

**Zennio®**



## **Presentia C v2**

**Presence Detector with Luminosity Sensor  
for Ceiling Mounting**

**ZPDC30LV2**

Application program version: [1.6]  
User manual edition: [1.6]\_a

[www.zennio.com](http://www.zennio.com)

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# DOCUMENT UPDATES

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Version	Changes	Page(s)
[1.6]_a	<b>Changes in the application program:</b> <ul style="list-style-type: none"><li>• New parameter to select lens colour.</li></ul>	-
[1.5]_a	<b>Changes in the application program:</b> <ul style="list-style-type: none"><li>• New functionality of Internal Temperature Sensor and Thermostat.</li></ul>	-
[1.4]_a	<b>Changes in the application program:</b> <ul style="list-style-type: none"><li>• Optimisation of Logic Functions and Presence Detector modules.</li></ul>	-

# 1 INTRODUCTION

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## 1.1 PRESENTIA C v2

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**Presentia C v2** from Zennio is a device that aims at, among other functions, the detection of presence, the measurement and control of the room luminosity and the detection of occupancy within the room where it has been installed. It has been designed for ceiling or false ceiling mounting by means of the bundled accessories.

The most outstanding features of Presentia C v2 are:

- **4 sensors** with configurable sensitivities.
- **4 LEDs** to indicate motion.
- **Presence detection:**
  - 6 presence detection channels.
  - Luminosity-dependent presence detection (optional).
  - Periodic and delayed sendings (binary, scene, HVAC, percentage).
- **Occupancy detection:**
  - 1x occupancy detection channel.
  - Master / slave configuration.
  - Trigger upon door opening or closing.
  - Periodic and delayed sendings (binary, scene, HVAC, percentage).
- **Luminosity measurement:**
  - Configurable correction factor and offset.
  - Periodic sending or upon value change.
- **2 constant light control** channels with configurable setpoints.
- **10 customisable, multi-operation logic functions.**

- **Internal Temperature Sensor.**
- **Thermostat.**
- **Heartbeat** or periodic “still alive” notification.
- **Day / night** configuration.

## 1.2 START-UP AND POWER LOSS

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During the start-up of the device, the Test/Prog. LED will blink in blue colour for one minute before the motion sensors are ready.

Depending on the configuration, some specific actions will also be performed during the start-up. For example, the integrator can set whether the detection channels should start up enabled or disabled. Please consult the next sections of this document for further details.

On the other hand, when a bus power failure takes place, the device will interrupt any pending actions, and will save its state so it can be recovered once the power supply is restored.

## 2 CONFIGURATION

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### 2.1 GENERAL

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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 window of the device.

#### ETS PARAMETERISATION

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From **General** screen it is possible to activate/deactivate all the required functionality.

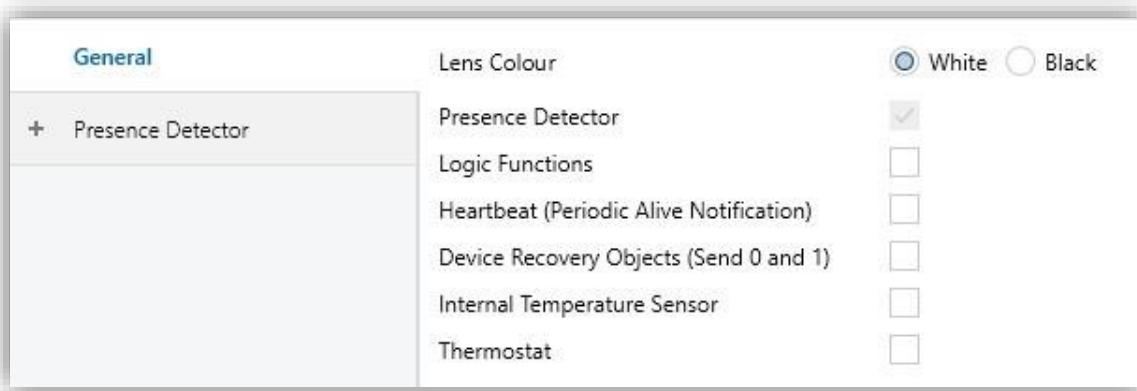


Figure 1. General

- **Lens Colour** [White / Black]: sets the colour of the lens of the device.

