MAXinBOX 88
MAXinBOX 66 v3

Multifunction Actuator with 8 / 6 Outputs, 8 / 6 Inputs and KNX Secure

ZIOMB88
ZIOMB66V3

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

www.zennio.com

USER MANUAL

CONTENTS

DOCUMENT UPDATES

Version	Changes	Page(s)
[1.6]_a	**Changes in the application program**: • Update of all the functionalities.	-
[1.5]_b	New device: **MAXinBOX 88.**	-

1 INTRODUCTION

1.1 MAXINBOX 88 / 66 V3

MAXinBOX 88 and MAXinBOX 66 v3 from Zennio are versatile KNX secure actuators featuring a wide variety of functions:

- **8 / 6 relay outputs**, configurable as:
  - Up to 4 / 3 independent shutter channels (with or without slats),
  - Up to 8 / 6 individual ON/OFF outputs,
  - Up to 2 two-pipe fan coil modules where both fan speed control and valve control are via relays (MAXinBOX 88 only),
  - A combination of the above.
- **8 / 6 multi-purpose inputs**, configurable as:
  - Temperature probes (possibility to parameterise a personalised probe),
  - Binary inputs (i.e., pushbuttons, switches, sensors),
  - Motion detectors.
- **10 customisable, multi-operation logic functions**.
- **4 independent thermostats**.
- **2 Master light controls** for an easy, out-of-the-box control of a set of luminaires (or functionally equivalent devices) one of which acts as a general lamp and the others as secondary lamps.
- **Manual operation / supervision** of the 6 relay outputs through the on-board pushbuttons and LEDs.
- **Relay switches counter.**
- **Heartbeat** or periodical “still-alive” notification.

- **Scene-triggered action control,** with an optional delay in the execution.

- **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 MAXinBOX 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, MAXinBOX will interrupt any pending actions, and will save its state so it can be recovered once the power supply is restored.

For safety reasons, all **shutter channels** 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.

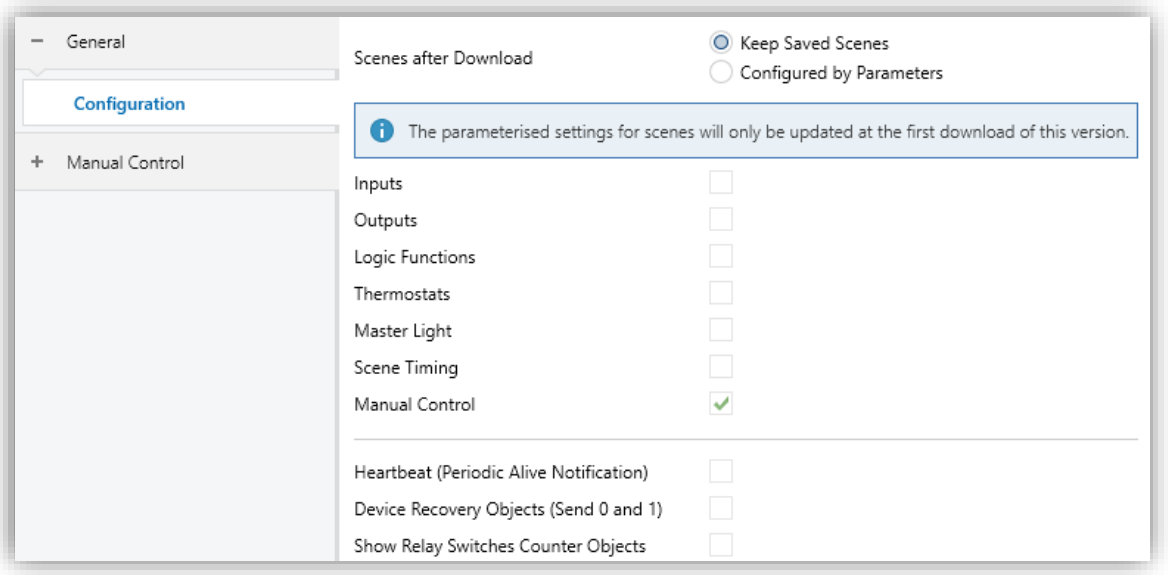

Figure 1. General screen

- **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 selected, 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.

- **Thermostats** [*disabled / enabled*]: enables o disables the “Thermostats” tab on the left menu. See section 2.5 for more details.

- **Master Light** [*disabled / enabled*]: enables o disables the “Master Light” tab on the left menu. See section 2.6 for more details.

- **Scene Temporization** [*disabled / enabled*]: enables o disables the “Scene Temporization” tab on the left menu. See section 2.7 for more details.

- **Manual Control** [*disabled / enabled*]: enables o disables the “Manual Control” tab on the left menu. See section 2.8 for more details.

- **Heartbeat (Periodic Alive Notification)** [*disabled / enabled*]: this parameter 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*).

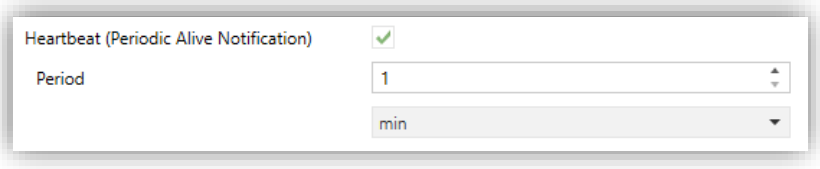

Figure 2. Heartbeat.

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 established period.*

- **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” 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.

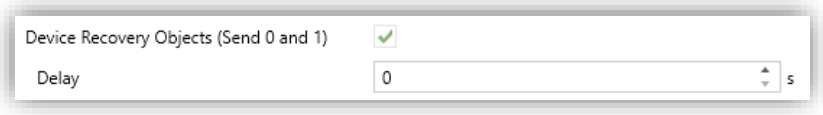

Figure 3. Sending of Indication objects on bus voltage recovery

- **Show Relay Switches Counter Objects** [*disabled / enabled*]: enables two communication objects to keep track of the number of switches performed by each of the relays ("**[Relay X] Number of Switches**") and the maximum number of switches carried out in a minute ("**[Relay X] Maximum Switches per Minute**").

