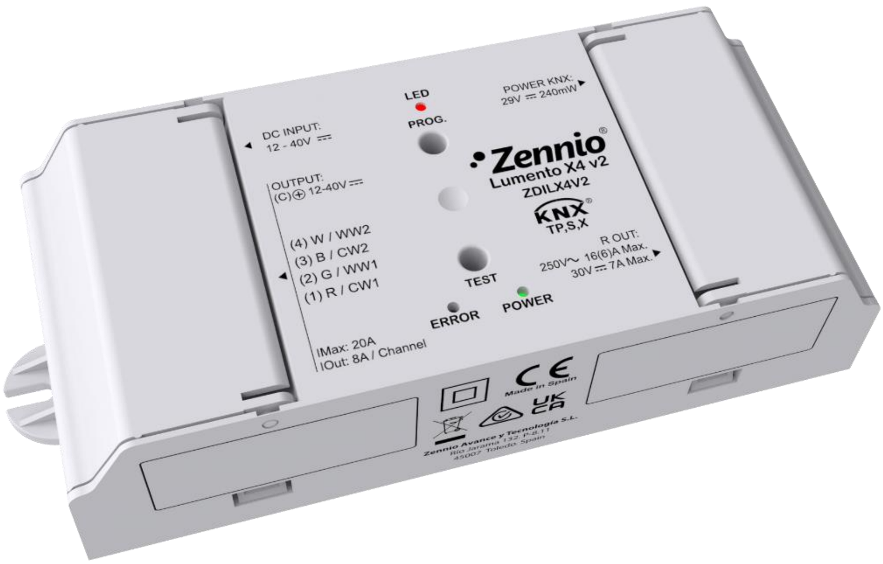

Lumento X4 v2
Lumento X3 v2
Lumento X2 v2

4 / 3 / 2 - Channel Constant Voltage PWM Dimmer for DC LED Loads

ZDILX4V2
ZDILX3V2
ZDILX2V2

Application Program Version: [1.0]
User Manual Version: [1.0]_a

www.zennio.com

USER MANUAL

CONTENTS

1 INTRODUCTION

1.1 LUMENTO X4 / X3 / X2 V2

Lumento Xn v2 constitutes the Zennio solution for light regulation in constant-voltage DC LED luminaires.

This document describes its three versions, being the difference between them the number of output channels available: Lumento X4 v2 (4 channels), Lumento X3 (3 channels) and Lumento X2 v2 (2 channels).

They all offer a wide variety of functions:

- **Output channels** parameterisable for different output configurations, according to the LED module type and the number of outputs available:
  - **Individual channels**: allows independent and parallel control over the different output channels.
  - **RGBW** (only in Lumento X4 v2): allows joint control over one four-colour LED module. The output channel will be formed by the colour components (R, G, B and W) of a sole module, being all of them controlled jointly but with differentiated luminosity levels.
  - **RGB+W / RGB** (only in Lumento X4 v2 and Lumento X3 v2 respectively): allows controlling a three-colour LED module, furthermore, in Lumento X4 v2 there is an independent white channel (i.e., **an RGB channel** plus an **individual channel** for the connection of a white LED module).
  - **Tunable White**: allows controlling regulation channels for the white colour temperature.
- Light regulation with **customisable dimming** limits and times.
- **Scenes** and **sequences**
- **Timed actions**: simple timers, flashing sequences and automatic switch-off.
- **Custom On/Off** controls.

- **Error detection and notification**
- **Power Supply Relay**
- **Master light control** 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 output channels.
- **Customisable, multi-operation logic functions.**
- **Heartbeat** or periodical “still-alive” notification.
- **KNX Security.**

2 CONFIGURATION

2.1 GENERAL

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

ETS PARAMETERISATION

The tab tree on the left shows the “**General**” tab in the first place, which contains the following parameters.

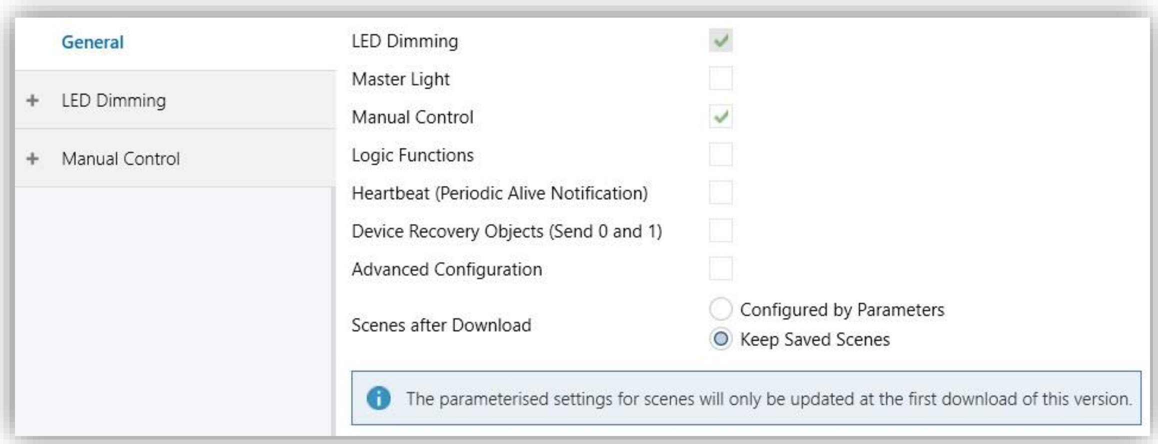

Figure 1. General.

- **LED Dimming** [*enabled*][1]: always enabled; the related parameters are contained in the “LED Dimming” tab (see section 2.2).
- **Master Light** [*disabled/enabled*]: enables or disables the “Master Light” tab on the left menu (see section 2.3).
- **Manual Control** [*disabled/enabled*]: enables or disables the “Manual control” tab on the left menu (see section 2.4).
- **Logic functions** [*disabled/enabled*]: enables or disables the “Logic Functions” tab on the left menu (see section 2.5)

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

- **Heartbeat (Periodical 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*).

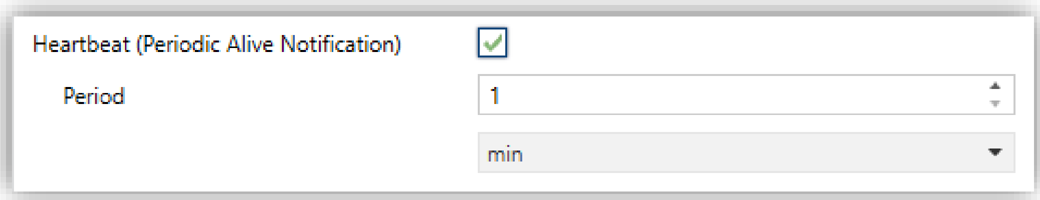

Figure 2. Heartbeat (Periodical Alive Notification).