**Note:** if Black lens colour is selected, the detection LEDs in the “Presence Detector” tab will always be disabled.

- **Presence Detection** [enabled]<sup>1</sup>: enables the “Presence Detector” tab in the tree on the left. For more information, see section 2.2.
- **Logic Functions** [enabled / disabled]: enables or disables the “Logic Functions” tab in the tree on the left. For more information, see section 2.3.
- **Heartbeat (Periodic Alive Notification)** [enabled / disabled]: 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 (still alive).

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

**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.

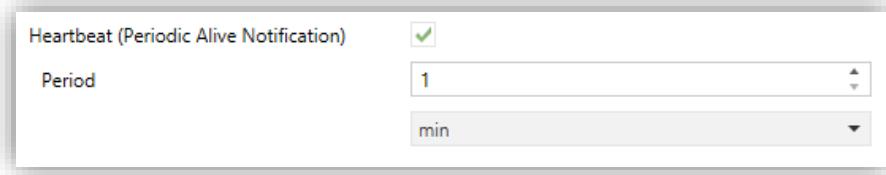


Figure 2. Heartbeat

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

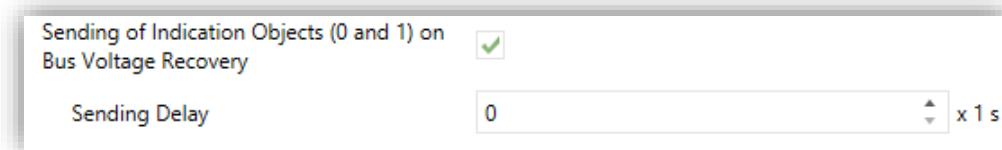


Figure 3. Sending of Indication objects on bus voltage recovery

**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 overload.

- **Internal Temperature Sensor [disabled / enabled]:** enables or disables the “Internal Temperature Sensor” tab. For more information, see section 2.4.
- **Thermostat [disabled / enabled]:** enables or disables the “Thermostat” tab. For more information, see section 2.5.
- **Scene after Download [Configured by Parameters / Keep Saved Scenes]:** 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.

## 2.2 PRESENCE DETECTOR

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Presentia C v2 incorporates six independent presence detection channels, two more for constant light control and one for occupancy detection.

- **Presence detection** consists in sending objects to the bus whenever the device observes a moving body (or no longer observes it) in the environment of the room where it has been installed.
- **Constant light control** consists in sending KNX orders to the dimmer device that controls the in-room luminaries, so the ambient light level remains constant even if other light sources are present.
- **Occupancy detection** is an algorithm that allows determining, through a multiple sensor configuration, whether a particular space is under occupation no matter if the occupant moves or not (i.e., no matter if the device is detecting presence in the room or not).

Please refer to the specific manual “**Presence Detector**” available in Presentia C v2 product section at the Zennio website ([www.zennio.com](http://www.zennio.com)) for detailed information about the functionality and the configuration of the related parameters.

## 2.3 LOGIC FUNCTIONS

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This module makes it possible to perform numeric and binary operations to incoming values received from the KNX bus, and to send the results through other communication objects specifically enabled for this purpose.

Presentia C v2 can implement up to **10 different and independent functions**, each of them entirely customisable and consisting of **up to 4 consecutive operations**.

The execution of each function can depend on a configurable **condition**, which will be evaluated every time the function is **triggered** through specific, parameterisable communication objects. The result after executing the operations of the function can also be evaluated according to certain **conditions** and afterwards sent (or not) to the KNX bus, which can be done every time the function is executed, periodically or only when the result differs from the last one.

Please refer to the “**Logic Functions**” user manual available under the Presentia C v2 product section at the Zennio homepage ([www.zennio.com](http://www.zennio.com)) for detailed information about the functionality and the configuration of the related parameters.

## 2.4 INTERNAL TEMPERATURE SENSOR

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The device is equipped with **an internal temperature sensor** for monitoring the ambient temperature of the room, so that the device can report it to the KNX bus and trigger several actions when the temperature reaches certain values.

Please refer to the specific documentation of the “**Temperature Probe**” available at the Zennio homepage, [www.zennio.com](http://www.zennio.com), for detailed information about the functionality and the configuration of the related parameters.

## 2.5 THERMOSTAT

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The device implements one **thermostat** which can be enabled and fully customised.