2.2 INPUTS

MAXinBOX 88 incorporates **8 analogue/digital inputs,** while MAXinBOX 66 v3 has **6**. Each one has three possible configurations, which are explained 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.

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.

2.2.3 MOTION DETECTOR

Configuration for the connection of a motion detector. It is possible to connect motion detectors from Zennio to the input ports of MAXinBOX 88 / 66 v3.

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

MAXinBOX 88 incorporates **8 relay outputs**, while MAXinBOX 66 v3 incorporates **6.** They have three possible configurations, which are explained below.

2.3.1 INDIVIDUAL BINARY OUTPUT

Independent control of a load (up to 8 / 6 different loads can be controlled by a MAXinBOX 88 / 66 v3). Please refer to the "**Individual Binary Outputs**" user manual, available under the product section at www.zennio.com.

2.3.2 SHUTTER CHANNEL

Control of the motion of one blind or blind with slats (up to 4 / 3 shutter channels can be controlled by a MAXinBOX 88 / 66 v3). Please refer to the "**Shutter Channels**" user manual, available under the product section at www.zennio.com.

2.3.3 FAN COIL MODULES

Control of the fan and the valve of two-pipe fan coils (up to 2 independent fan coil blocks can be controlled in **MAXinBOX 88** only). Please refer to the "**'Relays' Fan Coil**" user manual, available under the product section at www.zennio.com. Note that only two-pipe *fan coils* with On/Off valve can be controlled. References to four-pipe *fan coils* and 3-point valves do not apply to these devices.

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.

MAXinBOX 88 / 66 v3 can implement **up to 10 different and independent functions**, each of them entirely customisable and consisting of **up to 4 consecutive operations each**.

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

MAXinBOX 88 / 66 v3 implements **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 MASTER LIGHT

The MAXinBOX 88 / 66 v3 actuator implements **two / one lighting master controls** that can be enabled and configured independently.

The Master Light function brings the option to monitor the state of up to 12 light sources (or even more, if the Master Light controls from multiple Zennio devices are linked together) or of any other elements whose state is transmitted through a binary object and, depending on those states, perform a ***master order*** every time a certain trigger signal (again, a binary value) is received through a specific object.

Such master order will consist in:

- A **general switch-off** order, if at least one of the up to twelve status objects is found to be on.
- A **courtesy switch-on** order, if none of the up to twelve status objects is found to be on.

Note that the above switch-off and switch-on orders are not necessarily a binary value being sent to the bus – it is up to the integrator the decision of what to send to the KNX bus in both cases: a shutter order, a thermostat setpoint or mode switch order, a constant value, a scene… Only the trigger object and the twelve status objects are required to be binary (on/off).

The most typical scenario for this Master Light control would be a hotel room with a master pushbutton next to the door. When leaving the room, the guest will have the possibility of pressing on the master pushbutton and make all the lamps turn off together. Afterwards, back on the room and with all the lamps off, pressing on the same master pushbutton will only make a particular lamp turn on (e.g., the closest lamp to the door) – this is the courtesy switch-on.

Besides, it is possible to concatenate two or more Master Light modules by means of a specific communication object which represents the general state of the light sources of each module. Thereby, it is possible to expand the number of light sources by considering the general state of one module as an additional light source for another.

ETS PARAMETERISATION

Once the Master Light function has been enabled, a specific tab will be included in the menu on the left. This new parameter screen (Figure 4) contains the following options:

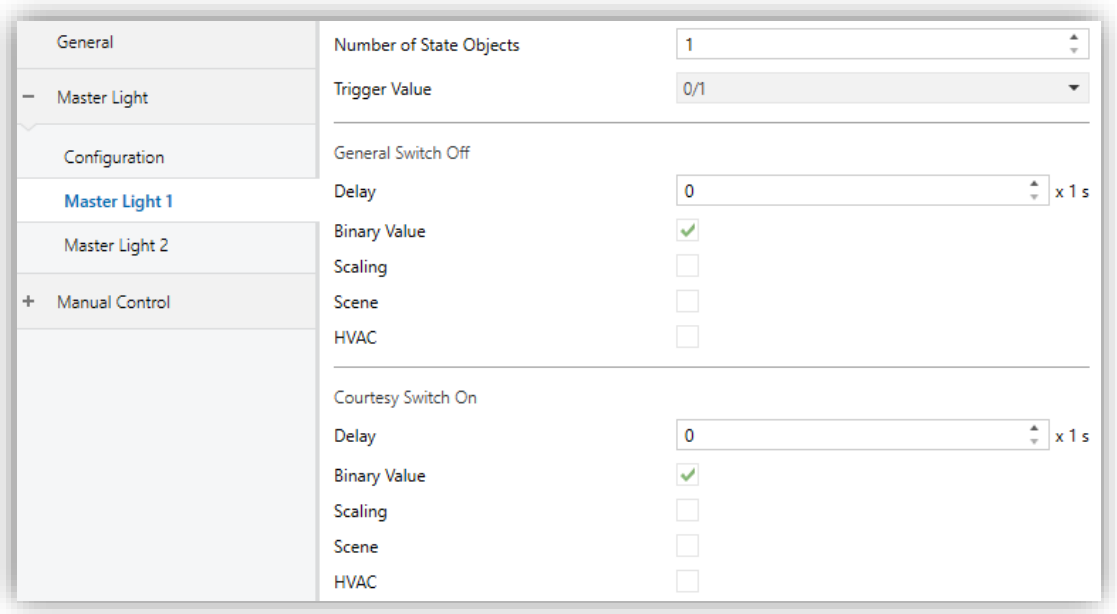

Figure 4. Master Light

- **Number of State Objects** [*1…12*]: defines the number of 1-bit status objects required. These objects are called "**[ML] Status Object *n***".

  In addition, the general status object ("**[ML] General status**") will always be available in the project topology. It will be sent to the bus with a value of "1" whenever there is at least one of the above state objects with such value. Otherwise (i.e., if none of them has a value of "1"), it will be sent with a value of "0".

- **Trigger Value** [*0 / 1 / 0/1*]: sets the value that will trigger, when received through "**[ML] Trigger**", the master action (the general switch-off or the courtesy switch-on).