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 activates 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.

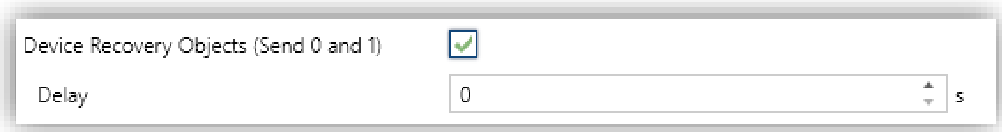

Figure 3. Device Recovery Objects

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.*

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

  Note: *if "Keep Saved Scenes" option has been configured, but it is the first download of the device or a different version from the current one, the values configured by parameters 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.*

- **Advanced Configuration** [*disabled/enabled*]: enables or disables the "Advanced Configuration" tab on the left menu (see section 2.1.1).

2.1.1 ADVANCED CONFIGURATION

- **Power Supply Start-Up Time** [*4…255*][*ds*]: allows parameterising the waiting time to be applied from the time the power supply relay closes until the channels are activated.

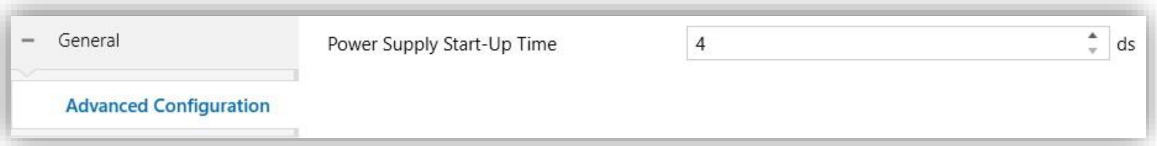

Figure 4. Advanced Configuration.

2.1.2 ERRORS

Lumento is able to detect certain errors that may occur during normal operation, which will be indicated through communication objects and lighting sequences of the LEDs of the device. It should be noted that Lumento does not report any of the other possible errors until it rules out or confirms that it is a lack of external power.

2.1.2.1 OVERHEATING

This error is activated in case any of the NTC probes that the device has reached a temperature that could be harmful.

The temperature is measured in each probe every 100ms and the corresponding action is taken if any temperature value is within these ranges:

- **Preventive range (110ºC < T < 115ºC)**: when 110ºC is exceeded, the lighting level of the loads is reduced to 30% if it is at a higher level. The values received by the bus during this mode are also limited to a maximum brightness of 30%.

- **Cutt-off range (T > 115ºC)**: when this temperature is exceeded, current is no longer supplied to the outputs.

Lumento does not return to its normal state until the temperature is below 105ºC.

When the overheat error state starts, several actions are performed:

- Send a '1' by the communication object **"Error: overheating"**.
- Turn off POWER LED.
- Flashing of the error LED for 2 consecutive times every 6 seconds (Ton = Toff = 0.5s). See Table 1 for more detail.

When leaving the error state, LED's flashing stops. In addition, POWER LED lights up and a '0' is sent by the mentioned object.

Some relevant considerations:

- **When the overheating error ends, the channels remain at the regulation level they are at that moment**, a level higher than 30% is not recovered even if a certain channel had it before the error occurred.
- **While the overheating state is active, Test On mode cannot be used**. In case of being active when overheating is detected, it will exit said mode.

2.1.2.2 EXTERNAL POWER SUPPLY

This error is activated in the following cases:

- No external power is connected.
- External power is reversed.
- The external power supply has a voltage greater than 40V.

When entering this error state, the following actions are performed:

- Notification every 30 seconds by the communication object **"Error: external voltage"**.
- Turn off POWER LED.
- Flashing of the error LED 4 consecutive times every 6 seconds (Ton = Toff = 0.5s). See Table 1 for more detail.

When leaving the error state, the flashing of the error LED stops. In addition, POWER LED lights up and a '0' is sent by the mentioned object.

The following issues should be mentioned:

- When the external power is recovered, if there is no other error that prevents the LEDs from lighting, the target value prior to the power failure is recovered. In case of external voltage recovery during a bus failure, the values configured in the custom initialization apply.
- While this error is present it is not possible to enter Test On mode. If it is active when external power problems are detected, this mode is abandoned.

2.1.2.3 SHORTCIRCUIT

Once the external power supply error has been ruled out, Lumento detects if there is a shortcircuit error in a certain output or a false shortcircuit detection through the following procedure:

- When an error of this type is detected for the first time, all the outputs are turned off immediately. In addition, the communication object **"Searching for shortcircuit error**" will send with a value of '1' and POWER LED turns off.
- Once the outputs are off, a 5 second wait will be forced to dissipate the excess temperature. During this time, all possible actions on the outputs are completely ignored (orders from objects or by pressing the button TEST) as well as the programming button.
- Once the cooling time has elapsed, the shortcircuit detection process begins through a scan of all the outputs of the device. This scan consists of turning on a single output each time for a limited time (~300ms).

If a **shortcircuit is detected** during the scan the following occurs:

- ➢ The output that caused the error is turned off.
- ➢ A '0' is sent by the “**Searching for shortcircuit error**” object.
- ➢ A '1' is sent through the “**[ ] Error: Shortcircuit**” object associated with the output that caused the error.

- POWER LED turns on.
- The error led starts flashing. This led flashes 1 time every 6 seconds. See Table 1 for more detail.

Once the shortcircuit has been solved, Lumento leaves this error state if it receives any on/off or dimming order caused by the reception of a communication object or by pressing the TEST button. When leaving the error state, a '0' is sent by the "**[ ] Error: Shortcircuit**" object and the associated flashing ends.

If a **shortcircuit is not detected** during the scan, Lumento returns to the target value prior to the detection of the error and sends a '0' by the "**Searching for shortcircuit error**" object.

If the error had not been corrected and occurred again immediately, the entire detection and notification process would begin again.

Some relevant considerations:

- If the error occurs while in Test On mode, Lumento immediately exits it.
- Contrary to the rest of the errors, Test On mode can be entered while this error is active.
- The identification and notification of this error only takes place when the regulation level is different from 0%.
- There are situations where the regulation level is so low that no shortcircuit error is detected (or produced). This depends on external factors such as the total resistance of the LED strip, which not only varies according to its length but also with temperature.

2.1.2.4 ERROR NOTIFICATION

The detection of errors, as well as its notification through the corresponding LEDs, is always active, so if one or more of the indicated errors happens, it will be **visually reported.**

For notification via communication object, the **Error objects** parameter must be enabled.