Please refer to the specific manual “**Zennio Thermostat**” (available in the product section at the Zennio website, [www.zennio.com](http://www.zennio.com)) for detailed information about the functionality and the configuration of the related parameters.

## ANNEX I. COMMUNICATION OBJECTS

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- “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		C - T -	DPT_Trigger	0/1	[Heartbeat] Object to Send '1'	Sending of '1' Periodically
2	1 Bit		C - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 0
3	1 Bit		C - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 1
4	1 Byte	I	C - W --	DPT_SceneNumber	0 - 63	Scene Input	Scene Value
5	1 Byte		C - T -	DPT_SceneControl	0-63; 128-191	Scene Output	Scene Value
6	2 Bytes	I/O	C R W --	DPT_Coefficient	0 - 100	Correction Factor - Internal Sensor	[0, 80] x0.1
8	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	Luminosity - Internal Sensor	%
12	1 Bit	I	C - W --	DPT_DayNight	0/1	Day/Night	0 = Day; 1 = Night
	1 Bit	I	C - W --	DPT_DayNight	0/1	Day/Night	0 = Night; 1 = Day
13	1 Bit	I	C - W --	DPT_Enable	0/1	Detection LEDs	0 = Disable; 1 = Enable
	1 Bit	I	C - W --	DPT_Enable	0/1	Detection LEDs	0 = Disable; 1 = Enable Only During the Day
	1 Bit	I	C - W --	DPT_Enable	0/1	Detection LED	0 = Disable; 1 = Enable
	1 Bit	I	C - W --	DPT_Enable	0/1	Detection LED	0 = Disable; 1 = Enable Only During the Day
14	1 Bit	O	C R - T -	DPT_Switch	0/1	Occupancy: Output (Binary)	Binary Value
			C - T -	DPT_Start	0/1	Occupancy: Slave Output	1 = Motion Detected
15	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	Occupancy: Output (Scaling)	0-100%
16	1 Byte	O	C R - T -	DPT_HVACMode	1=Confort 2=Standby 3=Económico 4=Protección	Occupancy: Output (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
17	1 Bit	I	C - W --	DPT_Window_Door	0/1	Occupancy: Trigger	Binary Value to Trigger the Occupancy Detection
18	1 Bit	I	C - W --	DPT_Start	0/1	Occupancy: Slave Input	1 = Detection from slave device
19	2 Bytes	I	C - W --	DPT_TimePeriodSec	0 - 65535	Occupancy: Waiting Time	0-65535 s.
20	2 Bytes	I	C - W --	DPT_TimePeriodSec	0 - 65535	Occupancy: Listening Time	1-65535 s.
21	1 Bit	I	C - W --	DPT_Enable	0/1	Occupancy: Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W --	DPT_Enable	0/1	Occupancy: Lock	0 = Lock; 1 = Unlock
22	1 Bit	O	C R - T -	DPT_Occupancy	0/1	Occupancy: Occupancy State	0 = Not Occupied; 1 = Occupied
23	1 Byte	I	C - W --	DPT_Scaling	0% - 100%	Sensor 1 Sensitivity	1-100%
	1 Byte	I	C - W --	DPT_Scaling	0% - 100%	Sensor Sensitivity	1-100%
24	1 Byte	I	C - W --	DPT_Scaling	0% - 100%	Sensor 2 Sensitivity	1-100%