- **General Switch-Off**.

  - **Delay** [*0…255*] [*x 1 s*]: defines a certain delay (once the trigger has been received) before the execution of the general switch-off. The allowed range is 0 to 255 seconds.

- **Binary Value** [*disabled / enabled*]: if checked, object "**[ML] General Switch-off: Binary Object**" will be enabled, which will send one "0" whenever the general switch-off takes off.

- **Scaling** [*disabled / enabled*]: if checked, object "**[ML] General Switch-off: Scaling**" will be enabled, which will send a percentage value (configurable in **Value** [*0…100*]) whenever the general switch-off takes off.

- **Scene** [*disabled / enabled*]: if checked, object "**[ML] General Switch-off: Scene**" will be enabled, which will send a scene run / save order (configurable in **Action** [*Run / Save*] and **Scene Number** [*1…64*]) whenever the general switch-off takes off

- **HVAC** [*disabled / enabled*]: if checked, object "**[ML] General Switch-off: HVAC mode**" will be enabled, which will send an HVAC thermostat mode value (configurable in **Value** [*Auto / Comfort / Standby / Economy / Building Protection*) whenever the general switch-off takes off

Note: *the above options are not mutually exclusive; it is possible to send values of different nature together*.

- **Courtesy Switch-On**:

  The parameters available here are entirely analogous to those already mentioned for General Switch-Off. However, in this case the names of the objects start with "**[ML] Courtesy Switch-On (…)**". On the other hand, sending **scene save orders** is not possible for the courtesy switch-on (only orders to play scenes are allowed).

  Note: *object "**[ML] Courtesy Switch-On: Binary Object**" sends the value "1" (when the courtesy switch-on takes place), in contrast to object "**[ML] General Switch-Off: Binary Object**", which sends the value "0" (during the general switch-off, as explained above)*.

2.7 SCENE TEMPORISATION

The scene temporisation allows **imposing delays over the scenes** of the outputs. These delays, defined in parameters, are applied on 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 temporisation**, it is necessary to have one or more scenes configured in some of the outputs. When entering the Configuration window under Scene Temporization, all configured scenes will be listed, together with a few checkboxes to select which of them need to be temporised, as shown in Figure 5:

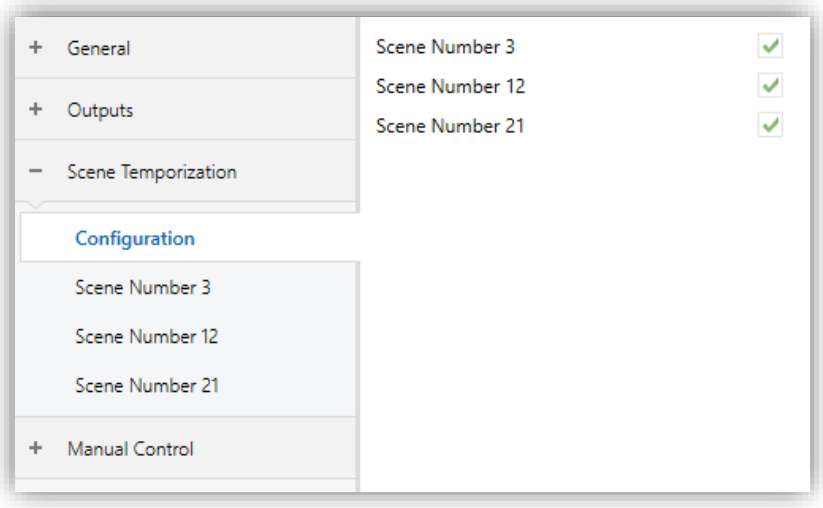

Figure 5. Scene Temporisation

Enabling a certain **Scene Number *n*** [*disabled / enabled*] 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.

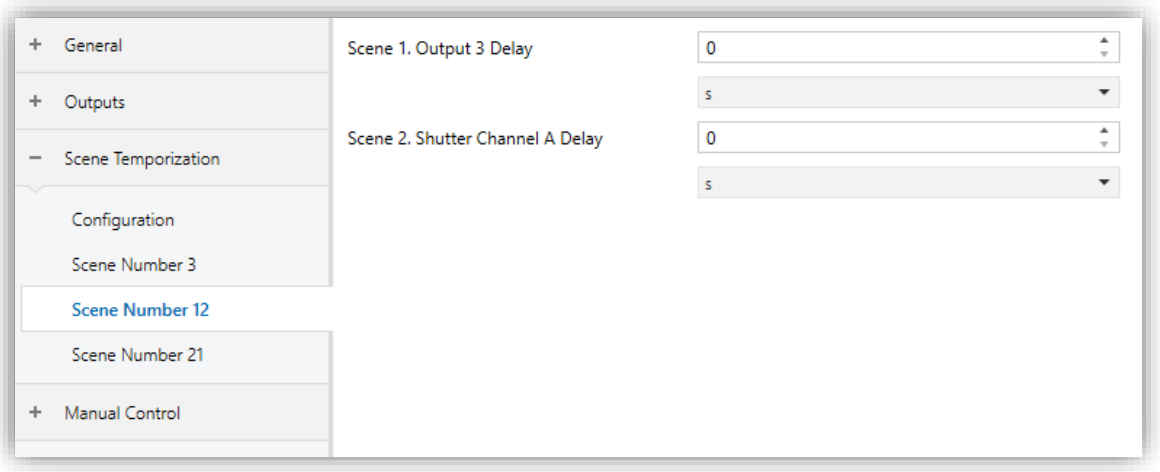

Figure 6. Scene Temporisation

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

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.*

2.8 MANUAL CONTROL

MAXinBOX 88 / 66 v3 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*.

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 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.

- **Fan Coil module**: the behaviour will depend on whether a fan-labelled or a valve-labelled button is pressed:

  - **Fan**: for this type of buttons, it must be considered that there are two types of control for the fan speed:

    - **Switching control**: a short or long press will switch the relays to set the selected speed, unless it matches the current speed – in such case all the relays will be opened (speed 0). The associated LEDs will indicate the state of the fan speed control relays (on = relay closed; off = relay open).