Time	External power problem (error)	Overheating	Shortcircuit	Nothing
0.5s	ERROR LED			
1.0s				
1.5s				
2.0s				
2.5s				
3.0s				
3.5s				
4.0s				
4.5s				
5.0s				
5.5s				
6.0s				
	POWER LED			
0-6s				

Table 1. Visual notification in case of error detection.

If there is more than one error simultaneously, only the one with the highest priority will be visually notified. If this one disappears while another one of lower priority is still active, the latter will be visually notified. The priority of the errors from highest to lowest is as follows:

1) External power supply failure.
2) Shortcircuit.
3) Overheating.

2.2 LED DIMMING

The main functionality of **Lumento Xn v2** consist of **controlling LED luminaries**, for which depending on the number of outputs available, there are different possible configurations depending on the LED strips to be connected.

For **Lumento X4 v2** the different configurations available are:

- [*Individual Channels*]
  - [*4x Individual*]
  - [*Channel 1+2+3+4 (Parallel)*]
  - [*Channel 1+2+3 (Parallel); Channel 4 (Indep.)*]
  - [*Channel 1+2 (Parallel); Channel 3 and 4 (Indep.)*]
  - [*Channel 1+2 (Parallel); Channel 3+4 (Parallel*)]
- [*RGBW*]
- [*RGB+W*]
- [*Tunable White*]
  - [*2x TW*]
  - [*TW 1+2 (Parallel)*]
  - [*TW 1; Channel 3 and 4 (Indep.)*]
  - [*TW 1; Channel 3+4 (Parallel)*]

For **Lumento X3 v2** the configurations available are:

- [*Individual Channels*]
  - [*3x Individual*]
  - [*Channel 1+2+3 (Parallel)*]
  - [*Channel 1+2 (Parallel); Channel 3 (Indep.)*]
- [*RGB*]
- [*Tunable White*]: **Channel TW1** and **Channel C3** (independent).

For **Lumento X2 v2** the configurations available are:

- [*Individual Channels*]
  - [*2x Individual*]
  - [*Channel 1+2 (Parallel)*]
- [*Tunable White*]

Please refer to the "**LED Dimming Control**" user manual, available under the Lumento DX4 v2 product section at www.zennio.com for detailed information on the use of the LED Dimming Control and its parameterisation in ETS.

2.3 MASTER LIGHT

Lumento has the **Master Light** function, that 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 contains the following options:

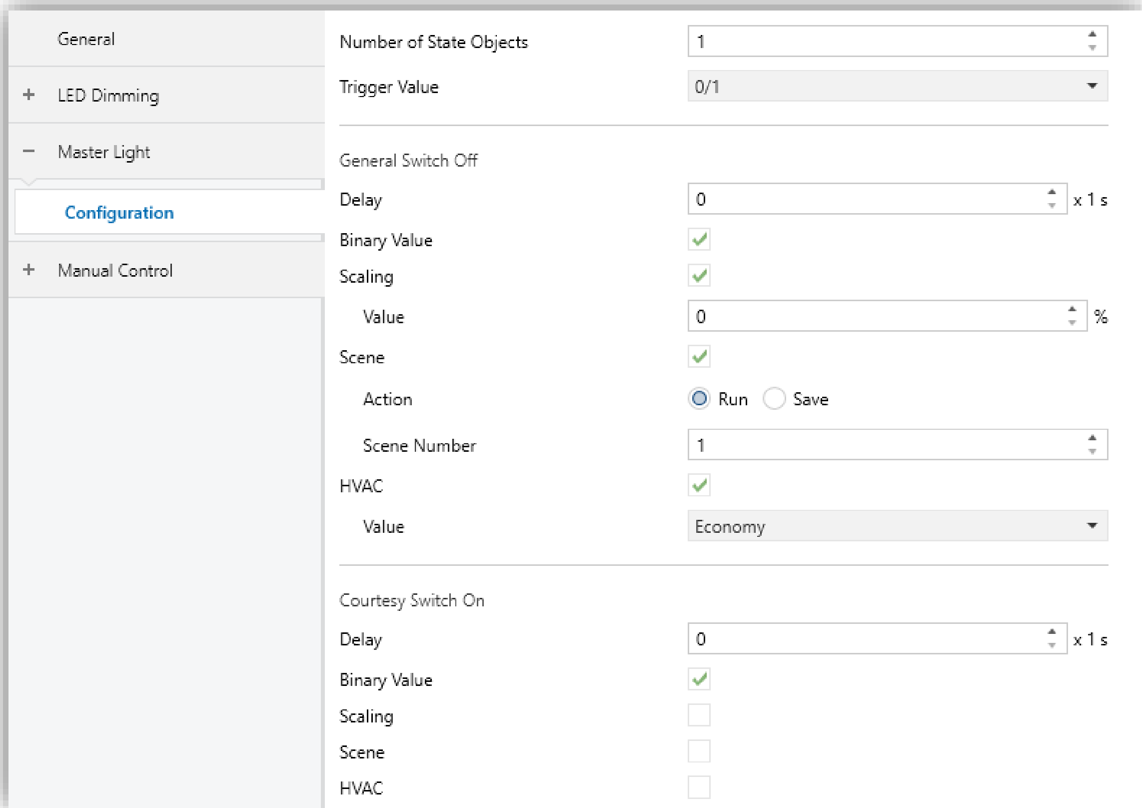

Figure 5. Master Light.

- **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)*.

2.4 MANUAL CONTROL

In the following table lists all the elements on the front panel of the device:

Element	Comment	Identifier
TEST button	On/off and outputs dimming	TEST
Error LED	Reports errors using different lighting sequences	ERROR
External Power Status LED	External power without error (On) or with error (Off)	POWER

Table 2. Front panel elements.

The Lumento allow manually switching the state of its channels through the TEST button on the top side of the device.

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 in parameters) after a download or a reset with no need of a specific activation – the button will respond to user presses from the start.*
- *On the contrary, switching to the Test On mode (unless disabled in parameters) 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.

- *When several outputs are parametrised in parallel, their status is changed at the same time as a single grouped channel.*

Test Off

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

When **TEST button** is pressed, the corresponding channel will behave as if an order had been received through the analogous communication object.

Short presses will successively turn on the different available channels (1, 2, 3, 4, OFF, 1…). The channel in question will turn on and the rest of the channels will remain off. The next short press will turn this one off and the next one on, and so on. The counter of the channel on which to act is increased only when acting on the TEST button, any order sent by object on the channels does not affect the current position.