25	1 Byte	I	<b>C - W --</b>	DPT_Scaling	0% - 100%	Sensor 3 Sensitivity	1-100%
26	1 Byte	I	<b>C - W --</b>	DPT_Scaling	0% - 100%	Sensor 4 Sensitivity	1-100%
27, 36, 45, 54, 63, 72	1 Bit	I	<b>C - W --</b>	DPT_Start	0/1	[Cx] External Motion Detection	1 = Motion detected by an external sensor
28, 37, 46, 55, 64, 73	1 Bit	O	<b>C R - T -</b>	DPT_Switch	0/1	[Cx] Output (Binary)	Binary Value
29, 38, 47, 56, 65, 74	1 Byte	O	<b>C R - T -</b>	DPT_Scaling	0% - 100%	[Cx] Output (Scaling)	0-100%
30, 39, 48, 57, 66, 75	1 Byte	O	<b>C R - T -</b>	DPT_HVACMode	1=Confort 2=Standby 3=Económico 4=Protección	[Cx] Output (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
31, 40, 49, 58, 67, 76	1 Bit	I	<b>C - W --</b>	DPT_Enable	0/1	[Cx] Lock Status	0 = Unlock; 1 = Lock
	1 Bit	I	<b>C - W --</b>	DPT_Enable	0/1	[Cx] Lock Status	0 = Lock; 1 = Unlock
32, 41, 50, 59, 68, 77	1 Bit	I	<b>C - W --</b>	DPT_Start	0/1	[Cx] Force State	0 = No Detection; 1 = Detection
33, 42, 51, 60, 69, 78	1 Bit	I	<b>C - W --</b>	DPT_Start	0/1	[Cx] External Switch	0 = No Detection; 1 = Detection
34, 43, 52, 61, 70, 79	2 Bytes	I/O	<b>C R W --</b>	DPT_TimePeriodSec	0 - 65535	[Cx] Length of Detection	1-65535 s.
81, 97	1 Bit	I	<b>C - W --</b>	DPT_Start	0/1	[CLCx] External Motion Detection	1 = Motion detected by an external sensor
82, 98	1 Bit	I	<b>C - W --</b>	DPT_Enable	0/1	[CLCx] Lock Status	0 = Unlock; 1 = Lock
	1 Bit	I	<b>C - W --</b>	DPT_Enable	0/1	[CLCx] Lock Status	0 = Lock; 1 = Unlock
83, 99	1 Bit	I	<b>C - W --</b>	DPT_Start	0/1	[CLCx] Force State	0 = No Detection; 1 = Detection
84, 100	1 Bit	I	<b>C - W --</b>	DPT_Start	0/1	[CLCx] External Switch	0 = No Detection; 1 = Detection
85, 101	2 Bytes	I	<b>C - W --</b>	DPT_Value_Lux		[CLCx] Setpoint	Setpoint Value (1-2000)
	2 Bytes	I	<b>C - W --</b>	DPT_Value_Lux		[CLCx] Setpoint During Day	Setpoint Value (1-2000)
86, 102	1 Byte	I	<b>C - W --</b>	DPT_Scaling	0% - 100%	[CLCx] Setpoint	Setpoint Value (1-100)%
87, 103	1 Byte	I	<b>C - W --</b>	DPT_Scaling	0% - 100%	[CLCx] Setpoint During Day	Setpoint Value (1-100)%
88, 104	2 Bytes	I/O	<b>C R W --</b>	DPT_Value_Lux		[CLCx] Setpoint During Night	Setpoint Value (1-2000)
89, 105	1 Byte	I	<b>C - W --</b>	DPT_Scaling	0% - 100%	[CLCx] Setpoint During Night	Setpoint Value (1-100)%
90, 106	1 Bit	I	<b>C - W --</b>	DPT_Switch	0/1	[CLCx] Manual Control: On/Off (Input)	1-Bit Control
91, 107	4 Bit	I	<b>C - W --</b>	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) ... 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) ... 0xF (Subir 1%)	[CLCx] Manual Control: Relative Dimming (Input)	4-Bit Control
92, 108	1 Byte	I	<b>C - W --</b>	DPT_Scaling	0% - 100%	[CLCx] Manual Control: Absolute Dimming (Input)	1-Byte Control
93, 109	1 Bit	O	<b>C R - T -</b>	DPT_Switch	0/1	[CLCx] Manual Control: On/Off (Output)	1-Bit Control
94, 110	4 Bit	O	<b>C R - T -</b>	DPT_Control_Dimming	0x0 (Detener)	[CLCx] Manual Control: Relative	4-Bit Control

