



MicroBOX 22 / MicroBOX 12

**Multifunction Actuator with 1 or 2 Outputs and 2 Inputs
with KNX Secure**

ZIOMCB22

ZIOMCB12

Application program version: [2.3]

User manual edition: [2.3]_a

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1 INTRODUCTION

1.1 MICROBOX 12 / 22

MicroBOX 12 and **MicroBOX 22** from Zennio are two versatile **KNX Secure** actuators featuring a wide variety of functions, being both entirely equivalent except for the number of individual binary outputs available (two in MicroBOX 22 and one in MicroBOX 12) and of the inclusion of the shutter functional block in the MicroBOX 22.

The most outstanding features are:

- **2 / 1 relay outputs**, respectively, configurable as:
 - **1 Independent shutter channel** (with or without slats), available only on the MicroBOX 22,
 - Up to **2 / 1 individual ON/OFF outputs**,
- **2 multi-purpose inputs**, configurable as:
 - Temperature probes (possibility to parameterise a custom probe),
 - Binary inputs (i.e., pushbuttons, switches, sensors),
 - Motion detectors.
- **10 customisable, multi-operation logic functions.**
- **4 independent thermostats.**
- **Scene-triggered action control**, with an optional delay in the execution.
- **Manual operation / supervision** of the relay outputs through the on-board pushbuttons and LEDs.
- **Heartbeat** or periodical “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).

1.2 START-UP AND POWER LOSS

During the start-up of the device, the Test/Prog. LED will blink in blue colour for a few seconds before the device is ready. External orders will not be executed during this time, but afterwards.

Depending on the configuration, some specific actions will also be performed during the start-up. For example, the integrator can set whether the output channels should switch to a particular state and whether the device should send certain objects to the bus after the power recovery. 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.

For safety reasons, the **shutter channel** will be stopped (i.e., the relays will open) if a power loss takes place, while the individual outputs will switch to the specific state configured in ETS (if any).

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

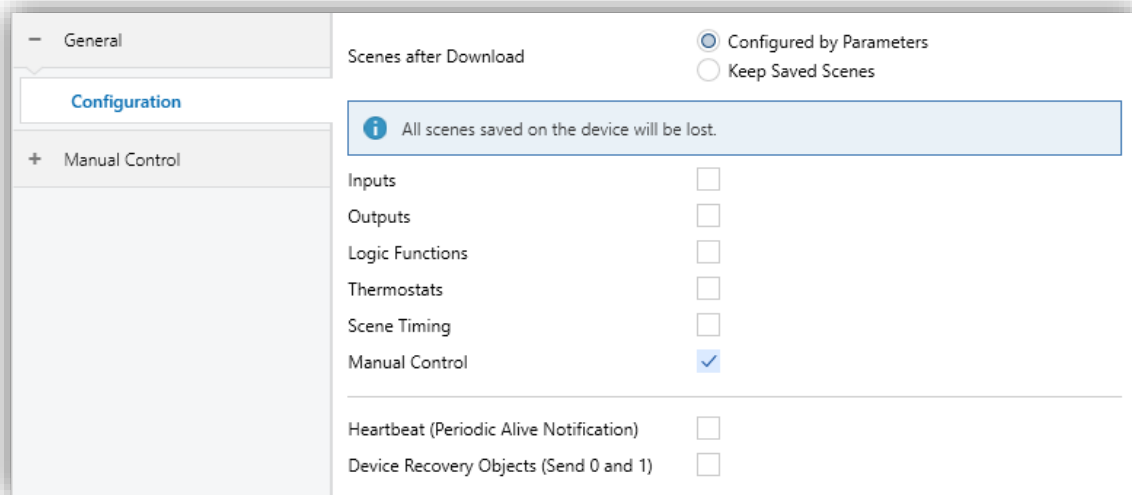


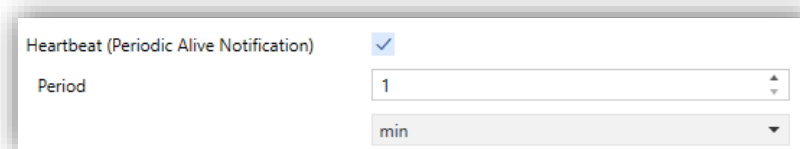
Figure 1. General Screen

- **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.

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

- **Inputs** [[disabled](#) / [enabled](#)]: enables o disables the “Inputs” tab on the left menu. See section 2.2 for more details.
- **Outputs** [[disabled](#) / [enabled](#)]: enables o disables the “Outputs” tab on the left menu. See section 2.3 for more details.
- **Logic Functions** [[disabled](#) / [enabled](#)]: enables o disables the “Logic Functions” tab on the left menu. See section 2.4 for more details.
- **Thermostat** [[disabled](#) / [enabled](#)]: enables o disables the “Thermostats” tab on the left menu. See section 2.5 for more details.
- **Scene Timing** [[disabled](#) / [enabled](#)]: enables o disables the “Scene Timing” tab on the left menu. See section 2.6 for more details.
- **Manual control** [[disabled](#) / [enabled](#)]: enables o disables the “Manual Control” tab on the left menu. See section 2.7 for more details.
- **Heartbeat (Periodic Alive Notification)** [[disabled](#) / [enabled](#)]: 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*).



Heartbeat (Periodic Alive Notification) ☒

Period

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.

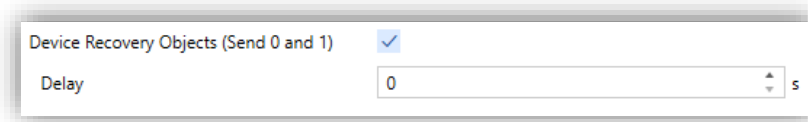


Figure 3. Device Recovery Objects

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 INPUTS

MicroBOX 12 / 22 actuators incorporate **two analogue-digital input ports**. The possible configurations are described below.

2.2.1 BINARY INPUT

Configuration for the connection of a pushbutton or a switch/sensor. Please refer to the “**Binary Inputs**” user manual, available under the product section at www.zennio.com for detailed information about the functionality and the configuration of the related parameters.