- **Long presses** regulate the last output manipulated with a short press. If the output state is equal to the maximum, Lumento will start a downward regulation, otherwise, it will start an upward regulation. If the button is released and pressed again, the regulation direction will be switched, and when the range limits are reached, the regulation will stop automatically.

  The regulation time will be the one parametrised for relative regulation.

  Note: *Both dimming and switch limits will be subject to the parameterisation (economical mode, characteristic curve, etc).*

Regarding the rest of the functions, the device will behave under the Test Off mode as usual. As stated, button presses during this mode are entirely analogous to the reception of the corresponding orders from the KNX bus, thus the status objects will also be sent normally.

Test On

After entering the Test On mode, it will only be possible to control the output channels through the on-board manual control pushbutton.

Enabling the Test On mode allows the direct control of every channel with independence of the device parameterisation – the output channels can be controlled in the Test On mode no matter if they have not been enabled in parameters:

The channel dimming through the TEST button will be analogous to the one in Test Off mode, with the following particularities:

- **Short press:** will cause immediate regulations to 0% or to 100%.
- **Long press:** dimming period will be 10 seconds from 0% to 100%.
- When entering Test On, the position of the counter of the channel on which to act is saved, and it is restarted in order to start in channel 1. When exiting Test On, the previous value is recovered.
- Orders received through communication objects will be ignored. Moreover, the device will not send any status objects corresponding to the manual actions performed by the user. The only exception is the blocking objects, which will be taken into account when leaving Test On Mode.
- In case of an external power failure or shortcircuit, Lumento will automatically exit Test On mode.

Test On mode will not be accessible during:

- An external power error.
- An overheating error.
- The shortcircuit search analysis.

Important: *the device is delivered from factory with both manual modes (Test Off and Test On) enabled, although with all channels disabled (thus, the Test Off mode will result functionless).*

ETS PARAMETERISATION

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

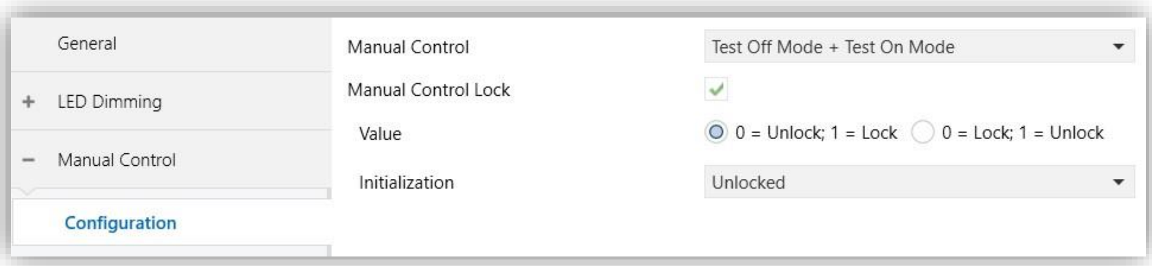

Figure 6. Manual Control.

This tab comprises the following parameters:

- **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** [*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 = Unlock; 1 = Lock / 0 = Lock; 1 = Unlock*]: defines whether the manual control lock/unlock should take place respectively upon the reception of values "0" and "1", or the opposite.

  - **Initialization** [*Unlocked / Locked / Last Value (Before Bus Failure)*]: 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).

2.5 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.

Up to 10 different and independent functions can be implemented, each of them entirely customisable and consisting of **up to 4 consecutive operations 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 within the Lumento X4 / X3 / X2 v2 product section at the Zennio homepage, www.zennio.com, for detailed information about the functionality and the configuration of the related parameters.

ANNEX I. COMMUNICATION OBJECTS

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

Note: Lumento X4 v2 objects are shown, some items are not applicable to the other models

Number	Size	I/O	Flags	Data type (DPT)	Functional Range	Name	Function
1	1 Bit	I	C - W - -	DPT_Enable	0/1	Lock Manual Control	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	Lock Manual Control	0 = Lock; 1 = Unlock
2	3 Bytes	I	C - W T U	DPT_TimeOfDay	00:00:00 - 23:59:59	[General] Time of Day	Time of Day External Reference
3	3 Bytes	I	C - W T U	DPT_Date	01/01/1990 - 31/12/2089	[General] Date	Date External Reference
4	1 Bit		C - - T -	DPT_Trigger	0/1	[Heartbeat] Object to Send '1'	Sending of '1' Periodically
5	1 Bit		C - - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 0
6	1 Bit		C - - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 1
7	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
8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	1 Bit	I	C - W - -	DPT_Switch	0/1	[MLx] Status Object x	Binary Status
20	1 Bit	O	C R - T -	DPT_Switch	0/1	[MLx] General Status	Binary Status
21	1 Bit		C - - T -	DPT_Switch	0/1	[MLx] General Switch Off: Binary Object	Switch Off Sending
22	1 Byte		C - - T -	DPT_Scaling	0% - 100%	[MLx] General Switch Off: Scaling	0-100%
23	1 Byte		C - - T -	DPT_SceneControl	0-63; 128-191	[MLx] General Switch Off: Scene	Scene Sending
24	1 Byte		C - - T -	DPT_HVACMode	1=Confort 2=Standby	[MLx] General Switch Off: HVAC mode	Auto, Comfort, Standby, Economy, Building Protection

					3=Económico 4=Protección		
25	1 Bit		C - - T -	DPT_Switch	0/1	[MLx] Courtesy Switch On: Binary Object	Switch On Sending
26	1 Byte		C - - T -	DPT_Scaling	0% - 100%	[MLx] Courtesy Switch On: Scaling	0-100%
27	1 Byte		C - - T -	DPT_SceneNumber	0 - 63	[MLx] Courtesy Switch On: Scene	Scene Sending
28	1 Byte		C - - T -	DPT_HVACMode	1=Confort 2=Standby 3=Económico 4=Protección	[MLx] Courtesy Switch On: HVAC mode	Auto, Comfort, Standby, Economy, Building Protection
29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60	1 Bit	I	C - W - -	DPT_Bool	0/1	[LF] (1-Bit) Data Entry x	Binary Data Entry (0/1)
61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76	1 Byte	I	C - W - -	DPT_Value_1_Ucount	0 - 255	[LF] (1-Byte) Data Entry x	1-Byte Data Entry (0-255)
77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92	2 Bytes	I	C - W - -	DPT_Value_2_Ucount	0 - 65535	[LF] (2-Byte) Data Entry x	2-Byte Data Entry
93, 94, 95, 96, 97, 98, 99, 100	4 Bytes	I	C - W - -	DPT_Value_4_Count	-2147483648 - 2147483647	[LF] (4-Byte) Data Entry x	4-Byte Data Entry
101, 102, 103, 104, 105, 106, 107, 108, 109, 110	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
111	1 Bit	O	C R - T -	DPT_Alarm	0/1	Error: Overheating	0 = No Error; 1 = Error
112	1 Bit		C - - T -	DPT_Start	0/1	Searching for Shortcircuit Error	0 = Stop; 1 = Start

