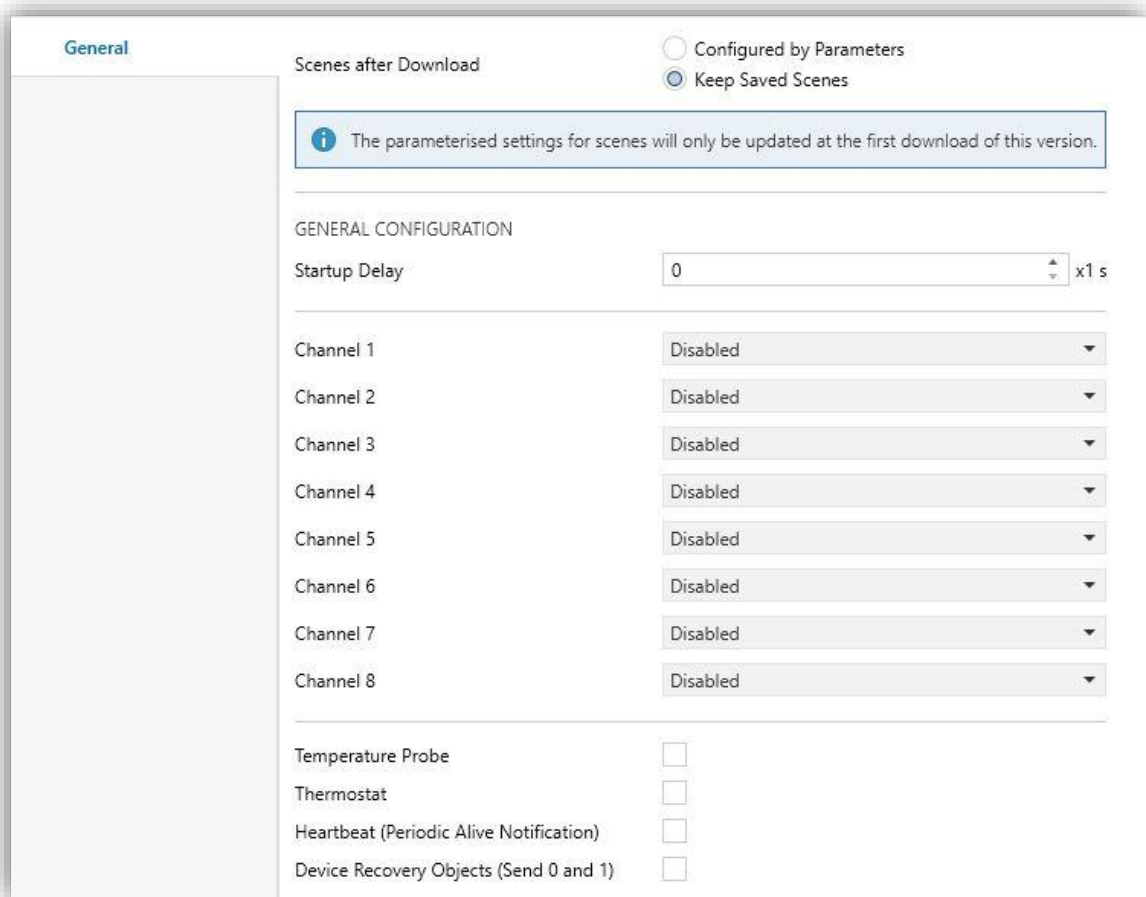

Figure 1. Default configuration.

- **Scenes after Download** [*Configured by Parameters / Keep Saved Scenes*][1]: allows defining whether the value of the scenes is the configured by parameter or whether the previously saved value is kept after download.

  Note: *if "Keep Saved Scenes" option has been configured, but it is the first download of the device or a different version from the current one, the values configured by parameter will be adopted. If new scenes are added in successive downloads, it will be necessary to perform a download by checking the option "Configured by Parameters" to ensure the correct operation of these scenes.*

- **Start-up Delay** [*0…255*]: sets a delay after the initialisation so the device does not respond to orders nor send objects to the bus (except the Heartbeat object, if enabled; see below).

- **Channel** [*Disabled / Binary Input / LED Lighting Output / Electronic Relay Control (Heating Actuator)*]**:** checkboxes that allow selecting which channels will behave as inputs and which channels as outputs. After enabling them, additional tabs will be incorporated to the tab tree on the left. These functions and their parameters will be explained in later sections of this document.