2.2.2 TEMPERATURE PROBE

Configuration for the connection of a temperature sensor from Zennio. Please refer to the “**Temperature Probe**” user manual, available under the product section at www.zennio.com for detailed information about the functionality and the configuration of the related parameters.

2.2.3 MOTION DETECTOR

Zennio motion and light detectors can be connected to the input ports available on the actuators. Please refer to the “**Motion Detector**” user manual, available under the product section at www.zennio.com, for detailed information about the functionality and the configuration of the related parameters.

2.3 OUTPUTS

MicroBOX 12 / 22 actuators incorporate **1 / 2 relay outputs**. The possible configurations are described below.

2.3.1 INDIVIDUAL BINARY OUTPUT

Independent control of a load. Between 1 and 2 outputs can be controlled, depending on the device.

Please refer to the “**Individual Binary Outputs**” user manual, available under the product section at www.zennio.com, for detailed information about the functionality and the configuration of the related parameters.

2.3.2 SHUTTER CHANNEL

Configuration for controlling shutter movement (with or without slats). One independent shutter channel can be controlled (only on the MicroBOX 22, since each channel requires two relay outputs).

Please refer to the “**Shutter Channels**” user manual, available under the product section at www.zennio.com, for detailed information about the functionality and the configuration of the related parameters.

2.4 LOGIC FUNCTIONS

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.

It may be implemented until **10 different and independent logical functions** can be implemented, which are fully customisable and consist of a **maximum of 4 consecutive operations for each one**.

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 product section at the Zennio homepage (www.zennio.com), for detailed information about the functionality and the configuration of the related parameters.

2.5 THERMOSTATS

The devices implement **four Zennio thermostats** which can be enabled and configured independently.

Please refer to the specific “**Zennio Thermostat**” user manual available under the product section at the Zennio homepage (www.zennio.com), for detailed information about the functionality and the configuration of the related parameters.

2.6 SCENE TIMING

The scene timing allows imposing **delays over the scenes of the outputs**. These delays are defined in parameters and can be applied to the execution of one or more scenes that may have been configured.

Please bear in mind that, as multiple delayed scenes can be configured for each individual output / shutter channel, in case of receiving an order to execute one of them when a previous temporisation is still pending for that output / channel, such temporisation will be interrupted and only the delay and the action of the new scene will be executed.

ETS PARAMETERISATION

Prior to setting the **scene timing**, it is necessary to have one or more scenes configured in some of the outputs. When entering the Configuration window under Scene Timing, all configured scenes will be listed, together with a few checkboxes to select which of them need to be temporised, as shown in Figure 4.

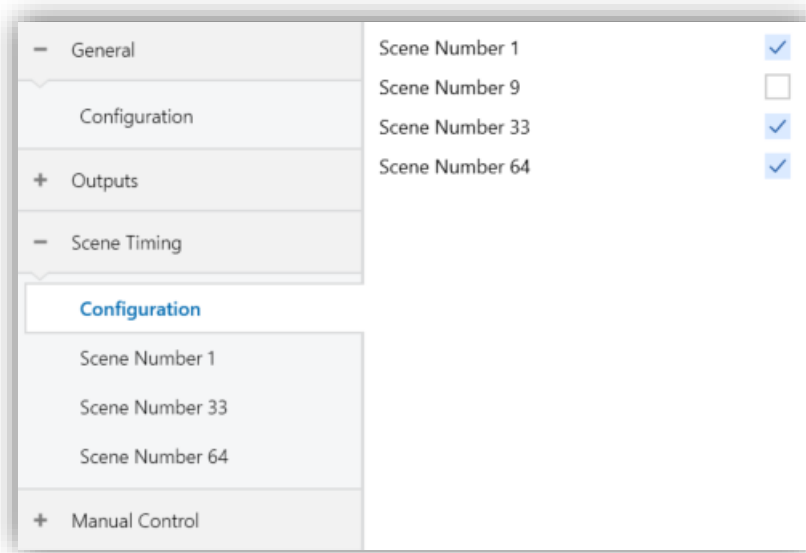


Figure 4. Scene timing

Enabling a certain scene number n brings a new tab with such name to the menu on the left, from which it is possible to configure the temporisation of that scene for each of the outputs where it has been configured.

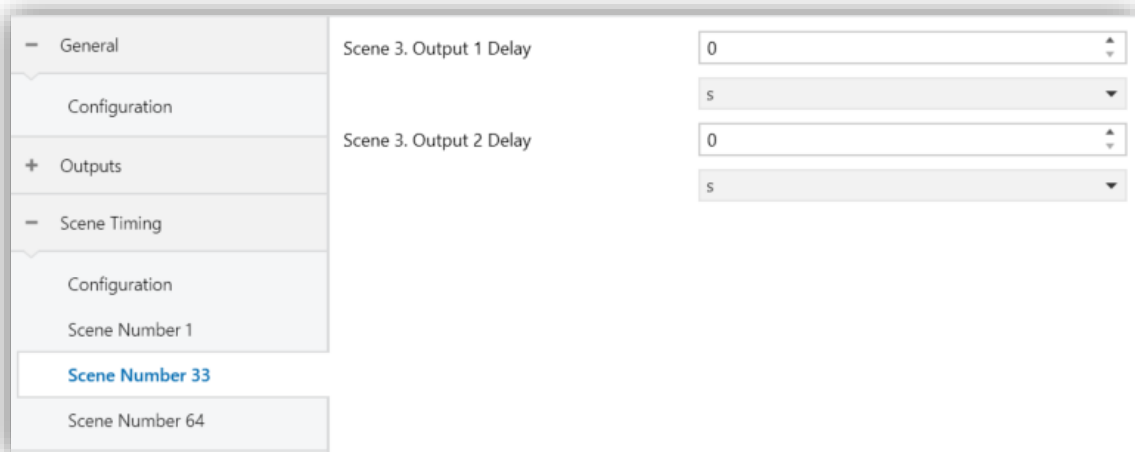


Figure 5. Configuration of Scene Timing

Therefore, parameter “**Scene m. Z Delay**” [$0...3600$ [s] / $0...1440$ [min] / $0...24$ [h]], defines the delay that will be applied to the action defined in Z for the execution of scene m (where Z may be a specific individual output, shutter channel).