    - **Accumulation control:** a short or long press switch to the selected speed, closing the relay associated with that speed, and the relays assigned to the lower speeds, unless it matches the current speed – in such case all the relays will be opened (speed 0). The associated LEDs will indicate the state of the fan speed control relays (on = relay closed; off = relay open).

    Note: *the behaviour of the relays will depend on the parameterisation, i.e., on the **number of fan speeds**, and on the **delay** between switches.*

- **Valve**: a short or long press will switch the status of the relay and therefore of the valve. The LED will show the state of the relay anytime (on = relay closed; off = relay open).

- **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 parameterised 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 parameterised times.

  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.*

- **Fan Coil module**: the behaviour is similar to that of the Test Off mode, although in this case the three fan speeds are supposed available.

- **Disabled output**: under the Test On mode, short and long presses will cause the same effect for disabled outputs as for individual outputs (i.e., the relay will switch its state).

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 or logic functions 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 taken into account, 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 factory delivered with all the output channels configured as shutters (without slats), and with both manual modes (Test Off and Test On) enabled*.

ETS PARAMETERISATION

After enabling "**Manual Control**" (enabled by default) in the General screen (see section 2.1), a new tab will be incorporated into the tree on the left.

The only two parameters are:

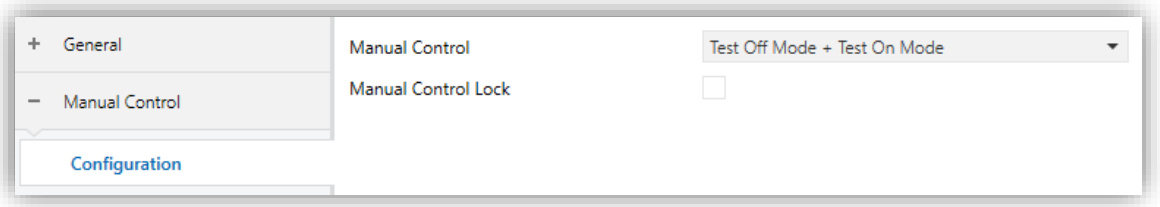

Figure 7. Manual Control

- **Manual Control** [*Disabled / Only Test Mode Off / Only Test Mode On / 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 Lock Control** [*Disabled / Enabled*]: 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 manual control should remain after the device start-up (after an ETS download or a bus power failure). If “Last Value” is selected, 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.

  Note: *some of the objects are only applicable to MAXinBOX 88*.

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, 44, 82, 120	2 Bytes	I	C - W T U	DPT_Value_Temp	-273.00º - 670433.28º	[Tx] Temperature Source 1	External Sensor Temperature
7, 45, 83, 121	2 Bytes	I	C - W T U	DPT_Value_Temp	-273.00º - 670433.28º	[Tx] Temperature Source 2	External Sensor Temperature
8, 46, 84, 122	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[Tx] Effective Temperature	Effective Control Temperature
9, 47, 85, 123	1 Byte	I	C - W - -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[Tx] Special Mode	1-Byte HVAC Mode
10, 48, 86, 124	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, 49, 87, 125	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, 50, 88, 126	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, 51, 89, 127	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, 52, 90, 128	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[Tx] Window Status (Input)	0 = Closed; 1 = Open
15, 53, 91, 129	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Tx] Comfort Prolongation	0 = Nothing; 1 = Timed Comfort
16, 54, 92, 130	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

17, 55, 93, 131	2 Bytes	I	C - W - -	DPT_Value_Temp	-273.00º - 670433.28º	[Tx] Setpoint	Thermostat Setpoint Input
	2 Bytes	I	C - W - -	DPT_Value_Temp	-273.00º - 670433.28º	[Tx] Basic Setpoint	Reference Setpoint
18, 56, 94, 132	1 Bit	I	C - W - -	DPT_Step	0/1	[Tx] Setpoint Step	0 = Decrease Setpoint; 1 = Increase Setpoint
19, 57, 95, 133	2 Bytes	I	C - W - -	DPT_Value_Tempd	-671088.64º - 670433.28º	[Tx] Setpoint Offset	Float Offset Value
20, 58, 96, 134	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[Tx] Setpoint Status	Current Setpoint
21, 59, 97, 135	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[Tx] Basic Setpoint Status	Current Basic Setpoint
22, 60, 98, 136	2 Bytes	O	C R - T -	DPT_Value_Tempd	-671088.64º - 670433.28º	[Tx] Setpoint Offset Status	Current Setpoint Offset
23, 61, 99, 137	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] Offset Reset	Reset Offset
24, 62, 100, 138	1 Bit	I	C - W - -	DPT_Heat_Cool	0/1	[Tx] Mode	0 = Cool; 1 = Heat
25, 63, 101, 139	1 Bit	O	C R - T -	DPT_Heat_Cool	0/1	[Tx] Mode Status	0 = Cool; 1 = Heat
26, 64, 102, 140	1 Bit	I	C - W - -	DPT_Switch	0/1	[Tx] On/Off	0 = Off; 1 = On
27, 65, 103, 141	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] On/Off Status	0 = Off; 1 = On
28, 66, 104, 142	1 Bit	I/O	C R W - -	DPT_Switch	0/1	[Tx] Main System (Cool)	0 = System 1; 1 = System 2
29, 67, 105, 143	1 Bit	I/O	C R W - -	DPT_Switch	0/1	[Tx] Main System (Heat)	0 = System 1; 1 = System 2
30, 68, 106, 144	1 Bit	I	C - W - -	DPT_Enable	0/1	[Tx] Enable/Disable Secondary System (Cool)	0 = Disable; 1 = Enable
31, 69, 107, 145	1 Bit	I	C - W - -	DPT_Enable	0/1	[Tx] Enable/Disable Secondary System (Heat)	0 = Disable; 1 = Enable
32, 38, 70, 76, 108, 114, 146, 152	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable (Cool)	PI Control (Continuous)
33, 39, 71, 77, 109, 115, 147, 153	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable (Heat)	PI Control (Continuous)
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Tx] [Sx] Control Variable	PI Control (Continuous)
34, 40, 72, 78, 110, 116, 148, 154	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Cool)	2-Point Control
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Cool)	PI Control (PWM)
35, 41, 73, 79, 111, 117, 149, 155	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Heat)	2-Point Control
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] Control Variable (Heat)	PI Control (PWM)
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] Control Variable	2-Point Control
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] Control Variable	PI Control (PWM)
36, 42, 74, 80, 112, 118, 150, 156	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] PI State (Cool)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
37, 43, 75, 81, 113, 119, 151, 157	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] PI State (Heat)	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Tx] [Sx] PI State	0 = PI Signal 0%; 1 = PI Signal Greater than 0%
158, 198	1 Bit	I	C - W - -	DPT_Trigger	0/1	[MLx] Trigger	Trigger the Master Light Function
	1 Bit	I	C - W - -	DPT_Ack	0/1	[MLx] Trigger	0 = Nothing; 1 = Trigger the Master Light Function
	1 Bit	I	C - W - -	DPT_Ack	0/1	[MLx] Trigger	1 = Nothing; 0 = Trigger the Master Light Function
159, 160, 161, 162, 163, 164, 165, 166, 167, 168,	1 Bit	I	C - W - -	DPT_Switch	0/1	[MLx] Status Object x	Binary Status