					0x1 (Reducir 100%) ... 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) ... 0xF (Subir 1%)	Dimming (Output)	
95, 111	1 Bit	I	C - W --	DPT_Enable	0/1	[CLCx] Manual Control	0 = Disable; 1 = Enable
96, 112	1 Bit	O	C R - T -	DPT_Enable	0/1	[CLCx] Manual Control (Status)	0 = Disabled; 1 = Enabled
113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144	1 Bit	I	C - W --	DPT_Bool	0/1	[LF] (1-Bit) Data Entry x	Binary Data Entry (0/1)
145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160	1 Byte	I	C - W --	DPT_Value_1_Ucount	0 - 255	[LF] (1-Byte) Data Entry x	1-Byte Data Entry (0-255)
161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176	2 Bytes	I	C - W --	DPT_Value_2_Ucount	0 - 65535	[LF] (2-Byte) Data Entry x	2-Byte Data Entry
177, 178, 179, 180, 181, 182, 183, 184	4 Bytes	I	C - W --	DPT_Value_4_Count	-2147483648 - 2147483647	[LF] (4-Byte) Data Entry x	4-Byte Data Entry
185, 186, 187, 188, 189, 190, 191, 192, 193, 194	1 Bit	O	C R - T -	DPT_Bool	0/1	[LF] Function x - Result	(1-Bit) Boolean
	1 Byte	O	C R - T -	DPT_Value_1_Ucount	0 - 255	[LF] Function x - Result	(1-Byte) Unsigned
	2 Bytes	O	C R - T -	DPT_Value_2_Ucount	0 - 65535	[LF] Function x - Result	(2-Byte) Unsigned
	4 Bytes	O	C R - T -	DPT_Value_4_Count	-2147483648 - 2147483647	[LF] Function x - Result	(4-Byte) Signed
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[LF] Function x - Result	(1-Byte) Percentage
	2 Bytes	O	C R - T -	DPT_Value_2_Count	-32768 - 32767	[LF] Function x - Result	(2-Byte) Signed
	2 Bytes	O	C R - T -	9.xxx	-671088,64 - 670433,28	[LF] Function x - Result	(2-Byte) Float
195	2 Bytes	O	C R - T -	DPT_Value_Temp	-273,00° - 670433,28°	[Internal Probe] Current Temperature	Temperature Sensor Value
196	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Internal Probe] Overcooling	0 = No Alarm; 1 = Alarm
197	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Internal Probe] Overheating	0 = No Alarm; 1 = Alarm
198	1 Byte	I	C - W --	DPT_SceneControl	0-63; 128-191	[Thermostat] Scenes	0 - 63 (Execute 1 - 64); 128 - 191 (Save 1 - 64)
199	2 Bytes	I	C - W T U	DPT_Value_Temp	-273,00° - 670433,28°	[Tx] Temperature Source 1	External Sensor Temperature
200	2 Bytes	I	C - W T U	DPT_Value_Temp	-273,00° - 670433,28°	[Tx] Temperature Source 2	External Sensor Temperature
201	2 Bytes	O	C R - T -	DPT_Value_Temp	-273,00° - 670433,28°	[Tx] Effective Temperature	Effective Control Temperature
202	1 Byte	I	C - W --	DPT_HVACMode	1=Confort 2=Standby 3=Económico 4=Protección	[Tx] Special Mode	1-Byte HVAC Mode
203	1 Bit	I	C - W --	DPT_Ack	0/1	[Tx] Special Mode: Comfort	0 = Nothing; 1 = Trigger