Note: in the configuration of a scene of an output / shutter channel it is possible to parameterize several scenes with the same scene number. This means that several delay parameters associated with the same output appear in the configuration tab of the delays of that scene. With this parameterization, the behaviour will be as follows: the action and delay of the first scene parameterized with the same scene number will

always prevail, where the highest priority scene is 1 (the first in the scene configuration tab) and the lowest priority is the last.

2.7 MANUAL CONTROL

The device allows manually switching the state of its output relays through the respective pushbuttons on the top of the device. A specific pushbutton is therefore available per output.

Manual operation can be done in two different ways, named as **Test On mode** (for testing purposes during the configuration of the device) and **Test Off mode** (for a normal use, anytime). Whether both, only one, or none of these modes should be accessible needs to be parameterised in ETS. Moreover, it is possible to enable a specific binary object for locking and unlocking the manual control in runtime.

Notes:

- *The **Test Off mode** will be active (unless it has been disabled by parameter) after a download or a reset with no need of a specific activation – the pushbuttons will respond to user presses from the start.*
- *On the contrary, switching to the **Test On mode** (unless disabled by parameter) needs to be done by long pressing the Prog/Test button (for at least three seconds), until the LED is no longer red and turns yellow. From that moment, once the button is released, the LED light will remain green to confirm that the device has switched from the Test Off mode to the Test On mode. After that, an additional press will turn the LED yellow and then off, once the button is released. This way, the device leaves the Test On mode. Note that it will also leave this mode if a bus power failure takes place or if a manual control lock is sending from KNX bus.*

Test Off Mode

Under the Test Off Mode, the outputs can be controlled through both their communication objects and the actual pushbuttons located on the top of the device.

When one of these buttons is pressed, the output will behave as if an order had been received through the corresponding communication object, depending on whether the output is configured as either an individual output or as a shutter channel.

- **Individual output:** a simple press (short or long) will make the output switch its on-off state, which will be reported to the KNX bus through the corresponding status object, if enabled.
- **Shutter Channel:** when the button is pressed, the device will act over the output according to the length of the button press and to the current state.
 - A **long press** makes the shutter start moving (upwards or downwards, depending on the button being pressed). The LED will light in green until the end of the motion. If the button gets pressed being the shutter already at the top or bottom positions, nothing will happen (the LED will not light).
 - A **short press** will make the shutter drive stop (if in motion), as it normally does when a step/stop order is received from the KNX bus. In case of not being the shutter in motion, pressing the button does not cause any action, unless slats/lamellas have been parameterized – in such case, a step movement (up/down, depending on the button pressed) will take place. The status objects will be sent to the bus when corresponding.
- **Disabled output:** outputs disabled by parameter will not react to button presses under the Test Off mode.

Regarding the lock, timer, alarm and scene functions, the device will behave under the Test Off mode as usual. Button presses during this mode are entirely analogous to the reception of the corresponding orders from the KNX bus.

Test On Mode

After entering the Test On mode, it will only be possible to control the outputs through the on-board pushbuttons. Orders received through communication objects will be ignored, with independence of the channel or the output they are addressed to.

Depending on whether the output has been parameterized as an individual output or as part of a shutter channel, the reactions to the button presses will differ.

- **Individual output:** short or long pressing the button will commute the on-off state of the relay.
- **Shutter channel:** pressing the button will make the shutter drive move upward or downward (depending on the button) until the button is released again, thus ignoring the position of the shutter and the parameterized times. For safety reasons, only one closed relay per shutter channel is allowed.

Note: *after leaving the Test On mode, the status objects will recover the values they had prior to entering Test On. As the device is never aware of the actual position of the shutter (as the shutter drive does not provide any feedback), these values may not show the real position. This can be solved by performing a complete move-up or move-down order, or by calibrating the shutter position in the Test On mode until it matches the status objects.*

- **Disabled output:** short and long presses will switch the state of the corresponding relay. In case this consists in closing the relay, then the remaining relays of its block will open, for safety reasons.

As described previously if the device is in Test On mode, any command sent from the KNX bus to the actuator will not affect the outputs and no status objects will be sent (only periodically timed objects such as Heartbeat, logic functions or master light will continue to be sent to the bus) while Test ON mode is active. However, in the case of the "Alarm" and "Block" objects, although in Test ON mode the actions received by each object are not considered, the evaluation of their status is carried out when exiting this mode, so that any change in the alarm status or blocking of the outputs while Test ON mode is active is taken into account when exiting this mode and is updated with the last status detected.

Important: the device is delivered from factory with all the outputs disabled, and with both manual modes (Test Off and Test On) enabled.

ETS PARAMETERISATION

After enabling 'Manual Control' on the General screen (see section 2.7), a new tab is added to the tree on the left.

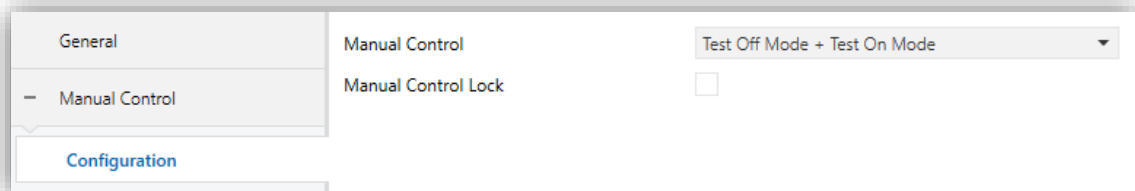


Figure 6. Manual Control

The only two parameters are:

- **Manual Control** [Disabled / Only Test Off Mode / Only Test On Mode / Test Off Mode + Test On Mode]: Depending on the selection, the device will permit using the manual control under the Test Off, the Test On, or both modes. Note that, as stated before, using the Test Off mode does not require any special action, while switching to the Test On mode does require long pressing the Prog/Test button.
- **Manual Control Lock** [enabled / disabled]: unless the above parameter has been "Disabled," the Lock Manual Control parameter provides an optional procedure for locking the manual control in runtime. When this checkbox is enabled, object "**Manual Control Lock**" turns visible, as well as two more parameters:
 - **Value** [0 = Lock; 1 = Unlock / 0 = Unlock; 1 = Lock]: defines whether the manual control lock/unlock should take place respectively upon the reception (through the aforementioned object) of values "0" and "1", or the opposite.
 - **Initialization** [Unlocked / Locked / Last Value]: sets how the lock state of the manual control should remain after the device start-up (after an ETS download or a bus power failure). "Last Value" (default; on the very first start-up, this will be Unlocked).