113	1 Bit	O	C R - T -	DPT_Alarm	0/1	Error: External Voltage	0 = No Error; 1 = Error
114, 115, 116, 117	1 Bit	O	C R - T -	DPT_Alarm	0/1	[Cx] Error: Shortcircuit	0 = No Error; 1 = Error
114	1 Bit	O	C R - T -	DPT_Alarm	0/1	[R] Error: Shortcircuit	0 = No Error; 1 = Error
114, 116	1 Bit	O	C R - T -	DPT_Alarm	0/1	[CWx] Error: Shortcircuit	0 = No Error; 1 = Error
115	1 Bit	O	C R - T -	DPT_Alarm	0/1	[G] Error: Shortcircuit	0 = No Error; 1 = Error
115, 117	1 Bit	O	C R - T -	DPT_Alarm	0/1	[WWx] Error: Shortcircuit	0 = No Error; 1 = Error
116	1 Bit	O	C R - T -	DPT_Alarm	0/1	[B] Error: Shortcircuit	0 = No Error; 1 = Error
117	1 Bit	O	C R - T -	DPT_Alarm	0/1	[W] Error: Shortcircuit	0 = No Error; 1 = Error
118	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[RGB] Maximum Light Level	20 - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[RGBW] Maximum Light Level	20 - 100%
118, 149	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx] Maximum Light Level	20 - 100%
118	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx+TWx] Maximum Light Level	20 - 100%
119	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGBW] Switch On/Off	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGB] Switch On/Off	0 = Off; 1 = On
119, 150	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx] Switch On/Off	0 = Off; 1 = On
119	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx+TWx] Switch On/Off	0 = Off; 1 = On
120	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) ... 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) ... 0xF (Subir 1%)	[RGBW] Relative Dimming	4-Bit Dimmer Control
	4 Bit	I	C - W - -	DPT_Control_Dimming		[RGB] Relative Dimming	4-Bit Dimmer Control
120, 151	4 Bit	I	C - W - -	DPT_Control_Dimming		[TWx] Relative Dimming	4-Bit Dimmer Control
120	4 Bit	I	C - W - -	DPT_Control_Dimming		[TWx+TWx] Relative Dimming	4-Bit Dimmer Control
121	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[RGBW] Absolute Dimming	1-Byte Dimmer Control
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[RGB] Absolute Dimming	1-Byte Dimmer Control
121, 152	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx] Absolute Dimming	1-Byte Dimmer Control
121	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx+TWx] Absolute Dimming	1-Byte Dimmer Control
122, 123, 124	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[RGBW] Dimming Time x	Time in Seconds
	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[RGB] Dimming Time x	Time in Seconds
122, 123, 124, 153, 154, 155	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[TWx] Dimming Time x	Time in Seconds
122, 123, 124	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[TWx+TWx] Dimming Time x	Time in Seconds
125	3 Bytes	I	C - W - -	DPT_Colour_RGB	[0 - 255] * 3	[RGB] RGB Colour	3-Byte RGB Control

125, 156	2 Bytes	I	C - W - -	DPT_Absolute_Colour_Temperature	0 - 65535	[TWx] Colour Temperature	2-Byte Control (Kelvin)
125	3 Bytes	I	C - W - -	DPT_Colour_RGB	[0 - 255] * 3	[RGBW] RGB Colour	3-Byte RGB Control
	2 Bytes	I	C - W - -	DPT_Absolute_Colour_Temperature	0 - 65535	[TWx+TWx] Colour Temperature	2-Byte Control (Kelvin)
126	6 Bytes	I	C - W - -	DPT_Colour_RGBW	[0 -1] *4 - [0 - 255] * 4	[RGBW] RGBW Colour	6-Byte RGBW Control
126, 157	6 Bytes	I	C - W - -	DPT_Brightness_Colour_Temperature_Transition	[0 - 255] * 6	[TWx] Colour Temperature and Luminosity Transition	6-Byte Control
126	6 Bytes	I	C - W - -	DPT_Brightness_Colour_Temperature_Transition	[0 - 255] * 6	[TWx+TWx] Colour Temperature and Luminosity Transition	6-Byte Control
127	3 Bytes	I	C - W - -	1.xxx	[0 - 255] * 3	[RGB] HSV Colour	3-Byte HSV Control
127, 158	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx] HCL	0 = Deactivate; 1 = Activate
127	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx+TWx] HCL	0 = Deactivate; 1 = Activate
128, 159	2 Bytes	I	C - W - -	DPT_Absolute_Colour_Temperature	0 - 65535	[TWx] HCL: Colour Temperature	Colour Temperature (Kelvin)
128	2 Bytes	I	C - W - -	DPT_Absolute_Colour_Temperature	0 - 65535	[TWx+TWx] HCL: Colour Temperature	Colour Temperature (Kelvin)
129	1 Byte	I	C - W - -	DPT_SceneControl	1 – 22	[RGBW] Direct Colour	Colour Number (Scene 1 - 22)
	1 Byte	I	C - W - -	DPT_SceneControl	1 - 22	[RGB] Direct Colour	Colour Number (Scene 1 - 22)
129, 160	1 Byte	I	C - W - -	DPT_SceneControl	1 – 6	[TWx] Direct Colour	Colour Number (Scene 1 - 6)
129	1 Byte	I	C - W - -	DPT_SceneControl	1 - 6	[TWx+TWx] Direct Colour	Colour Number (Scene 1 - 6)
130	1 Bit	I	C - W - -	DPT_Start	0/1	[RGBW] Colour Shift	0 = Stop; 1 = Start
	1 Bit	I	C - W - -	DPT_Start	0/1	[RGB] Colour Shift	0 = Stop; 1 = Start
130, 161	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx] Colour Temperature Shift	0 = Stop; 1 = Start
130	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx+TWx] Colour Temperature Shift	0 = Stop; 1 = Start
131	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) … 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) … 0xF (Subir 1%)	[RGBW] Colour Shift	4-Bit Colour Control
	4 Bit	I	C - W - -	DPT_Control_Dimming		[RGB] Colour Shift	4-Bit Colour Control
131, 162	4 Bit	I	C - W - -	DPT_Control_Dimming		[TWx] Colour Temperature Shift	4-Bit Colour Control
131	4 Bit	I	C - W - -	DPT_Control_Dimming		[TWx+TWx] Colour Temperature Shift	4-Bit Colour Control
132	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[RGBW] Memory Function: Switch On Value	0 - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[RGB] Memory Function: Switch On Value	0 - 100%