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

<div align="center">

Figure 2. Heartbeat (Periodic Alive Notification).
</div>

  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.*

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

- **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.
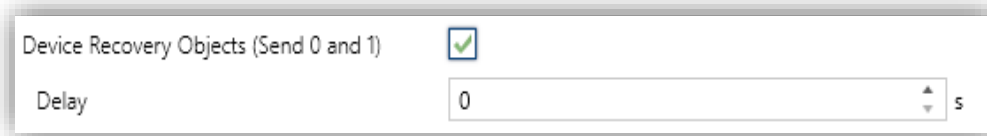

Device Recovery Objects (Send 0 and 1)	✓	
Delay	0	s

Figure 3. Device Recovery Objects

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.*

2.2 CHANNELS

BIN-T 8X, 6X, 4X and 2X incorporate, respectively, **eight, six, our and two input/output channels**, each of them configurable as a:

- **Binary Input**. See section 2.2.1.

- **LED Lighting Output**. See section 2.2.2.

- **Electronic Relay Control (Heating Actuator).** See section 2.2.3.

Additionally, every BIN-T incorporate **one temperature probe input** (see section).

2.2.1 BINARY INPUT

Please refer to the "**Binary Inputs**" user manual, available in the BIN v2 product section at the Zennio website (www.zennio.com).

2.2.2 LED LIGHTING OUTPUT

The LED lighting control permits commuting each LED between two states: **off** (which not necessarily means "no light") and **on** (which not necessarily means "light on"). Moreover, the LEDs can also switch between two operation modes: the **normal mode** and the **night mode**. The second one is optional and is provided for temporary situations and environments where an excess of brightness may disturb the user. In

such cases, it will be possible to switch the mode by means of a one-bit object and/or a scene object.

These settings are common for all outputs configured as LEDs. On the contrary, **timers**, **flashing** and **status objects** can be configured independently for each output.

2.2.2.1   GENERAL CONFIGURATION

The general configuration of the LED outputs entails setting the brightness levels for the on and off states, both for the normal mode and for the night mode (if required).

ETS PARAMETERISATION

A general Configuration tab for the LED Outputs function is provided once at least one output has been configured as a LED Lighting Output. This tab contains the settings that are common to all LED outputs.

Figure 4. LED Outputs - General configuration.

- **Normal Mode** [_enabled_]:

  - **On Level** [_0…255_]**:** sets the brightness level value for on state.

  - **Off Level** [_0…255_]**:** sets the brightness level values for off state.

- **Night Mode** [_enabled / disabled_]: in case of being this mode necessary, this checkbox needs to be marked:

  - **On Level** [_0…8…255_]**:** sets the brightness level values for on state.

  - **Off Level** [_0…255_]**:** sets the brightness level values for off state.

In case of enabling the night mode, some more options can be configured:

Figure 5. LED Outputs - General Configuration - Night Mode

- **Brightness Mode after ETS download** [*Normal / Night*]: sets which of the two modes will be active after an ETS Download.

- **1-bit Object** [*enabled / disabled*]: when marked, it will be possible to switch the mode by writing to a binary object ("**[LED] Brightness Mode**"). The parameter **Value** ([*0 = Normal; 1 = Night / 0 = Night; 1 = Normal*]) will show up to select which value should trigger which mode.

- **Scene Object** [*enabled / disabled*]: when marked, it will be possible to switch the mode by writing a certain scene value to "**[LED] Scene**". Two specific textboxes will show up to enter what scenes (1 through 64) will trigger each mode.

2.2.2.2   OUTPUT X: LED LIGHTING – CONFIGURATION

As already stated, each LED output allows an independent configuration of its **status object**, **timer** and **flashing** functions.

The **Timer** function consists in performing a single, timed switch-on / switch-off cycle when a specific trigger object is received.

On the other hand, the **Flashing** function consists in performing a continuous, timed on/off sequence when a specific trigger object is received.