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.
- Please note that **the full object table corresponds to the MicroBOX 22**, as it is the device with the greatest number of instances. The MicroBOX 12 will not include certain communication objects, since it has fewer outputs and therefore does not support shutter-related functionality.

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 Bit	I	C - W - -	DPT_Enable	0/1	Lock Manual Control	0 = Lock; 1 = Unlock
	1 Bit	I	C - W - -	DPT_Enable	0/1	Lock Manual Control	0 = Unlock; 1 = Lock
5	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Thermostat] Scenes	0 - 63 (Execute 1 - 64); 128 - 191 (Save 1 - 64)
6, 57	2 Bytes	I	C - W T U	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Temperature Source 1	External Sensor Temperature
7, 58	2 Bytes	I	C - W T U	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Temperature Source 2	External Sensor Temperature
8, 59	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Effective Temperature	Effective Control Temperature
9, 60	1 Byte	I	C - W - -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Tx] Special Mode	1-Byte HVAC Mode
10, 61	1 Bit	I	C - W - -	DPT_Ack	0/1	[Tx] Special Mode: Comfort	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] Special Mode: Comfort	0 = Off; 1 = On
11, 62	1 Bit	I	C - W - -	DPT_Ack	0/1	[Tx] Special Mode: Standby	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] Special Mode: Standby	0 = Off; 1 = On
12, 63	1 Bit	I	C - W - -	DPT_Ack	0/1	[Tx] Special Mode: Economy	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] Special Mode: Economy	0 = Off; 1 = On
13, 64	1 Bit	I	C - W - -	DPT_Ack	0/1	[Tx] Special Mode: Protection	0 = Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] Special Mode: Protection	0 = Off; 1 = On
14, 65	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Tx] Comfort Prolongation	0 = Nothing; 1 = Timed Comfort
15, 66	1 Byte	O	C R - T -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Tx] Special Mode Status	1-Byte HVAC Mode
16, 67	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[Tx] Window Status 1 (Input)	0 = Closed; 1 = Open

17, 68	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[Tx] Window Status 2 (Input)	0 = Closed; 1 = Open
18, 69	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[Tx] Window Status 3 (Input)	0 = Closed; 1 = Open
19, 70	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[Tx] Window Status 4 (Input)	0 = Closed; 1 = Open
20, 71	2 Bytes	I	C - W - -	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Setpoint	Thermostat Setpoint Input
	2 Bytes	I	C - W - -	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Basic Setpoint	Reference Setpoint
21, 72	1 Bit	I	C - W - -	DPT_Step	0/1	[Tx] Setpoint Step	0 = Decrease Setpoint; 1 = Increase Setpoint
22, 73	2 Bytes	I	C - W - -	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Setpoint Shift Offset	Float Shift Offset Value
23, 74	2 Bytes	O	CR - T -	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Setpoint Status	Current Setpoint
24, 75	2 Bytes	O	CR - T -	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Basic Setpoint Status	Current Basic Setpoint
25, 76	2 Bytes	O	CR - T -	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Setpoint Shift Offset Status	Current Setpoint Shift Offset
26, 77	1 Bit	I	C - W - -	DPT_Reset	0/1	[Tx] Setpoint Reset	Reset Setpoint to Default
	1 Bit	I	C - W - -	DPT_Reset	0/1	[Tx] Shift Offset Reset	Reset Shift Offset
27, 78	2 Bytes	I/O	CRWTU	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Comfort Setpoint (Cooling)	[-20°C, 100°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Comfort Shift Offset (Cooling)	[-10°C, 10°C]
28, 79	2 Bytes	I/O	CRWTU	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Standby Setpoint (Cooling)	[-20°C, 100°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Standby Shift Offset (Cooling)	[-10°C, 10°C]
29, 80	2 Bytes	I/O	CRWTU	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Economy Setpoint (Cooling)	[-20°C, 100°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Economy Shift Offset (Cooling)	[-10°C, 10°C]
30, 81	2 Bytes	I/O	CRWTU	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Comfort Setpoint (Heating)	[-20°C, 100°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Comfort Shift Offset (Heating)	[-10°C, 10°C]
31, 82	2 Bytes	I/O	CRWTU	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Standby Setpoint (Heating)	[-20°C, 100°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Standby Shift Offset (Heating)	[-10°C, 10°C]
32, 83	2 Bytes	I/O	CRWTU	DPT_Value_Temp	-273.00° - 670433.28°	[Tx] Economy Setpoint (Heating)	[-20°C, 100°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Economy Shift Offset (Heating)	[-10°C, 10°C]
33, 84	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Lower Dead Band (Only for Comfort Mode)	Automatic H/C Mode Changeover Band [0°C, 10°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Lower Dead Band	Automatic H/C Mode Changeover Band [0°C, 10°C]
34, 85	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Upper Dead Band (Only for Comfort Mode)	Automatic H/C Mode Changeover Band [0°C, 10°C]
	2 Bytes	I/O	CRWTU	DPT_Value_Tempd	-671088.64° - 670433.28°	[Tx] Upper Dead Band	Automatic H/C Mode Changeover Band [0°C, 10°C]
35, 86	1 Bit	I	C - W - -	DPT_Heat_Cool	0/1	[Tx] Simplified Mode	0 = Cool; 1 = Heat
36, 87	1 Bit	O	CR - T -	DPT_Heat_Cool	0/1	[Tx] Simplified Mode Status	0 = Cool; 1 = Heat
37, 88	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] On/Off	0 = Off; 1 = On
38, 89	1 Bit	O	CR - T -	DPT_Switch	0/1	[Tx] On/Off Status	0 = Off; 1 = On
39, 90	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] Force Secondary System (Cool)	0 = Off; 1 = On
40, 91	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] Force Secondary System (Heat)	0 = Off; 1 = On
41, 92	1 Byte	I	C - W - -	DPT_ChangeoverMode		[Tx] Mode	0 = Auto; 1 = Cool; 2 = Heat
42, 93	1 Byte	O	CR - T -	DPT_ChangeoverMode		[Tx] Mode Status	0 = Auto; 1 = Cool; 2 = Heat