132, 163	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx] Memory Function: Switch On Value	0 - 100%
132	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx+TWx] Memory Function: Switch On Value	0 - 100%
133	1 Bit	I	C - W - -	DPT_Start	0/1	[RGBW] Simple Timer	0 = Deactivate; 1 = Activate
	1 Bit	I	C - W - -	DPT_Start	0/1	[RGB] Simple Timer	0 = Deactivate; 1 = Activate
133, 164	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx] Simple Timer	0 = Deactivate; 1 = Activate
133	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx+TWx] Simple Timer	0 = Deactivate; 1 = Activate
134	1 Bit	O	C R - T -	DPT_Bool	0/1	[RGBW] Warning Time (Status)	0 = Deactivated; 1 = Activated
	1 Bit	O	C R - T -	DPT_Bool	0/1	[RGB] Warning Time (Status)	0 = Deactivated; 1 = Activated
134, 165	1 Bit	O	C R - T -	DPT_Bool	0/1	[TWx] Warning Time (Status)	0 = Deactivated; 1 = Activated
134	1 Bit	O	C R - T -	DPT_Bool	0/1	[TWx+TWx] Warning Time (Status)	0 = Deactivated; 1 = Activated
135	1 Bit	I	C - W - -	DPT_Start	0/1	[RGBW] Flashing	0 = Deactivate; 1 = Activate
	1 Bit	I	C - W - -	DPT_Start	0/1	[RGB] Flashing	0 = Deactivate; 1 = Activate
135, 166	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx] Flashing	0 = Deactivate; 1 = Activate
135	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx+TWx] Flashing	0 = Deactivate; 1 = Activate
136	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[RGBW] Scenes/Sequences	Scene/Sequence Number
	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[RGB] Scenes/Sequences	Scene/Sequence Number
136, 167	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[TWx] Scenes/Sequences	Scene/Sequence Number
136	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[TWx+TWx] Scenes/Sequences	Scene/Sequence Number
137	1 Bit	I	C - W - -	DPT_Start	0/1	[RGBW] Start/Stop Sequence	0 = Stop; 1 = Start
	1 Bit	I	C - W - -	DPT_Start	0/1	[RGB] Start/Stop Sequence	0 = Stop; 1 = Start
137, 168	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx] Start/Stop Sequence	0 = Stop; 1 = Start
137	1 Bit	I	C - W - -	DPT_Start	0/1	[TWx+TWx] Start/Stop Sequence	0 = Stop; 1 = Start
138	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGBW] Custom On/Off 1	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGB] Custom On/Off 1	0 = Off; 1 = On
138, 169	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx] Custom On/Off 1	0 = Off; 1 = On
138	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx+TWx] Custom On/Off 1	0 = Off; 1 = On
139	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGBW] Custom On/Off 2	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGB] Custom On/Off 2	0 = Off; 1 = On
139, 170	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx] Custom On/Off 2	0 = Off; 1 = On
139	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx+TWx] Custom On/Off 2	0 = Off; 1 = On

140	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGBW] Custom On/Off 3	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGB] Custom On/Off 3	0 = Off; 1 = On
140, 171	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx] Custom On/Off 3	0 = Off; 1 = On
140	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx+TWx] Custom On/Off 3	0 = Off; 1 = On
141	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGBW] Custom On/Off 4	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[RGB] Custom On/Off 4	0 = Off; 1 = On
141, 172	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx] Custom On/Off 4	0 = Off; 1 = On
141	1 Bit	I	C - W - -	DPT_Switch	0/1	[TWx+TWx] Custom On/Off 4	0 = Off; 1 = On
142	1 Bit	I	C - W - -	DPT_Enable	0/1	[RGBW] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[RGB] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[RGBW] Lock	0 = Lock; 1 = Unlock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[RGB] Lock	0 = Lock; 1 = Unlock
142, 173	1 Bit	I	C - W - -	DPT_Enable	0/1	[TWx] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[TWx] Lock	0 = Lock; 1 = Unlock
142	1 Bit	I	C - W - -	DPT_Enable	0/1	[TWx+TWx] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[TWx+TWx] Lock	0 = Lock; 1 = Unlock
143, 174	1 Bit	I	C - W - -	DPT_Trigger	0/1	[RGBW] White Balance	0 = 1 = Save RGB components
	1 Bit	I	C - W - -	DPT_Trigger	0/1	[RGB] White Balance	0 = 1 = Save RGB components
144	1 Bit	O	C R - T -	DPT_Switch	0/1	[RGBW] On/Off (Status)	0 = Off; 1 = On
	1 Bit	O	C R - T -	DPT_Switch	0/1	[RGB] On/Off (Status)	0 = Off; 1 = On
144, 175	1 Bit	O	C R - T -	DPT_Switch	0/1	[TWx] On/Off (Status)	0 = Off; 1 = On
144	1 Bit	O	C R - T -	DPT_Switch	0/1	[TWx+TWx] On/Off (Status)	0 = Off; 1 = On
145	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[RGBW] Dimming Value (Status)	0 - 100%
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[RGB] Dimming Value (Status)	0 - 100%
145, 176	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[TWx] Dimming Value (Status)	0 - 100%
145	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[TWx+TWx] Dimming Value (Status)	0 - 100%
146	3 Bytes	O	C R - T -	DPT_Colour_RGB	[0 - 255] * 3	[RGB] RGB Dimming Values (Status)	3-Byte Status
146, 177	2 Bytes	O	C R - T -	DPT_Absolute_Colour_Temperature	0 - 65535	[TWx] Colour Temperature Value (Status)	Colour Temperature (Kelvin)
146	3 Bytes	O	C R - T -	DPT_Colour_RGB	[0 - 255] * 3	[RGBW] RGB Dimming Values (Status)	3-Byte Status