ETS PARAMETERISATION

A specific Configuration tab is provided for each enabled LED output. It contains the following parameters:
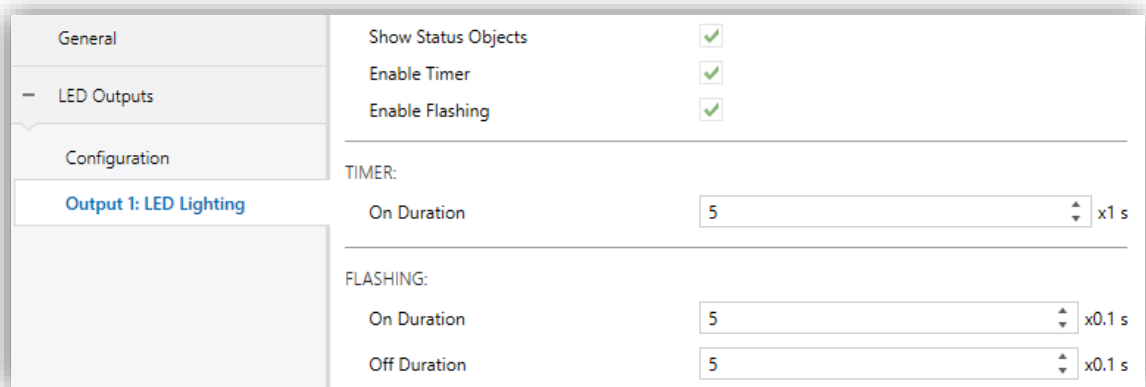
Figure 6. Output X: LED Lighting – Configuration.

- **Show Status Objects** [*enabled / disabled*]: if enabled, the "**[LEDx] LED Status**" object is added to the project. It takes value '0' when the LED is in the off state and value '1' when the LED is in the on state. This object is sent to the bus whenever the status is updated.

- **Enable Timer** [*enabled / disabled*]: enables the timer function.

  - ➢ **On Duration** [*0…5…255*]: sets how much time the output will remain in the on state once the timer is activated. If set to zero, the output will not switch off afterwards.

- **Enable Flashing** [*enabled / disabled*]: enables the flashing function.

  - ➢ **On Duration** [*1…5…255*]: length of each "on" stage.

  - ➢ **Off Duration** [*1…5…255*]: length of each "on" stage.

The following objects are also related to the functionality of each LED output:

- "**[LEDx] On/Off**" (binary): when it receives the value "1", the LED will switch to the on state, while the value "0" will switch it off.

- "**[LEDx] Inverted On/Off**" (binary): performs an inverse control of the LED. When it receives the value "0", the LED will switch to the on state, while the value "1" will switch it off.

- "**[LEDx] Timer**" (binary): when it receives the value "1", the LED timer function will start, while the value "0" will stop it.

- "**[LEDx] Flashing**" (binary): when it receives the value "1", the LED flashing function will trigger, while the value "0" will stop it.

2.2.3 ELECTRONIC RELAY CONTROL (HEATING ACTUATOR)

Please refer to "**Electronic Relay Control in Heating Systems**" specific manual, available in the BIN v2 product section at the Zennio website, www.zennio.com.

Note: *BIN v2 does not implement the following options, although they are included in the above document:*

- *Overload/short-circuit notification.*

- *Start-up delay (the general start-up delay is applied instead; see section 2.1).*

2.3 TEMPERATURE PROBE

Configuration for the connection of **one** temperature sensor from Zennio. Please refer to the "**Temperature Probe**" user manual, available under the product section at www.zennio.com.

2.4 THERMOSTAT

BIN-T implements **one** thermostat, which can be enabled and configured independently.

Please, refer to the specific "**Thermostat**" user manual available under any of the family of BIN-T on the product section at the Zennio homepage (www.zennio.com) for detailed information about the functionality and the configuration of the related parameters.

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.
- The following table has all the objects of BIN-T 8X, many of the numbers will not be available for the 6, 4 and 2 channels version of the BIN-T family.

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, 10, 16, 22, 28, 34, 40, 46	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ix] Input Lock	0 = Unlock; 1 = Lock
5, 11, 17, 23, 29, 35, 41, 47	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Short Press] 0	Sending of 0
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Short Press] 1	Sending of 1
	1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Short Press] 0/1 Switching	Switching 0/1
	1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Short Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Short Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Short Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Short Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Short Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Short Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Short Press] Brighter	Increase Brightness
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Short Press] Darker	Decrease Brightness
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Short Press] Brighter/Darker	Switch Bright/Dark
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Short Press] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Short Press] Light Off	Sending of 0 (Off)
	1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Short Press] Light On/Off	Switching 0/1
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Short Press] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Short Press] Save Scene	Sending of 128 - 191