169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228							
189, 229	1 Bit	O	C R - T -	DPT_Switch	0/1	[MLx] General Status	Binary Status
190, 230	1 Bit	O	C - - T -	DPT_Switch	0/1	[MLx] General Switch Off: Binary Object	Switch Off Sending
191, 231	1 Byte	O	C - - T -	DPT_Scaling	0% - 100%	[MLx] General Switch Off: Scaling	0-100%
192, 232	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[MLx] General Switch Off: Scene	Scene Sending
193, 233	1 Byte	O	C - - T -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[MLx] General Switch Off: HVAC mode	Auto, Comfort, Standby, Economy, Building Protection
194, 234	1 Bit	O	C - - T -	DPT_Switch	0/1	[MLx] Courtesy Switch On: Binary Object	Switch On Sending
195, 235	1 Byte	O	C - - T -	DPT_Scaling	0% - 100%	[MLx] Courtesy Switch On: Scaling	0-100%
196, 236	1 Byte	O	C - - T -	DPT_SceneNumber	0 - 63	[MLx] Courtesy Switch On: Scene	Scene Sending
197, 237	1 Byte	O	C - - T -	DPT_HVACMode	1=Comfort 2=Standby 3=Economy 4=Building Protection	[MLx] Courtesy Switch On: HVAC mode	Auto, Comfort, Standby, Economy, Building Protection
238, 242, 246, 250, 254, 258, 262, 266	2 Bytes	O	C R - T -	DPT_Value_Temp	-273.00º - 670433.28º	[Ix] Current Temperature	Temperature Sensor Value
239, 243, 247, 251, 255, 259, 263, 267	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] Overcooling	0 = No Alarm; 1 = Alarm
240, 244, 248, 252, 256, 260, 264, 268	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] Overheating	0 = No Alarm; 1 = Alarm
241, 245, 249, 253, 257, 261, 265, 269	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] Probe Error	0 = No Alarm; 1 = Alarm
270, 276, 282, 288, 294, 300, 306, 312	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ix] Input Lock	0 = Unlock; 1 = Lock
271, 277, 283, 289, 295, 301, 307, 313	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	Switching 0/1 (Up/Down)

						Shutter	
	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
272, 278, 284, 290, 296, 302, 308, 314	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%
273, 279, 285, 291, 297, 303, 309, 315	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
274, 280, 286, 292, 298, 304, 310, 316	1 Bit	O	C - - T -	DPT_Trigger	0/1	[Ix] [Long Press/Release] Stop Shutter	Release -> Stop Shutter
275, 281, 287, 293, 299, 305, 311, 317	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
366	1 Byte	I	C - W - -	DPT_SceneNumber	0 - 63	[Motion Detector] Scene Input	Scene Value
367	1 Byte	O	C - - T -	DPT_SceneControl	0-63; 128-191	[Motion Detector] Scene Output	Scene Value
368, 402, 436, 470, 504, 538, 572, 606	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Ix] Luminosity	0-100%
369, 403, 437, 471, 505, 539, 573, 607	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] Open Circuit Error	0 = No Error; 1 = Open Circuit Error
370, 404, 438, 472, 506, 540, 574, 608	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Ix] Short Circuit Error	0 = No Error; 1 = Short Circuit Error
371, 405, 439, 473, 507, 541, 575, 609	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Ix] Presence State (Scaling)	0-100%
372, 406, 440, 474, 508,	1 Byte	O	C R - T -	DPT_HVACMode	1=Comfort	[Ix] Presence State (HVAC)	Auto, Comfort, Standby, Economy,

542, 576, 610					2=Standby 3=Economy 4=Building Protection		Building Protection
373, 407, 441, 475, 509, 543, 577, 611	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
374, 408, 442, 476, 510, 544, 578, 612	1 Bit	I	C - W - -	DPT_Window_Door	0/1	[Ix] Presence Trigger	Binary Value to Trigger the Presence Detection
375, 409, 443, 477, 511, 545, 579, 613	1 Bit	I	C - W - -	DPT_Start	0/1	[Ix] Presence: Slave Input	0 = Nothing; 1 = Detection from slave device
376, 410, 444, 478, 512, 546, 580, 614	2 Bytes	I/O	C R W - -	DPT_TimePeriodSec	0 - 65535	[Ix] Presence: Waiting Time	0-65535 s.
377, 411, 445, 479, 513, 547, 581, 615	2 Bytes	I/O	C R W - -	DPT_TimePeriodSec	0 - 65535	[Ix] Presence: Listening Time	1-65535 s.
378, 412, 446, 480, 514, 548, 582, 616	2 Bytes	I/O	C R W - -	DPT_TimePeriodMin	0 - 65535	[Ix] Presence: Safety Time	0-1440 min.
379, 413, 447, 481, 515, 549, 583, 617	1 Byte	I/O	C R W - -	DPT_Value_1_Ucount	0 - 255	[Ix] Presence: Filter Detections Number	2-5
380, 414, 448, 482, 516, 550, 584, 618	1 Byte	I/O	C R W - -	DPT_Value_1_Ucount	0 - 255	[Ix] Presence: Filter Detection Window	15-60 s.
381, 415, 449, 483, 517, 551, 585, 619	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ix] Presence: Enable	According to parameters
382, 416, 450, 484, 518, 552, 586, 620	1 Bit	I/O	C R W - -	DPT_DayNight	0/1	[Ix] Presence: Day/Night	According to parameters
383, 417, 451, 485, 519, 553, 587, 621	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
384, 418, 452, 486, 520, 554, 588, 622	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
385, 419, 453, 487, 521, 555, 589, 623	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
386, 420, 454, 488, 522, 556, 590, 624	1 Bit	I	C - W - -	DPT_Start	0/1	[Ix] External Motion Detection	0 = Nothing; 1 = Motion detected by an external sensor
387, 392, 397, 421, 426, 431, 455, 460, 465, 489, 494, 499, 523, 528, 533, 557, 562, 567, 591, 596, 601, 625, 630, 635	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Ix] [Cx] Detection State (Scaling)	0-100%
388, 393, 398, 422, 427, 432, 456, 461, 466, 490, 495, 500, 524, 529, 534, 558, 563, 568, 592, 597, 602, 626, 631, 636	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