	2 Bytes	O	C R - T -	DPT_Absolute_Colour_Temperature	0 - 65535	[TWx+TWx] Colour Temperature Value (Status)	Colour Temperature (Kelvin)
147, 178	6 Bytes	O	C R - T -	DPT_Colour_RGBW	[0 -1] *4 - [0 - 255] * 4	[RGBW] RGBW Dimming Values (Status)	6-Byte Status
148	3 Bytes	O	C R - T -	1.xxx	[0 - 255] * 3	[RGB] HSV Dimming Values (Status)	3-Byte Status
148, 179	1 Bit	O	C R - T -	DPT_Switch	0/1	[TWx] HCL (Status)	0 = Deactivated; 1 = Activated
148	1 Bit	O	C R - T -	DPT_Switch	0/1	[TWx+TWx] HCL (Status)	0 = Deactivated; 1 = Activated
180, 200, 220, 240	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx] Maximum Light Level	20 - 100%
180	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx] Maximum Light Level	20 - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx+Cx] Maximum Light Level	20 - 100%
180, 220	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx] Maximum Light Level	20 - 100%
181, 201, 221, 241	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx] Switch On/Off	0 = Off; 1 = On
181	1 Bit	I	C - W - -	DPT_Switch	0/1	[R] Switch On/Off	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx+Cx] Switch On/Off	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx] Switch On/Off	0 = Off; 1 = On
181, 221	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx] Switch On/Off	0 = Off; 1 = On
182, 202, 222, 242	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) ... 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) ... 0xF (Subir 1%)	[Cx] Relative Dimming	4-Bit Dimmer Control
182	4 Bit	I	C - W - -	DPT_Control_Dimming		[R] Relative Dimming	4-Bit Dimmer Control
	4 Bit	I	C - W - -	DPT_Control_Dimming		[Cx+Cx+Cx+Cx] Relative Dimming	4-Bit Dimmer Control
	4 Bit	I	C - W - -	DPT_Control_Dimming		[Cx+Cx+Cx] Relative Dimming	4-Bit Dimmer Control
182, 222	4 Bit	I	C - W - -	DPT_Control_Dimming		[Cx+Cx] Relative Dimming	4-Bit Dimmer Control
183, 203, 223, 243	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx] Absolute Dimming	1-Byte Dimmer Control
183	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[R] Absolute Dimming	1-Byte Dimmer Control
183, 223	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx] Absolute Dimming	1-Byte Dimmer Control
183	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx] Absolute Dimming	1-Byte Dimmer Control
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx+Cx] Absolute Dimming	1-Byte Dimmer Control

184, 185, 186, 204, 205, 206, 224, 225, 226, 244, 245, 246	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[Cx] Dimming Time x	Time in Seconds
184, 185, 186	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[Cx+Cx+Cx] Dimming Time x	Time in Seconds
	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[Cx+Cx+Cx+Cx] Dimming Time x	Time in Seconds
184, 185, 186, 224, 225, 226	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[Cx+Cx] Dimming Time x	Time in Seconds
187, 207, 227, 247	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx] Memory Function: Switch On Value	0 - 100%
187	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx] Memory Function: Switch On Value	0 - 100%
	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx+Cx] Memory Function: Switch On Value	0 - 100%
187, 227	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[Cx+Cx] Memory Function: Switch On Value	0 - 100%
188, 208, 228, 248	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx] Simple Timer	0 = Deactivate; 1 = Activate
188	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx+Cx+Cx] Simple Timer	0 = Deactivate; 1 = Activate
	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx+Cx] Simple Timer	0 = Deactivate; 1 = Activate
188, 228	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx] Simple Timer	0 = Deactivate; 1 = Activate
189, 209, 229, 249	1 Bit	O	C R - T -	DPT_Bool	0/1	[Cx] Warning Time (Status)	0 = Deactivated; 1 = Activated
189	1 Bit	O	C R - T -	DPT_Bool	0/1	[Cx+Cx+Cx+Cx] Warning Time (Status)	0 = Deactivated; 1 = Activated
	1 Bit	O	C R - T -	DPT_Bool	0/1	[Cx+Cx+Cx] Warning Time (Status)	0 = Deactivated; 1 = Activated
189, 229	1 Bit	O	C R - T -	DPT_Bool	0/1	[Cx+Cx] Warning Time (Status)	0 = Deactivated; 1 = Activated
190, 210, 230, 250	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx] Flashing	0 = Deactivate; 1 = Activate
190	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx+Cx+Cx] Flashing	0 = Deactivate; 1 = Activate
190, 230	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx] Flashing	0 = Deactivate; 1 = Activate
190	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx+Cx] Flashing	0 = Deactivate; 1 = Activate
191, 211, 231, 251	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Cx] Scenes/Sequences	Scene/Sequence Number
191	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Cx+Cx+Cx+Cx] Scenes/Sequences	Scene/Sequence Number
	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Cx+Cx+Cx] Scenes/Sequences	Scene/Sequence Number
191, 231	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[Cx+Cx] Scenes/Sequences	Scene/Sequence Number
192, 212, 232, 252	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx] Start/Stop Sequence	0 = Stop; 1 = Start

192	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx+Cx+Cx] Start/Stop Sequence	0 = Stop; 1 = Start
	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx+Cx] Start/Stop Sequence	0 = Stop; 1 = Start
192, 232	1 Bit	I	C - W - -	DPT_Start	0/1	[Cx+Cx] Start/Stop Sequence	0 = Stop; 1 = Start
193, 213, 233, 253	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx] Custom On/Off 1	0 = Off; 1 = On
193	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx+Cx] Custom On/Off 1	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx] Custom On/Off 1	0 = Off; 1 = On
193, 233	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx] Custom On/Off 1	0 = Off; 1 = On
194, 214, 234, 254	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx] Custom On/Off 2	0 = Off; 1 = On
194	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx+Cx] Custom On/Off 2	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx] Custom On/Off 2	0 = Off; 1 = On
194, 234	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx] Custom On/Off 2	0 = Off; 1 = On
195, 215, 235, 255	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx] Custom On/Off 3	0 = Off; 1 = On
195	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx+Cx] Custom On/Off 3	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx] Custom On/Off 3	0 = Off; 1 = On
195, 235	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx] Custom On/Off 3	0 = Off; 1 = On
196, 216, 236, 256	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx] Custom On/Off 4	0 = Off; 1 = On
196	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx+Cx] Custom On/Off 4	0 = Off; 1 = On
	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx+Cx] Custom On/Off 4	0 = Off; 1 = On
196, 236	1 Bit	I	C - W - -	DPT_Switch	0/1	[Cx+Cx] Custom On/Off 4	0 = Off; 1 = On
197, 217, 237, 257	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx] Lock	0 = Lock; 1 = Unlock
197	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx+Cx+Cx+Cx] Lock	0 = Lock; 1 = Unlock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx+Cx+Cx+Cx] Lock	0 = Unlock; 1 = Lock