43, 94	1 Byte	I/O	CRWTU	1.xxx	0/1	[Tx] System Selector (Cool)	0 = S1 (Main) / S2 (Additional); 1 = Only S1; 2 = Only S2; 3 = S2 (Main) / S1 (Additional)
	1 Byte	I/O	CRWTU	1.xxx	0/1	[Tx] System Selector (Cool)	0 = S2 (Main) / S1 (Additional); 1 = Only S1; 2 = Only S2; 3 = S1 (Main) / S2 (Additional)
44, 95	1 Byte	I/O	CRWTU	1.xxx	0/1	[Tx] System Selector (Heat)	0 = S1 (Main) / S2 (Additional); 1 = Only S1; 2 = Only S2; 3 = S2 (Main) / S1 (Additional)
	1 Byte	I/O	CRWTU	1.xxx	0/1	[Tx] System Selector (Heat)	0 = S2 (Main) / S1 (Additional); 1 = Only S1; 2 = Only S2; 3 = S1 (Main) / S2 (Additional)
45, 51, 96, 102	1 Byte	O	CR-T-	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable (Cool)	PI Control (Continuous)
46, 52, 97, 103	1 Byte	O	CR-T-	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable (Heat)	PI Control (Continuous)
	1 Byte	O	CR-T-	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable	PI Control (Continuous)
47, 53, 98, 104	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Cool)	2-Point Control
	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Cool)	PI Control (PWM)
48, 54, 99, 105	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Heat)	2-Point Control
	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Heat)	PI Control (PWM)
	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] Control Variable	2-Point Control
	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] Control Variable	PI Control (PWM)
49, 55, 100, 106	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] PI State (Cool)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
50, 56, 101, 107	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] PI State (Heat)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
	1 Bit	O	CR-T-	DPT_Switch	0/1	[Tx] [Sx] PI State	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
290, 294	2 Bytes	O	CR-T-	DPT_Value_Temp	-273.00° - 670433.28°	[Ix] Current Temperature	Temperature Sensor Value
291, 295	1 Bit	O	CR-T-	DPT_Alarm	0/1	[Ix] Overcooling	0 = No Alarm; 1 = Alarm
292, 296	1 Bit	O	CR-T-	DPT_Alarm	0/1	[Ix] Overheating	0 = No Alarm; 1 = Alarm
293, 297	1 Bit	O	CR-T-	DPT_Alarm	0/1	[Ix] Probe Error	0 = No Alarm; 1 = Alarm
322, 331	1 Bit	I	C-W--	DPT_Enable	0/1	[Ix] Input Lock	0 = Unlock; 1 = Lock
323, 332	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-WT-	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	I	C-WT-	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	I	C - W 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	I	C - W 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 On/Off	0/1
1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Short Press] Light Off	Sending of 0 (Off)
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 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
1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0	Sending of 0
1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 1	Sending of 1
1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0/1 Switching	Switching 0/1
1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Rising Edge] Move Up Shutter	Sending of 0 (Up)
1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Rising Edge] Move Down Shutter	Sending of 1 (Down)
1 Bit	I	C - W T -	DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Rising Edge] Move Up/Down Shutter	Switching 0/1 (Up/Down)
1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Switch/Sensor] [Rising Edge] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Switch/Sensor] [Rising Edge] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
1 Bit	I	C - W T -	DPT_Step	0/1	[Ix] [Switch/Sensor] [Rising Edge] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] Light On	Sending of 1 (On)
1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] Light Off	Sending of 0 (Off)

	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] Light On/Off	0/1
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Rising Edge] Brighter	Increase Brightness
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Rising Edge] Darker	Decrease Brightness
	4 Bit	I	C - W T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Rising Edge] Brighter/Darker	Switch Bright/Dark
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Rising Edge] Run Scene	Sending of 0 - 63
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Rising Edge] Save Scene	Sending of 128 - 191
	1 Byte	O	C - - T -	DPT_Value_1_Ucount	0 - 255	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Percentage)	0% - 100%
	2 Bytes	O	C - - T -	DPT_Value_2_Ucount	0 - 65535	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Integer)	0 - 65535
	2 Bytes	O	C - - T -	9.xxx	-671088.64 - 670433.28	[Ix] [Switch/Sensor] [Rising Edge] Constant Value (Float)	Float Value
	1 Bit	O	C - - T -	DPT_Ack	0/1	[Ix] [Pulse Counter] Counter	Send 1
	1 Byte	O	C R - T -	DPT_Value_1_Ucount	0 - 255	[Ix] [Pulse Counter] Counter	Number of Pulses
	2 Bytes	O	C R - T -	DPT_Value_2_Ucount	0 - 65535	[Ix] [Pulse Counter] Counter	Number of Pulses
	2 Bytes	O	C R - T -	DPT_Power	-671088.64 - 670433.28 kW	[Ix] [Pulse Counter] Counter	Power (kW)
	2 Bytes	O	C R - T -	DPT_Value_Volume_Flow		[Ix] [Pulse Counter] Counter	Flow (l/h)
	4 Bytes	O	C R - T -	DPT_Value_4_Ucount	0 - 4294967295	[Ix] [Pulse Counter] Counter	Number of Pulses
	4 Bytes	O	C R - T -	1.xxx	0/1	[Ix] [Pulse Counter] Counter	Flow Rate (m3/h)
	4 Bytes	O	C R - T -	DPT_ActiveEnergy	0 - 2147483647	[Ix] [Pulse Counter] Counter	Energy (Wh)
	4 Bytes	O	C R - T -	DPT_ActiveEnergy_kWh	0 - 2147483647	[Ix] [Pulse Counter] Counter	Energy (kWh)
	4 Bytes	O	C R - T -	DPT_Value_Power	-3.4E+38 W - 3.4E+38 W	[Ix] [Pulse Counter] Counter	Power (W)
	4 Bytes	O	C R - T -	DPT_Value_Volume		[Ix] [Pulse Counter] Counter	Volume (m3)
324, 333	1 Bit	I/O	C R W T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] Edge	0/1
	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	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Rising Edge] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Rising Edge] Shutter Status (Input)	0% = Top; 100% = Bottom