	1 Bit	I/O	C R W T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] Edge	Sending of 0 or 1
	1 Byte	O	C - - T -	DPT_Value_1_Ucount	0 - 255	[Ix] [Short Press] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	DPT_Scaling	0% - 100%	[Ix] [Short Press] Constant Value (Percentage)	0% - 100%
	2 Bytes	O	C - - T -	DPT_Value_2_Ucount	0 - 65535	[Ix] [Short Press] Constant Value (Integer)	0 - 65535
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Short Press] Constant Value (Float)	Float Value
	2 Bytes	O	C R - T -	DPT_Value_2_Ucount	0 - 65535	[Ix] [Pulse Counter] Counter	Number of Pulses
6, 12, 18, 24, 30, 36, 42, 48	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Short Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Short Press] Dimming Status (Input)	0% - 100%
	1 Byte	O	C R - T -	DPT_Value_1_Ucount	0 - 255	[Ix] [Pulse Counter] Counter	Number of Pulses
7, 13, 19, 25, 31, 37, 43, 49	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Long Press] 0	Sending of 0
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Long Press] 1	Sending of 1
	1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Long Press] 0/1 Switching	Switching 0/1
	1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Long Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Long Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Long Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Long Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Long Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Long Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Long Press] Brighter	Long Pr. -> Brighter; Release -> Stop
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Long Press] Darker	Long Pr. -> Darker; Release -> Stop
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Long Press] Brighter/Darker	Long Pr. -> Brighter/Darker; Release -> Stop
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Long Press] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Long Press] Light Off	Sending of 0 (Off)
	1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Long Press] Light On/Off	Switching 0/1
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Long Press] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Long Press] Save Scene	Sending of 128 - 191
	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] [Switch/Sensor] Alarm: Breakdown or Sabotage	1 = Alarm; 0 = No Alarm

	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Long Press] Constant Value (Float)	Float Value
	2 Bytes	O	C - - T -	DPT_Value_2_Ucount	0 - 65535	[Ix] [Long Press] Constant Value (Integer)	0 - 65535
	1 Byte	O	C - - T -	DPT_Scaling	0% - 100%	[Ix] [Long Press] Constant Value (Percentage)	0% - 100%
	1 Byte	O	C - - T -	DPT_Value_1_Ucount	0 - 255	[Ix] [Long Press] Constant Value (Integer)	0 - 255
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Double Press] 0	Sending of 0
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Double Press] 1	Sending of 1
	1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Double Press] 0/1 Switching	Switching 0/1
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Double Press] Save Scene	Sending of 128 - 191
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Double Press] Run Scene	Sending of 0 - 63
8, 14, 20, 26, 32, 38, 44, 50	1 Bit	O	C - - T -	DPT_Trigger	0/1	[Ix] [Long Press/Release] Stop Shutter	Release -> Stop Shutter
	1 Bit	I	C - W - -	DPT_Reset	0/1	[Ix] [Pulse Counter] Reset	0 = No Action; 1 = Reset
9, 15, 21, 27, 33, 39, 45, 51	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Long Press] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Long Press] Shutter Status (Input)	0% = Top; 100% = Bottom
52, 57, 62, 67, 72, 77, 82, 87	1 Bit	I	C - W - -	DPT_Switch	0/1	[LEDx] On/Off	0 = Off; 1 = On
53, 58, 63, 68, 73, 78, 83, 88	1 Bit	I	C - W - -	DPT_Scene_AB	0/1	[LEDx] Inverted On/Off	0 = On; 1 = Off
54, 59, 64, 69, 74, 79, 84, 89	1 Bit	O	C R - T -	DPT_Switch	0/1	[LEDx] On/Off (Status)	0 = Off; 1 = On
55, 60, 65, 70, 75, 80, 85, 90	1 Bit	I	C - W - -	DPT_Start	0/1	[LEDx] Timer	0 = Switch Off; 1 = Switch On
56, 61, 66, 71, 76, 81, 86, 91	1 Bit	I	C - W - -	DPT_Start	0/1	[LEDx] Flashing	0 = Stop; 1 = Start
92	1 Bit	I	C - W - -	DPT_DayNight	0/1	[LED] Brightness Mode	0 = Normal; 1 = Night
	1 Bit	I	C - W - -	DPT_DayNight	0/1	[LED] Brightness Mode	0 = Night; 1 = Normal
93	1 Byte	I	C - W - -	DPT_SceneNumber	0 - 63	[LED] Scene	1 - 64
94	1 Bit	O	C R - T -	DPT_Bool	0/1	[HC] All Valves Are Closed	0 = False; 1 = True
	1 Bit	O	C R - T -	DPT_Bool	0/1	[HC] All Valves Are Closed	0 = True; 1 = False
95	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[HC] Max. Control Value (Output)	0 - 100 %
96	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[HC] Max. Control Value (Input)	0 - 100 %
97, 109, 121, 133, 145, 157, 169, 181	1 Bit	O	C R - T -	DPT_Alarm	0/1	[HCx] Short Circuit Error	0 = No Error; 1 = Error
98, 110, 122, 134, 146, 158, 170, 182	1 Bit	O	C R - T -	DPT_Alarm	0/1	[HCx] Overload Error	0 = No Error; 1 = Error
99, 111, 123, 135, 147, 159, 171, 183	1 Bit	I	C - W - -	DPT_Enable	0/1	[HCx] Lock	0 = Unlock; 1 = Lock
100, 112, 124, 136, 148,	1 Bit	I	C - W - -	DPT_Alarm	0/1	[HCx] Alarm	0 = No Alarm; 1 = Alarm