389, 394, 399, 423, 428, 433, 457, 462, 467, 491, 496, 501, 525, 530, 535, 559, 564, 569, 593, 598, 603, 627, 632, 637	1 Bit	O	C R - T -	DPT_Switch	0/1	[Ix] [Cx] Detection State (Binary)	Binary Value
390, 395, 400, 424, 429, 434, 458, 463, 468, 492, 497, 502, 526, 531, 536, 560, 565, 570, 594, 599, 604, 628, 633, 638	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ix] [Cx] Enable Channel	According to parameters
391, 396, 401, 425, 430, 435, 459, 464, 469, 493, 498, 503, 527, 532, 537, 561, 566, 571, 595, 600, 605, 629, 634, 639	1 Bit	I	C - W - -	DPT_Switch	0/1	[Ix] [Cx] Force State	0 = No Detection; 1 = Detection
640, 651, 662, 673, 684, 695, 706, 717	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Ox] Scenes	0 – 63 (Execute 1 – 64); 128 – 191 (Save 1 – 64)
641, 652, 663, 674, 685, 696, 707, 718	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)
642, 653, 664, 675, 686, 697, 708, 719	1 Bit	O	C R - T -	DPT_BinaryValue	0/1	[Ox] On/Off (Status)	0 = Output Off; 1 = Output On
643, 654, 665, 676, 687, 698, 709, 720	1 Bit	I	C - W - -	DPT_Enable	0/1	[Ox] Lock	0 = Unlock; 1 = Lock
644, 655, 666, 677, 688, 699, 710, 721	1 Bit	I	C - W - -	DPT_Start	0/1	[Ox] Timer	0 = Switch Off; 1 = Switch On
645, 656, 667, 678, 689, 700, 711, 722	1 Bit	I	C - W - -	DPT_Start	0/1	[Ox] Flashing	0 = Stop; 1 = Start
646, 657, 668, 679, 690, 701, 712, 723	1 Bit	I	C - W - -	DPT_Alarm	0/1	[Ox] Alarm	0 = Normal; 1 = Alarm
	1 Bit	I	C - W - -	DPT_Alarm	0/1	[Ox] Alarm	0=Alarm; 1=Normal
647, 658, 669, 680, 691, 702, 713, 724	1 Bit	I	C - W - -	DPT_Ack	0/1	[Ox] Unfreeze Alarm	Alarm = 0 + Unfreeze = 1 => End Alarm
648, 659, 670, 681, 692, 703, 714, 725	1 Bit	O	C R - T -	DPT_State	0/1	[Ox] Warning Time (Status)	0 = Normal; 1 = Warning
649, 660, 671, 682, 693, 704, 715, 726	4 Bytes	I/O	C R W T -	DPT_LongDeltaTimeSec	-2147483648 - 2147483647	[Ox] Operating Time (s)	Time in Seconds
650, 661, 672, 683, 694, 705, 716, 727	2 Bytes	I/O	C R W T -	DPT_TimePeriodHrs	0 - 65535	[Ox] Operating Time (h)	Time in Hours
816	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Shutter] Scenes	0 - 63 (Execute 1 - 64); 128 - 191 (Save 1 - 64)
817, 849, 881, 913	1 Bit	I	C - W - -	DPT_UpDown	0/1	[Cx] Move	0 = Raise; 1 = Lower
818, 850, 882, 914	1 Bit	I	C - W - -	DPT_Step	0/1	[Cx] Stop/Step	0 = Stop/StepUp; 1 = Stop/StepDown
	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Cx] Stop	0 = Stop; 1 = Stop
819, 851, 883, 915	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Cx] Switched Control	0, 1 = Up, Down or Stop, Depending on the Last Move