	1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0/1 Switching (Immediate Object)	Switching 0/1
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 0 (Immediate Object)	Sending of 0
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Rising Edge] 1 (Immediate Object)	Sending of 1
	1 Bit	I/O	C R W T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] Edge (Immediate Object)	0/1
325, 334	1 Bit	I	C - W - -	DPT_Reset	0/1	[Ix] [Pulse Counter] Reset	0 = No Action; 1 = Reset
	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] [Switch/Sensor] Alarm: Breakdown or Sabotage	1 = Alarm; 0 = No Alarm
326, 335	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 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Double Press] Move Up Shutter	Sending of 0 (Up)
	1 Bit	O	C - - T -	DPT_UpDown	0/1	[Ix] [Double Press] Move Down Shutter	Sending of 1 (Down)
	1 Bit	I	C - W T -	DPT_UpDown	0/1	[Ix] [Double Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Double Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Double Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
	1 Bit	I	C - W T -	DPT_Step	0/1	[Ix] [Double 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] [Double Press] Brighter	Increase Brightness
	4 Bit	O	C - - T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Double Press] Darker	Decrease Brightness
	4 Bit	I	C - W T -	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Double Press] Brighter/Darker	Switch Bright/Dark
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Double Press] Light On	Sending of 1 (On)
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Double Press] Light Off	Sending of 0 (Off)
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Double Press] Light On/Off	0/1
	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Ix] [Double Press] Run Scene	Sending of 0 - 63
	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_Value_1_Ucount	0 - 255	[Ix] [Double Press] Constant Value (Integer)	0 - 255
	1 Byte	O	C - - T -	DPT_Scaling	0% - 100%	[Ix] [Double Press] Constant Value (Percentage)	0% - 100%

	2 Bytes	O	C--T-	DPT_Value_2_Ucount	0 - 65535	[Ix] [Double Press] Constant Value (Integer)	0 - 65535
	2 Bytes	O	C--T-	9.xxx	-671088.64 - 670433.28	[Ix] [Double Press] Constant Value (Float)	Float Value
	1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0	Sending of 0
	1 Bit	I	C-WT-	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0/1 Switching	Switching 0/1
	1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 1	Sending of 1
	4 Bit	O	C--T-	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Falling Edge] Brighter	Increase Brightness
	4 Bit	I	C-WT-	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Falling Edge] Brighter/Darker	Switch Bright/Dark
	2 Bytes	O	C--T-	9.xxx	-671088.64 - 670433.28	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Float)	Float Value
	2 Bytes	O	C--T-	DPT_Value_2_Ucount	0 - 65535	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Integer)	0 - 65535
	1 Byte	O	C--T-	DPT_Value_1_Ucount	0 - 255	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Integer)	0 - 255
	1 Byte	O	C--T-	DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Falling Edge] Constant Value (Percentage)	0% - 100%
	4 Bit	O	C--T-	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Switch/Sensor] [Falling Edge] Darker	Decrease Brightness
	1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] Light Off	Sending of 0 (Off)
	1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] Light On	Sending of 1 (On)
	1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] Light On/Off	0/1
	1 Bit	O	C--T-	DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Falling Edge] Move Down Shutter	Sending of 1 (Down)
	1 Bit	O	C--T-	DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Falling Edge] Move Up Shutter	Sending of 0 (Up)
	1 Bit	I	C-WT-	DPT_UpDown	0/1	[Ix] [Switch/Sensor] [Falling Edge] Move Up/Down Shutter	Switching 0/1 (Up/Down)
	1 Byte	O	C--T-	DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Falling Edge] Run Scene	Sending of 0 - 63
	1 Byte	O	C--T-	DPT_SceneControl	0-63; 128-191	[Ix] [Switch/Sensor] [Falling Edge] Save Scene	Sending of 128 - 191
	1 Bit	O	C--T-	DPT_Step	0/1	[Ix] [Switch/Sensor] [Falling Edge] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)