	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx+Cx+Cx] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx+Cx+Cx] Lock	0 = Lock; 1 = Unlock
197, 237	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx+Cx] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[Cx+Cx] Lock	0 = Lock; 1 = Unlock
198, 218, 238, 258	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx] On/Off (Status)	0 = Off; 1 = On
198	1 Bit	O	C R - T -	DPT_Switch	0/1	[R] On/Off (Status)	0 = Off; 1 = On
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx+Cx+Cx] On/Off (Status)	0 = Off; 1 = On
	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx+Cx+Cx+Cx] On/Off (Status)	0 = Off; 1 = On
198, 238	1 Bit	O	C R - T -	DPT_Switch	0/1	[Cx+Cx] On/Off (Status)	0 = Off; 1 = On
199, 219, 239, 259	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Cx] Dimming Value (Status)	0 - 100%
199	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[R] Dimming Value (Status)	0 - 100%
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx] Dimming Value (Status)	0 - 100%
	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Cx+Cx+Cx+Cx] Dimming Value (Status)	0 - 100%
199, 239	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[Cx+Cx] Dimming Value (Status)	0 - 100%
201	1 Bit	I	C - W - -	DPT_Switch	0/1	[G] Switch On/Off	0 = Off; 1 = On
202	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) … 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) … 0xF (Subir 1%)	[G] Relative Dimming	4-Bit Dimmer Control
203	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[G] Absolute Dimming	1-Byte Dimmer Control
218	1 Bit	O	C R - T -	DPT_Switch	0/1	[G] On/Off (Status)	0 = Off; 1 = On
219	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[G] Dimming Value (Status)	0 - 100%

221	1 Bit	I	C - W - -	DPT_Switch	0/1	[B] Switch On/Off	0 = Off; 1 = On
222	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) … 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) … 0xF (Subir 1%)	[B] Relative Dimming	4-Bit Dimmer Control
223	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[B] Absolute Dimming	1-Byte Dimmer Control
238	1 Bit	O	C R - T -	DPT_Switch	0/1	[B] On/Off (Status)	0 = Off; 1 = On
239	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[B] Dimming Value (Status)	0 - 100%
240	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[W] Maximum Light Level	20 - 100%
241	1 Bit	I	C - W - -	DPT_Switch	0/1	[W] Switch On/Off	0 = Off; 1 = On
242	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) … 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) … 0xF (Subir 1%)	[W] Relative Dimming	4-Bit Dimmer Control
243	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[W] Absolute Dimming	1-Byte Dimmer Control
244, 245, 246	2 Bytes	I	C - W - -	DPT_TimePeriodSec	0 - 65535	[W] Dimming Time x	Time in Seconds
247	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[W] Memory Function: Switch On Value	0 - 100%
248	1 Bit	I	C - W - -	DPT_Start	0/1	[W] Simple Timer	0 = Deactivate; 1 = Activate
249	1 Bit	O	C R - T -	DPT_Bool	0/1	[W] Warning Time (Status)	0 = Deactivated; 1 = Activated
250	1 Bit	I	C - W - -	DPT_Start	0/1	[W] Flashing	0 = Deactivate; 1 = Activate

251	1 Byte	I	C - W - -	DPT_SceneControl	0-63; 128-191	[W] Scenes/Sequences	Scene/Sequence Number
252	1 Bit	I	C - W - -	DPT_Start	0/1	[W] Start/Stop Sequence	0 = Stop; 1 = Start
253	1 Bit	I	C - W - -	DPT_Switch	0/1	[W] Custom On/Off 1	0 = Off; 1 = On
254	1 Bit	I	C - W - -	DPT_Switch	0/1	[W] Custom On/Off 2	0 = Off; 1 = On
255	1 Bit	I	C - W - -	DPT_Switch	0/1	[W] Custom On/Off 3	0 = Off; 1 = On
256	1 Bit	I	C - W - -	DPT_Switch	0/1	[W] Custom On/Off 4	0 = Off; 1 = On
257	1 Bit	I	C - W - -	DPT_Enable	0/1	[W] Lock	0 = Unlock; 1 = Lock
	1 Bit	I	C - W - -	DPT_Enable	0/1	[W] Lock	0 = Lock; 1 = Unlock
258	1 Bit	O	C R - T -	DPT_Switch	0/1	[W] On/Off (Status)	0 = Off; 1 = On
259	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[W] Dimming Value (Status)	0 - 100%
260	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) ... 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) ... 0xF (Subir 1%)	[H] Relative Dimming	4-Bit Dimmer Control
260, 266, 269	4 Bit	I	C - W - -	DPT_Control_Dimming		[TWx] Colour Temperature Relative Dimming	4-Bit Dimmer Control (0% = Warm, 100% = Cold)
260	4 Bit	I	C - W - -	DPT_Control_Dimming		[TWx+TWx] Colour Temperature Relative Dimming	4-Bit Dimmer Control (0% = Warm, 100% = Cold)
261	1 Byte	I	C - W - -	DPT_Angle	0 - 360°	[H] Absolute Dimming	1-Byte Dimmer Control
261, 267, 270	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx] Colour Temperature Absolute Dimming	1-Byte Dimmer Control (0% = Warm, 100% = Cold)
261	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[TWx+TWx] Colour Temperature Absolute Dimming	1-Byte Dimmer Control (0% = Warm, 100% = Cold)
262	1 Byte	O	C R - T -	DPT_Angle	0 - 360°	[H] Dimming Value (Status)	0 - 360°
262, 268, 271	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[TWx] Colour Temperature Dimming Value (Status)	Colour Temperature (0% = Warm, 100% = Cold)
262	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[TWx+TWx] Colour Temperature Dimming Value (Status)	Colour Temperature (0% = Warm, 100% = Cold)

263	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) ... 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) ... 0xF (Subir 1%)	[S] Relative Dimming	4-Bit Dimmer Control
264	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[S] Absolute Dimming	1-Byte Dimmer Control
265	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[S] Dimming Value (Status)	0 - 100 %
266, 269	4 Bit	I	C - W - -	DPT_Control_Dimming	0x0 (Detener) 0x1 (Reducir 100%) ... 0x7 (Reducir 1%) 0x8 (Detener) 0x9 (Subir 100%) ... 0xF (Subir 1%)	[V] Relative Dimming	4-Bit Dimmer Control
267, 270	1 Byte	I	C - W - -	DPT_Scaling	0% - 100%	[V] Absolute Dimming	1-Byte Dimmer Control
268, 271	1 Byte	O	C R - T -	DPT_Scaling	0% - 100%	[V] Dimming Value (Status)	0 - 100%
272	1 Bit	I	C - W - -	DPT_Switch	0/1	[Power Supply Relay] Switch On/Off	0 = Off; 1 = On
273	1 Bit	O	C R - T -	DPT_Switch	0/1	[Power Supply Relay] On/Off (Status)	0 = Off; 1 = On

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