820, 852, 884, 916	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Cx] Switched Control Up	0, 1 = Up or Stop, Depending on the Last Move
821, 853, 885, 917	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Cx] Switched Control Down	0, 1 = Down or Stop, Depending on the Last Move
822, 854, 886, 918	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx] Lock	0 = Unlock; 1 = Lock
823, 855, 887, 919	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx] Shutter Positioning	0% = Top; 100% = Bottom
824, 856, 888, 920	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Cx] Shutter Position (Status)	0% = Top; 100% = Bottom
825, 857, 889, 921	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx] Slats Positioning	0% = Open; 100% = Closed
826, 858, 890, 922	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Cx] Slats Position (Status)	0% = Open; 100% = Closed
827, 859, 891, 923	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx] Rising Relay (Status)	0 = Open; 1 = Closed
828, 860, 892, 924	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx] Lowering Relay (Status)	0 = Open; 1 = Closed
829, 861, 893, 925	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx] Movement (Status)	0 = Stopped; 1 = Moving
830, 862, 894, 926	1 Bit	O	C R - T -	DPT_UpDown	0/1	[Cx] Movement Direction (Status)	0 = Upward; 1 = Downward
831, 863, 895, 927	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx] Auto: On/Off	0 = On; 1 = Off
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx] Auto: On/Off	0 = Off; 1 = On
832, 864, 896, 928	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx] Auto: On/Off (Status)	0 = On; 1 = Off
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx] Auto: On/Off (Status)	0 = Off; 1 = On
833, 865, 897, 929	1 Bit	I	C - W - -	DPT_UpDown	0/1	[Cx] Auto: Move	0 = Raise; 1 = Lower
834, 866, 898, 930	1 Bit	I	C - W - -	DPT_Step	0/1	[Cx] Auto: Stop/Step	0 = Stop/StepUp; 1 = Stop/StepDown
	1 Bit	I	C - W - -	DPT_Trigger	0/1	[Cx] Auto: Stop	0 = Stop; 1 = Stop
835, 867, 899, 931	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx] Auto: Shutter Positioning	0% = Top; 100% = Bottom
836, 868, 900, 932	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx] Auto: Slats Positioning	0% = Open; 100% = Closed
837, 869, 901, 933	1 Bit	I	C - W T U	DPT_Scene_AB	0/1	[Cx] Sunshine/Shadow	0 = Sunshine; 1 = Shadow
	1 Bit	I	C - W T U	DPT_Scene_AB	0/1	[Cx] Sunshine/Shadow	0 = Shadow; 1 = Sunshine
838, 870, 902, 934	1 Bit	I	C - W T U	DPT_Heat_Cool	0/1	[Cx] Cooling/Heating	0 = Cooling; 1 = Heating
	1 Bit	I	C - W T U	DPT_Heat_Cool	0/1	[Cx] Cooling/Heating	0 = Heating; 1 = Cooling
839, 871, 903, 935	1 Bit	I	C - W T U	DPT_Occupancy	0/1	[Cx] Presence/No Presence	0 = No Presence; 1 = Presence
	1 Bit	I	C - W T U	DPT_Occupancy	0/1	[Cx] Presence/No Presence	0 = Presence; 1 = No Presence
840, 841, 872, 873, 904, 905, 936, 937	1 Bit	I	C - W - -	DPT_Alarm	0/1	[Cx] Alarm x	0 = No Alarm; 1 = Alarm
	1 Bit	I	C - W - -	DPT_Alarm	0/1	[Cx] Alarm x	0 = Alarm; 1 = No Alarm
842, 874, 906, 938	1 Bit	I	C - W - -	DPT_Ack	0/1	[Cx] Unfreeze Alarm	Alarm1 = Alarm2 = No Alarm + Unfreeze (1) => End Alarm
843, 875, 907, 939	1 Bit	I	C - W - -	DPT_Scene_AB	0/1	[Cx] Move (Reversed)	0 = Lower; 1 = Raise
844, 876, 908, 940	1 Bit	I	C - W - -	DPT_Ack	0/1	[Cx] Direct Positioning 1	0 = No Action; 1 = Go to Position
845, 877, 909, 941	1 Bit	I	C - W - -	DPT_Ack	0/1	[Cx] Direct Positioning 2	0 = No Action; 1 = Go to Position
846, 878, 910, 942	1 Bit	I	C - W - -	DPT_Ack	0/1	[Cx] Direct Positioning 1 (Save)	0 = No Action; 1 = Save Current Position
847, 879, 911, 943	1 Bit	I	C - W - -	DPT_Ack	0/1	[Cx] Direct Positioning 2 (Save)	0 = No Action; 1 = Save Current Position
848, 880, 912, 944	1 Bit	O	C R - T -	DPT_BinaryValue	0/1	[Cx] External Contact - Stop Movement	0 = Open Relay; 1 = Close Relay
1073	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Fan Coil] Scenes	0 - 63 (Execute 1 - 64); 128 - 191

							(Save 1 - 64)
1074, 1107	1 Bit	I	C - W - U	DPT_Switch	0/1	[FCx] On/Off	0 = Off; 1 = On
1075, 1108	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] On/Off (Status)	0 = Off; 1 = On
1076, 1109	1 Bit	I	C - W - U	DPT_Heat_Cool	0/1	[FCx] Mode	0 = Cool; 1 = Heat
1077, 1110	1 Bit	O	C R - T -	DPT_Heat_Cool	0/1	[FCx] Mode (Status)	0 = Cool; 1 = Heat
1078, 1111	1 Bit	I	C - W - U	DPT_Enable	0/1	[FCx] Fan: Manual/Automatic	0 = Automatic; 1 = Manual
	1 Bit	I	C - W - U	DPT_Enable	0/1	[FCx] Fan: Manual/Automatic	0 = Manual; 1 = Automatic
1079, 1112	1 Bit	O	C R - T -	DPT_Enable	0/1	[FCx] Fan: Manual/Automatic (Status)	0 = Automatic; 1 = Manual
	1 Bit	O	C R - T -	DPT_Enable	0/1	[FCx] Fan: Manual/Automatic (Status)	0 = Manual; 1 = Automatic
1080, 1113	1 Bit	I	C - W - U	DPT_Step	0/1	[FCx] Manual Fan: Step Control	0 = Down; 1 = Up
1081, 1114	1 Bit	I	C - W - U	DPT_Switch	0/1	[FCx] Manual Fan: Speed 0	0 = Off; 1 = On
1082, 1115	1 Bit	I	C - W - U	DPT_Switch	0/1	[FCx] Manual Fan: Speed 1	0 = Off; 1 = On
1083, 1116	1 Bit	I	C - W - U	DPT_Switch	0/1	[FCx] Manual Fan: Speed 2	0 = Off; 1 = On
1084, 1117	1 Bit	I	C - W - U	DPT_Switch	0/1	[FCx] Manual Fan: Speed 3	0 = Off; 1 = On
1085, 1118	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Fan: Speed 0 (Status)	0 = Off; 1 = On
1086, 1119	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Fan: Speed 1 (Status)	0 = Off; 1 = On
1087, 1120	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Fan: Speed 2 (Status)	0 = Off; 1 = On
1088, 1121	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Fan: Speed 3 (Status)	0 = Off; 1 = On
1089, 1122	1 Byte	I	C - W - U	DPT_Fan_Stage	0 - 255	[FCx] Manual Fan: Enumeration Control	S0 = 0; S1 = 1; S2 = 2; S3 = 3
	1 Byte	I	C - W - U	DPT_Fan_Stage	0 - 255	[FCx] Manual Fan: Enumeration Control	S0 = 0; S1 = 1; S2 = 2
	1 Byte	I	C - W - U	DPT_Fan_Stage	0 - 255	[FCx] Manual Fan: Enumeration Control	S0 = 0; S1 = 1
1090, 1123	1 Byte	O	C R - T -	DPT_Fan_Stage	0 - 255	[FCx] Fan: Speed Enumeration (Status)	S0 = 0; S1 = 1; S2 = 2; S3 = 3
	1 Byte	O	C R - T -	DPT_Fan_Stage	0 - 255	[FCx] Fan: Speed Enumeration (Status)	S0 = 0; S1 = 1; S2 = 2
	1 Byte	O	C R - T -	DPT_Fan_Stage	0 - 255	[FCx] Fan: Speed Enumeration (Status)	S0 = 0; S1 = 1
1091, 1124	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[FCx] Manual Fan: Percentage Control	S0 = 0%; S1 = 0,4-33,3%; S2 = 33,7-66,7%; S3 = 67,1-100%
	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[FCx] Manual Fan: Percentage Control	S0 = 0%; S1 = 1-50%; S2 = 51-100%
	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[FCx] Manual Fan: Percentage Control	S0 = 0%; S1 = 1-100%
1092, 1125	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[FCx] Fan: Speed Percentage (Status)	S0 = 0%; S1 = 33,3%; S2 = 66,6%; S3 = 100%
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[FCx] Fan: Speed Percentage (Status)	S0 = 0%; S1 = 1-50%; S2 = 51-100%
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[FCx] Fan: Speed Percentage	S0 = 0%; S1 = 1-100%