160, 172, 184	1 Bit	I	C - W - -	DPT_Alarm	0/1	[HCx] Alarm	0 = Alarm; 1 = No Alarm
101, 113, 125, 137, 149, 161, 173, 185	1 Bit	I	C - W - -	DPT_Alarm	0/1	[HCx] Alarm x	0 = No Alarm; 1 = Alarm
	1 Bit	I	C - W - -	DPT_Alarm	0/1	[HCx] Alarm x	0 = Alarm; 1 = No Alarm
102, 114, 126, 138, 150, 162, 174, 186	1 Bit	I	C - W - -	DPT_Ack	0/1	[HCx] Unfreeze Alarm	Alarm = No Alarm + Unfreeze (1) -> End Alarm
	1 Bit	I	C - W - -	DPT_Ack	0/1	[HCx] Unfreeze Alarm	Alarm = Alarm 2 = No Alarm + Unfreeze (1) -> End Alarm
103, 115, 127, 139, 151, 163, 175, 187	1 Bit	O	C R - T -	DPT_Bool	0/1	[HCx] Control Value - Error	0 = No Error; 1 = Error
104, 116, 128, 140, 152, 164, 176, 188	1 Bit	O	C R - T -	DPT_State	0/1	[HCx] Anti-Seize Protection	0 = Inactive; 1 = Active
105, 117, 129, 141, 153, 165, 177, 189	1 Bit	I	C - W - -	DPT_Switch	0/1	[HCx] Control Value - 1 bit	0 = Close Valve; 1 = Open Valve
	1 Bit	I	C - W - -	DPT_OpenClose	0/1	[HCx] Control Value - 1 bit	0 = Open Valve; 1 = Close Valve
106, 118, 130, 142, 154, 166, 178, 190	1 Bit	O	C R - T -	DPT_Switch	0/1	[HCx] Control Value - 1 bit (Status)	0 = Closed; 1 = Open
	1 Bit	O	C R - T -	DPT_OpenClose	0/1	[HCx] Control Value - 1 bit (Status)	0 = Open; 1 = Closed
107, 119, 131, 143, 155, 167, 179, 191	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[HCx] Control Value - 1 byte	0 - 100 %
108, 120, 132, 144, 156, 168, 180, 192	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[HCx] Control Value - 1 byte (Status)	0 - 100 %
193	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[Temperature Probe] Current Temperature	Temperature Sensor Value
194	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Temperature Probe] Overcooling	0 = No Alarm; 1 = Alarm
195	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Temperature Probe] Overheating	0 = No Alarm; 1 = Alarm
196	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Temperature Probe] Probe Error	0 = No Alarm; 1 = Alarm
197	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Thermostat] Scenes	0 – 63 (Execute 1 – 64); 128 – 191 (Save 1 – 64)
198	2 Bytes	I	C - W T U	DPT_Value_Temp	-273.00º - 670433.28º	[T1] Temperature Source 1	External Sensor Temperature
199	2 Bytes	I	C - W T U	DPT_Value_Temp	-273.00º - 670433.28º	[T1] Temperature Source 2	External Sensor Temperature
200	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[T1] Effective Temperature	Effective Control Temperature
201	1 Byte	I	C - W - -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[T1] Special Mode	1-Byte HVAC Mode
202	1 Bit	I	C - W - -	DPT_Ack	0/1	[T1] Special Mode: Comfort	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[T1] Special Mode: Comfort	0 = Off; 1 = On
203	1 Bit	I	C - W - -	DPT_Ack	0/1	[T1] Special Mode: Standby	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[T1] Special Mode: Standby	0 = Off; 1 = On
204	1 Bit	I	C - W - -	DPT_Ack	0/1	[T1] Special Mode: Economy	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[T1] Special Mode: Economy	0 = Off; 1 = On
205	1 Bit	I	C - W - -	DPT_Ack	0/1	[T1] Special Mode: Protection	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[T1] Special Mode: Protection	0 = Off; 1 = On
206	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[T1] Window Status (Input)	0 = Closed; 1 = Open