	1 Bit	I	C - W T -	DPT_Step	0/1	[Ix] [Switch/Sensor] [Falling Edge] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
	1 Bit	O	C - - T -	DPT_Step	0/1	[Ix] [Switch/Sensor] [Falling Edge] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
327, 336	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Double Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Double Press] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Falling Edge] Dimming Status (Input)	0% - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Switch/Sensor] [Falling Edge] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0 (Immediate Object)	Sending of 0
	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 1 (Immediate Object)	Sending of 1
	1 Bit	I	C - W T -	DPT_Switch	0/1	[Ix] [Switch/Sensor] [Falling Edge] 0/1 Switching (Immediate Object)	Switching 0/1
328, 337	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	I	C - W 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	I	C - W 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	I	C - W 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	O	C - - T -	DPT_Switch	0/1	[Ix] [Long Press] Light On/Off	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 Byte	O	C--T-	DPT_Value_1_Ucount	0 - 255	[Ix] [Long Press] Constant Value (Integer)	0 - 255
1 Byte	O	C--T-	DPT_Scaling	0% - 100%	[Ix] [Long Press] Constant Value (Percentage)	0% - 100%
2 Bytes	O	C--T-	DPT_Value_2_Ucount	0 - 65535	[Ix] [Long Press] Constant Value (Integer)	0 - 65535
2 Bytes	O	C--T-	9.xxx	-671088.64 - 670433.28	[Ix] [Long Press] Constant Value (Float)	Float Value
1 Bit	O	C--T-	DPT_Step	0/1	[Ix] [Triple Press] Stop/Step Up Shutter	Sending of 0 (Stop/Step Up)
1 Bit	I	C-WT-	DPT_Step	0/1	[Ix] [Triple Press] Stop/Step Shutter (Switched)	Switching of 0/1 (Stop/Step Up/Down)
1 Bit	O	C--T-	DPT_Step	0/1	[Ix] [Triple Press] Stop/Step Down Shutter	Sending of 1 (Stop/Step Down)
1 Byte	O	C--T-	DPT_SceneControl	0-63; 128-191	[Ix] [Triple Press] Save Scene	Sending of 128 - 191
1 Byte	O	C--T-	DPT_SceneControl	0-63; 128-191	[Ix] [Triple Press] Run Scene	Sending of 0 - 63
1 Bit	I	C-WT-	DPT_UpDown	0/1	[Ix] [Triple Press] Move Up/Down Shutter	Switching 0/1 (Up/Down)
1 Bit	O	C--T-	DPT_UpDown	0/1	[Ix] [Triple Press] Move Up Shutter	Sending of 0 (Up)
1 Bit	O	C--T-	DPT_UpDown	0/1	[Ix] [Triple Press] Move Down Shutter	Sending of 1 (Down)
1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Triple Press] Light On/Off	0/1
1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Triple Press] Light On	Sending of 1 (On)
1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Triple Press] Light Off	Sending of 0 (Off)
4 Bit	O	C--T-	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Triple Press] Darker	Decrease Brightness
1 Byte	O	C--T-	DPT_Scaling	0% - 100%	[Ix] [Triple Press] Constant Value (Percentage)	0% - 100%
2 Bytes	O	C--T-	DPT_Value_2_Ucount	0 - 65535	[Ix] [Triple Press] Constant Value (Integer)	0 - 65535
1 Byte	O	C--T-	DPT_Value_1_Ucount	0 - 255	[Ix] [Triple Press] Constant Value (Integer)	0 - 255
2 Bytes	O	C--T-	9.xxx	-671088.64 - 670433.28	[Ix] [Triple Press] Constant Value (Float)	Float Value
4 Bit	I	C-WT-	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Triple Press] Brighter/Darker	Switch Bright/Dark
4 Bit	O	C--T-	DPT_Control_Dimming	0x0/0x8 (Stop) 0x1...0x7 (Dec.) 0x9...0xF (Inc.)	[Ix] [Triple Press] Brighter	Increase Brightness
1 Bit	O	C--T-	DPT_Switch	0/1	[Ix] [Triple Press] 1	Sending of 1
1 Bit	I	C-WT-	DPT_Switch	0/1	[Ix] [Triple Press] 0/1 Switching	Switching 0/1

	1 Bit	O	C - - T -	DPT_Switch	0/1	[Ix] [Triple Press] 0	Sending of 0
329, 338	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
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Triple Press] Shutter Status (Input)	0% = Top; 100% = Bottom
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix] [Triple Press] Dimming Status (Input)	0% - 100%
330, 339	1 Bit	O	C - - T -	DPT_Trigger	0/1	[Ix] [Long Press/Release] Stop Shutter	Release -> Stop Shutter
466	1 Byte	I	C - W - -	DPT_SceneNumber	0 - 63	[Motion Detector] Scene Input	Scene Value
467	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Motion Detector] Scene Output	Scene Value
468, 505	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Ix] Luminosity	0 - 100%
469, 506	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] Open Circuit Error	0 = No Error; 1 = Open Circuit Error
470, 507	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] Short Circuit Error	0 = No Error; 1 = Short Circuit Error
471, 508	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Ix] Presence State (Scaling)	0 - 100%
472, 509	1 Byte	O	C R - T -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Ix] Presence State (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
473, 510	1 Bit	O	C R - T -	DPT_Switch	0/1	[Ix] Presence State (Binary)	Binary Value
	1 Bit	O	C R - T -	DPT_Start	0/1	[Ix] Presence: Slave Output	1 = Motion Detected
474, 511	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[Ix] Presence Trigger	Binary Value to Trigger the Presence Detection
475, 512	1 Bit	I	C - W - -	DPT_Start	0/1	[Ix] Presence: Slave Input	0 = Nothing; 1 = Detection from slave device
476, 513	2 Bytes	I/O	C R W - -	DPT_TimePeriodSec	0 - 65535	[Ix] Presence: Waiting Time	0 - 65535 s
477, 514	2 Bytes	I/O	C R W - -	DPT_TimePeriodSec	0 - 65535	[Ix] Presence: Listening Time	1 - 65535 s
478, 515	2 Bytes	I/O	C R W - -	DPT_TimePeriodMin	0 - 65535	[Ix] Presence: Safety Time	0 - 1440 min
479, 516	1 Byte	I/O	C R W - -	DPT_Value_1_Ucount	0 - 255	[Ix] Presence: Number of Detections of the Filter	2 - 5
480, 517	1 Byte	I/O	C R W - -	DPT_Value_1_Ucount	0 - 255	[Ix] Presence: Filter Detection Window	15 - 60 s
481, 518	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ix] Presence: Enable	0 = Disable; 1 = Enable
	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ix] Presence: Enable	0 = Enable; 1 = Disable
482, 519	1 Bit	I/O	C R W - -	DPT_DayNight	0/1	[Ix] Presence: Day/Night	0 = Day; 1 = Night
	1 Bit	I/O	C R W - -	DPT_DayNight	0/1	[Ix] Presence: Day/Night	0 = Night; 1 = Day
483, 520	1 Bit	O	C R - T -	DPT_Occupancy	0/1	[Ix] Presence: Occupancy State (Master Output)	0 = Not Occupied; 1 = Occupied
	1 Bit	I	C - W - -	DPT_Occupancy	0/1	[Ix] Presence: Occupancy State (Master Input)	0 = Not Occupied; 1 = Occupied