	1 Bit	I	<b>C - W --</b>	DPT_Switch	0/1	[Tx] Special Mode: Comfort	0 = Off; 1 = On
204	1 Bit	I	<b>C - W --</b>	DPT_Ack	0/1	[Tx] Special Mode: Standby	0 = Nothing; 1 = Trigger
	1 Bit	I	<b>C - W --</b>	DPT_Switch	0/1	[Tx] Special Mode: Standby	0 = Off; 1 = On
205	1 Bit	I	<b>C - W --</b>	DPT_Ack	0/1	[Tx] Special Mode: Economy	0 = Nothing; 1 = Trigger
	1 Bit	I	<b>C - W --</b>	DPT_Switch	0/1	[Tx] Special Mode: Economy	0 = Off; 1 = On
206	1 Bit	I	<b>C - W --</b>	DPT_Ack	0/1	[Tx] Special Mode: Protection	0 = Nothing; 1 = Trigger
	1 Bit	I	<b>C - W --</b>	DPT_Switch	0/1	[Tx] Special Mode: Protection	0 = Off; 1 = On
207	1 Bit	I	<b>C - W --</b>	DPT_Window_Door	0/1	[Tx] Window Status (Input)	0 = Closed; 1 = Open
208	1 Bit	I	<b>C - W --</b>	DPT_Trigger	0/1	[Tx] Comfort Prolongation	0 = Nothing; 1 = Timed Comfort
209	1 Byte	O	<b>CR - T -</b>	DPT_HVACMode	1=Confort 2=Standby 3=Económico 4=Protección	[Tx] Special Mode Status	1-Byte HVAC Mode
210	2 Bytes	I	<b>C - W --</b>	DPT_Value_Temp	-273,00° - 670433,28°	[Tx] Setpoint	Thermostat Setpoint Input
	2 Bytes	I	<b>C - W --</b>	DPT_Value_Temp	-273,00° - 670433,28°	[Tx] Basic Setpoint	Reference Setpoint
211	1 Bit	I	<b>C - W --</b>	DPT_Step	0/1	[Tx] Setpoint Step	0 = Decrease Setpoint; 1 = Increase Setpoint
212	2 Bytes	I	<b>C - W --</b>	DPT_Value_Tempd	-671088,64° - 670433,28°	[Tx] Setpoint Offset	Float Offset Value
213	2 Bytes	O	<b>CR - T -</b>	DPT_Value_Temp	-273,00° - 670433,28°	[Tx] Setpoint Status	Current Setpoint
214	2 Bytes	O	<b>CR - T -</b>	DPT_Value_Temp	-273,00° - 670433,28°	[Tx] Basic Setpoint Status	Current Basic Setpoint
215	2 Bytes	O	<b>CR - T -</b>	DPT_Value_Tempd	-671088,64° - 670433,28°	[Tx] Setpoint Offset Status	Current Setpoint Offset
216	1 Bit	I	<b>C - W --</b>	DPT_Reset	0/1	[Tx] Setpoint Reset	Reset Setpoint to Default
	1 Bit	I	<b>C - W --</b>	DPT_Reset	0/1	[Tx] Offset Reset	Reset Offset
217	1 Bit	I	<b>C - W --</b>	DPT_Heat_Cool	0/1	[Tx] Mode	0 = Cool; 1 = Heat
218	1 Bit	O	<b>CR - T -</b>	DPT_Heat_Cool	0/1	[Tx] Mode Status	0 = Cool; 1 = Heat
219	1 Bit	I	<b>C - W --</b>	DPT_Switch	0/1	[Tx] On/Off	0 = Off; 1 = On
220	1 Bit	O	<b>CR - T -</b>	DPT_Switch	0/1	[Tx] On/Off Status	0 = Off; 1 = On
221	1 Bit	I/O	<b>CRW - -</b>	DPT_Switch	0/1	[Tx] Main System (Cool)	0 = System 1; 1 = System 2
222	1 Bit	I/O	<b>CRW - -</b>	DPT_Switch	0/1	[Tx] Main System (Heat)	0 = System 1; 1 = System 2
223	1 Bit	I	<b>C - W --</b>	DPT_Enable	0/1	[Tx] Enable/Disable Secondary System (Cool)	0 = Disable; 1 = Enable
224	1 Bit	I	<b>C - W --</b>	DPT_Enable	0/1	[Tx] Enable/Disable Secondary System (Heat)	0 = Disable; 1 = Enable
225, 231	1 Byte	O	<b>CR - T -</b>	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable (Cool)	PI Control (Continuous)
226, 232	1 Byte	O	<b>CR - T -</b>	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable (Heat)	PI Control (Continuous)
	1 Byte	O	<b>CR - T -</b>	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable	PI Control (Continuous)
227, 233	1 Bit	O	<b>CR - T -</b>	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Cool)	2-Point Control
	1 Bit	O	<b>CR - T -</b>	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Cool)	PI Control (PWM)
228, 234	1 Bit	O	<b>CR - T -</b>	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Heat)	2-Point Control
	1 Bit	O	<b>CR - T -</b>	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Heat)	PI Control (PWM)
	1 Bit	O	<b>CR - T -</b>	DPT_Switch	0/1	[Tx] [Sx] Control Variable	2-Point Control
	1 Bit	O	<b>CR - T -</b>	DPT_Switch	0/1	[Tx] [Sx] Control Variable	PI Control (PWM)

229, 235	1 Bit	O	<b>CR-T-</b>	DPT_Switch	0/1	[Tx] [Sx] PI State (Cool)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
230, 236	1 Bit	O	<b>CR-T-</b>	DPT_Switch	0/1	[Tx] [Sx] PI State (Heat)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
	1 Bit	O	<b>CR-T-</b>	DPT_Switch	0/1	[Tx] [Sx] PI State	0 = PI Signal 0%; 1 = PI Signal Greater than 0%



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