207	1 Bit	I	C - W - -	DPT_Trigger	0/1	[T1] Comfort Prolongation	0 = Nothing; 1 = Timed Comfort
208	1 Byte	O	C R - T -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[T1] Special Mode Status	1-Byte HVAC Mode
209	2 Bytes	I	C - W - -	DPT_Value_Temp	-273.00º - 670433.28º	[T1] Setpoint	Thermostat Setpoint Input
	2 Bytes	I	C - W - -	DPT_Value_Temp	-273.00º - 670433.28º	[T1] Basic Setpoint	Reference Setpoint
210	1 Bit	I	C - W - -	DPT_Step	0/1	[T1] Setpoint Step	0 = Decrease Setpoint; 1 = Increase Setpoint
211	2 Bytes	I	C - W - -	DPT_Value_Tempd	-671088.64º - 670433.28º	[T1] Setpoint Offset	Float Offset Value
212	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[T1] Setpoint Status	Current Setpoint
213	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[T1] Basic Setpoint Status	Current Basic Setpoint
214	2 Bytes	O	C R - T -	DPT_Value_Tempd	-671088.64º - 670433.28º	[T1] Setpoint Offset Status	Current Setpoint Offset
215	1 Bit	I	C - W - -	DPT_Reset	0/1	[T1] Setpoint Reset	Reset Setpoint to Default
	1 Bit	I	C - W - -	DPT_Reset	0/1	[T1] Offset Reset	Reset Offset
216	1 Bit	I	C - W - -	DPT_Heat_Cool	0/1	[T1] Mode	0 = Cool; 1 = Heat
217	1 Bit	O	C R - T -	DPT_Heat_Cool	0/1	[T1] Mode Status	0 = Cool; 1 = Heat
218	1 Bit	I	C - W - -	DPT_Switch	0/1	[T1] On/Off	0 = Off; 1 = On
219	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] On/Off Status	0 = Off; 1 = On
220	1 Bit	I/O	C R W - -	DPT_Switch	0/1	[T1] Main System (Cool)	0 = System 1; 1 = System 2
221	1 Bit	I/O	C R W - -	DPT_Switch	0/1	[T1] Main System (Heat)	0 = System 1; 1 = System 2
222	1 Bit	I	C - W - -	DPT_Enable	0/1	[T1] Enable/Disable Secondary System (Cool)	0 = Disable; 1 = Enable
223	1 Bit	I	C - W - -	DPT_Enable	0/1	[T1] Enable/Disable Secondary System (Heat)	0 = Disable; 1 = Enable
224, 230	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[T1] [Sx] Control Variable (Cool)	PI Control (Continuous)
225, 231	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[T1] [Sx] Control Variable (Heat)	PI Control (Continuous)
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[T1] [Sx] Control Variable	PI Control (Continuous)
226, 232	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] Control Variable (Cool)	2-Point Control
	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] Control Variable (Cool)	PI Control (PWM)
227, 233	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] Control Variable (Heat)	2-Point Control
	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] Control Variable (Heat)	PI Control (PWM)
	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] Control Variable	2-Point Control
	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] Control Variable	PI Control (PWM)
228, 234	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] PI State (Cool)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
229, 235	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] PI State (Heat)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
	1 Bit	O	C R - T -	DPT_Switch	0/1	[T1] [Sx] PI State	0 = PI Signal 0%; 1 = PI Signal Greater than 0%

Zennio

Join and send us your inquiries about Zennio devices:

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