484, 521	1 Bit	I	C - W - -	DPT_Switch	0/1	[Ix] Presence: Access Guest/Employee	0 = Guest; 1 = Employee
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Ix] Presence: Access Guest/Employee	0 = Employee; 1 = Guest
485, 522	1 Bit	I	C - W - -	DPT_Bool	0/1	[Ix] Presence: Sold/Unsold Room	0 = Unsold; 1 = Sold
	1 Bit	I	C - W - -	DPT_Bool	0/1	[Ix] Presence: Sold/Unsold Room	0 = Sold; 1 = Unsold
486, 523	1 Bit	I	C - W - -	DPT_Start	0/1	[Ix] External Motion Detection	0 = Nothing; 1 = Motion detected by an external sensor
487, 493, 499, 524, 530, 536	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Ix][Cx] Detection State (Scaling)	0 - 100%
488, 494, 500, 525, 531, 537	1 Byte	O	C R - T -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Ix][Cx] Detection State (HVAC)	Auto, Comfort, Standby, Economy, Building Protection
489, 495, 501, 526, 532, 538	1 Bit	O	C R - T -	DPT_Switch	0/1	[Ix][Cx] Detection State (Binary)	Binary Value
490, 496, 502, 527, 533, 539	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ix][Cx] Enable Channel	According to parameters
491, 497, 503, 528, 534, 540	1 Bit	I	C - W - -	DPT_Switch	0/1	[Ix][Cx] Force State	0 = No Detection; 1 = Detection
492, 498, 504, 529, 535, 541	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Ix][Cx] Luminosity Threshold	1 - 100%
764	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Ox] Scenes	0 - 63 (Execute 1 - 64); 128 - 191 (Save 1 - 64)
765	1 Bit	I	C - W - -	DPT_BinaryValue	0/1	[Ox] On/Off	N.O. (0 = Open Relay; 1 = Close Relay)
	1 Bit	I	C - W - -	DPT_BinaryValue	0/1	[Ox] On/Off	N.C. (0 = Close Relay; 1 = Open Relay)
766	1 Bit	O	C R - T -	DPT_BinaryValue	0/1	[Ox] On/Off (Status)	0 = Output Off; 1 = Output On
767	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Ox] Switched Control	0/1 = On/Off Depending on the Last Status
768	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ox] Lock	0 = Unlock; 1 = Lock
769	1 Bit	O	C R - T -	DPT_Enable	0/1	[Ox] Lock (Status)	0 = Unlock; 1 = Lock
770	1 Bit	I	C - W - -	DPT_Start	0/1	[Ox] Timer	0 = Switch Off; 1 = Switch On
771	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[Ox] On Duration Time (s)	0 - 3600 s
	2 Bytes	I	C - W - -	DPT_TimePeriod100Msec		[Ox] On Duration Time (ds)	0 - 600 ds
	2 Bytes	I	C - W - -	DPT_TimePeriodMin	0 - 65535	[Ox] On Duration Time (min)	0 - 1440 min
	2 Bytes	I	C - W - -	DPT_TimePeriodHrs	0 - 65535	[Ox] On Duration Time (h)	0 - 24 h
772	1 Bit	O	C R - T -	DPT_State	0/1	[Ox] Warning Countdown (Status)	0 = Normal; 1 = Warning
773	1 Bit	I	C - W - -	DPT_Start	0/1	[Ox] Flashing	0 = Stop; 1 = Start
774	1 Bit	I	C - W - -	DPT_Alarm	0/1	[Ox] Alarm	0 = No Alarm; 1 = Alarm
	1 Bit	I	C - W - -	DPT_Alarm	0/1	[Ox] Alarm	0 = Alarm; 1 = No Alarm
775	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ox] Alarm (Status)	0 = No Alarm; 1 = Alarm

	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ox] Alarm (Status)	0 = Alarm; 1 = No Alarm
776	1 Bit	I	C - W - -	DPT_Ack	0/1	[Ox] Unfreeze Alarm	Alarm = 0 + Unfreeze = 1 => End Alarm
777	4 Bytes	I/O	C R W T -	DPT_LongDeltaTimeSec	-2147483648 - 2147483647	[Ox] Operating Time (s)	Time in Seconds
	4 Bytes	I/O	C R W T -	1.xxx	0/1	[Ox] Operating Time (h)	Time in Hours
988	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Shutter] Scenes	0 - 63 (Execute 1 - 64); 128 - 191 (Save 1 - 64)
989	2 Bytes	I	C - W T U	DPT_Value_Temp	-273.00° - 670433.28°	[Shutter] Outdoor Temperature Input	-30°C ... 60°C
990	1 Byte	I	C - W T U	DPT_Angle	0 - 360°	[Shutter] Azimuth	Azimuth External Reference [0° ... 360°]
991	2 Bytes	I	C - W T U	DPT_Rotation_Angle	-90 - 90°	[Shutter] Elevation	Elevation External Reference [-90° ... 90°]
1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484	1 Bit	I	C - W - -	DPT_Bool	0/1	[LF] (1-Bit) Data Entry x	Binary Data Entry (0/1)
1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500	1 Byte	I	C - W - -	DPT_Value_1_Ucount	0 - 255	[LF] (1-Byte) Data Entry x	1-Byte Data Entry (0-255)
1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516	2 Bytes	I	C - W - -	DPT_Value_2_Ucount	0 - 65535	[LF] (2-Byte) Data Entry x	2-Byte Data Entry
	2 Bytes	I	C - W - -	DPT_Value_2_Count	-32768 - 32767	[LF] (2-Byte) Data Entry x	2-Byte Data Entry
	2 Bytes	I	C - W - -	9.xxx	-671088.64 - 670433.28	[LF] (2-Byte) Data Entry x	2-Byte Data Entry
1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524	4 Bytes	I	C - W - -	DPT_Value_4_Count	-2147483648 - 2147483647	[LF] (4-Byte) Data Entry x	4-Byte Data Entry
1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534	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

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Zennio Avance y Tecnología S.L.

C/ Río Jarama, 132. Nave P-8.11

45007 Toledo, Spain.

Tel. +34 925 232 002.

www.zennio.com

info@zennio.com