						(Status)	
1093, 1126	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[FCx] Cooling Fan: Continuous Control	0 - 100%
	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[FCx] Cooling Valve: PI Control (Continuous)	0 - 100%
1094, 1127	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[FCx] Heating Fan: Continuous Control	0 - 100%
	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[FCx] Heating Valve: PI Control (Continuous)	0 - 100%
1095, 1128	1 Bit	I	C - W - U	DPT_OpenClose	0/1	[FCx] Cooling Valve: Control Variable (1 bit)	0 = Open Valve; 1 = Close Valve
	1 Bit	I	C - W - U	DPT_Switch	0/1	[FCx] Cooling Valve: Control Variable (1 bit)	0 = Close Valve; 1 = Open Valve
1096, 1129	1 Bit	I	C - W - U	DPT_OpenClose	0/1	[FCx] Heating Valve: Control Variable (1 bit)	0 = Open Valve; 1 = Close Valve
	1 Bit	I	C - W - U	DPT_Switch	0/1	[FCx] Heating Valve: Control Variable (1 bit)	0 = Close Valve; 1 = Open Valve
1097, 1130	1 Bit	O	C R - T -	DPT_OpenClose	0/1	[FCx] Cooling Valve (Status)	0 = Open; 1 = Closed
	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Cooling Valve (Status)	0 = Closed; 1 = Open
	1 Bit	O	C R - T -	DPT_OpenClose	0/1	[FCx] Valve (Status)	0 = Open; 1 = Closed
	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Valve (Status)	0 = Closed; 1 = Open
1098, 1131	1 Bit	O	C R - T -	DPT_OpenClose	0/1	[FCx] Heating Valve (Status)	0 = Open; 1 = Closed
	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Heating Valve (Status)	0 = Closed; 1 = Open
1099, 1132	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Cooling Valve: Anti-Seize Protection (Status)	0 = Not Active; 1 = Active
	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Valve: Anti-Seize Protection (Status)	0 = Not Active; 1 = Active
1100, 1133	1 Bit	O	C R - T -	DPT_Switch	0/1	[FCx] Heating Valve: Anti-Seize Protection (Status)	0 = Not Active; 1 = Active
1101, 1134	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[FCx] Valve (Status)	0 - 100%
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[FCx] Cooling Valve (Status)	0 - 100%
1102, 1135	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[FCx] Heating Valve (Status)	0 - 100%
1103, 1136	1 Bit	O	C R - T -	DPT_Bool	0/1	[FCx] Control Value - Error	0 = No Error; 1 = Error
1104, 1137	2 Bytes	I	C - W - U	DPT_Value_Temp	-273.00º - 670433.28º	[FCx] Ambient Temperature	Ambient Temperature
1105, 1138	2 Bytes	I	C - W - U	DPT_Value_Temp	-273.00º - 670433.28º	[FCx] Setpoint Temperature	Setpoint Temperature
1106, 1139	2 Bytes	I/O	C R W T U	DPT_TimePeriodMin	0 - 65535	[FCx] Duration of Manual Control	0 = Endless; 1 - 1440 min
	2 Bytes	I/O	C R W T U	DPT_TimePeriodHrs	0 - 65535	[FCx] Duration of Manual Control	0 = Endless; 1 - 24 h
1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233,	1 Bit	I	C - W - -	DPT_Bool	0/1	[LF] (1-Bit) Data Entry x	Binary Data Entry (0/1)

1234, 1235, 1236, 1237							
1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253	1 Byte	I	**C - W - -**	DPT_Value_1_Ucount	0 - 255	[LF] (1-Byte) Data Entry x	1-Byte Data Entry (0-255)
1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269	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
1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277	4 Bytes	I	**C - W - -**	DPT_Value_4_Count	-2147483648 - 2147483647	[LF] (4-Byte) Data Entry x	4-Byte Data Entry
1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287	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
1288, 1290, 1292, 1294, 1296, 1298, 1300, 1302, 1304, 1306, 1308, 1310, 1312, 1314, 1316, 1318	4 Bytes	O	**C R - T -**	DPT_Value_4_Ucount	0 - 4294967295	[Relay x] Number of Switches	Number of Switches
1289, 1291, 1293, 1295, 1297, 1299, 1301, 1303, 1305, 1307, 1309, 1311, 1313, 1315, 1317, 1319	2 Bytes	O	**C R - T -**	DPT_Value_2_Ucount	0 - 65535	[Relay x] Maximum Switches per Minute	Maximum Switches per Minute

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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