

IuxCONTROL

ready2mains[™] scriptGENERATOR



Table of contents

1 About the ready2mains scriptGENERATOR	
2 Switch ON / OFF commands	
2.1 Switch Programmer output off (initialization) 4	
2.2 Switch Programmer output on	
2.3 Switch on DALI supply	
2.4 Start automatic addressing of all connected DALI devices on the bus	
2.5 Reset the output of the Programmer 4	
2.6 Dim device to the specified dim level 4	
2.7 Reset DALI device in order to remove the device address	
2.8 Reset the DALI power supply within the Programmer	
2.9 Switch Programmer output off	
2.10 Switch DALI supply off	
3 DALI / ready2mains parameters	
3.1 Set output current [mA]	
3.2 OEM GTIN byte 0 - 5	
3.3 OEM identification number byte 0 - 7 6	
3.4 Additional OEM Information (Tridonic supported) 6	
3.5 DC Level, light level in %	
3.6 Enhanced Power On Level in percent	
3.7 "Actuator configuration" of the LED driver	
3.8 Start Up Fading	
3.9 Constant Light Output (CLO)	
3.10 corridorFUNCTION	
3.11 ITG Offset Temperature	
3.12 Set Operating Mode	
4 chronoSTEP 2	
4.1 Description	
4.2 Parameters for chonoSTEP 2 15	
5 basicDIM DGC Parameters	
5.1 Room Profiles	
5.2 Device-specific Configuration	
5.3 Motion Sensor	
5.4 Light Sensor	
5.5 Remote Control	
6 Useful links	5

	Α	В	0	Р	S	Т	U	V	W	Х
2	Line #	Add to script	Delay [ms]	DALI short address	Physical value	Parameter description	Min value	Max value	visible in simple mode?	save to DALI file
26	51		300 ms			Switch Programmer output off (initialization)	no	no	Yes	
27	52		0 ms			Switch Programmer output on	no	no	Yes	
28	53		100 ms			Switch on DALI supply	no	no	Yes	
31	101		0 ms			Start automatic addressing of all connected DALI devices on the bus	no	no	No	
32	102		0 ms			Set given short address in the column "value" to the connected device	0	63	No	
33	103		0 ms			Set output current [mA]	0 mA	2000 mA	Yes	
37	105		0 ms			Reset the output of the Programmer. Keep the output off for x seconds given by the column "Physical value"	0 s	255 s	Yes	
38	106		0 ms			OEM GTIN byte 0 (MSB)	0	255	No	
39	107		0 ms			OEM GTIN byte 1	0	255	No	
40	108		0 ms			OEM GTIN byte 2	0	255	No	
41	109		0 ms			OEM GTIN byte 3	0	255	No	
42	110		0 ms			OEM GTIN byte 4	0	255	No	
43	111		0 ms			OEM GTIN byte 5 ATTENTION: may not work with old drivers! (only ready2mains affected!)	0	255	No	
44	112		0 ms			OEM Identification number byte 0 (MSB)	0	255	No	
45	113		0 ms			OEM Identification number byte 1	0	255	No	
46	114		0 ms			OEM Identification number byte 2	0	255	No	
47	115		0 ms			OEM Identification number byte 3	0	255	No	
48	116		0 ms			OEM Identification number byte 4	0	255	No	
49	117		0 ms			OEM Identification number byte 5	0	255	No	
50	118		0 ms			OEM Identification number byte 6	0	255	No	
51	119		0 ms			OEM Identification number byte 7	0	255	No	
52	120		0 ms			Additional OEM Information (Tridonic supported)	0	255	No	

1. About the ready2mains scriptGENERATOR

The software tool scriptGENERATOR is based on Microsoft EXCEL and is used to generate user defined parameter sets, called scripts. These scripts can then be transferred via the ready2mains Programmer into ready2mains, DALI or U6Me2 capable Tridonic LED Drivers. This provides a simple, efficient and flexible way for luminaire manufacturers to program LED luminaires.

One line from the Microsoft EXCEL spreadsheet corresponds to one parameter set. The following documentation covers the different parameter sets. The parameter sets are listed according to their "Parameter description" which is the text from the 6th column of the spreadsheet (see screenshot above).

2. Switch ON / OFF commands

2.1. Switch Programmer output off (initialization)

Command used to initially switch the Programmer mains output off. This is used to make sure that the programmer is always off when a script is started.

2.2. Switch Programmer output on

Command used to switch the Programmer mains output on.

2.3. Switch on DALI supply

Command used to switch the internal DALI power supply on.

2.4. Start automatic addressing of all connected DALI devices on the

bus

Command used to start the automatic addressing of all connected DALI devices.

2.5. Reset the output of the Programmer

Command used to reset the Programmer mains output (switch it off and on). The value added into the column "Physical value" defines how long the Programmer is off before it is automatically restarted.

Value range:

▶ 0 - 255 s

2.6. Dim device to the specified dim level

Command used to dim the device to a specific value.

Value range:

▶ 0 - 100%

2.7. Reset DALI device in order to remove the device address

Command used to remove the device address (DALI addresses) from the devices.

2.8. Reset the DALI power supply within the Programmer

Command used to reset the DALI power supply of the Programmer (switch it off and on). The value added into the column "Physical value" defines how long the DALI power supply is off before it is automatically restarted.

Value range:

▶ 0 - 255 s

2.9. Switch Programmer output off

Command used to switch the Programmer mains output off.

2.10. Switch DALI supply off

Command used to switch the internal DALI power supply off.

3. DALI / ready2mains parameters

3.1. Set output current [mA]

With this parameter it's possible to set the output current of the LED driver in 1 mA steps.

A CAUTION!

The set output current must be within the driver's current range. If the output current is set via ready2mains and the output current is too high or too low, the driver doesn't show any positive optical feedback (no blinking, otherwise it would blink twice and then leave the light on afterwards).

3.2. OEM GTIN byte 0 - 5

With these parameters it's possible to set the GTIN (Global Trade Item Number).

A CAUTION!

With old drivers it might not be possible to write the GTIN byte 5 via ready2mains.

3.3. OEM identification number byte 0 - 7

With these parameters it's possible to set the OEM (Original Equipment Manufacturer) identification number.

3.4. Additional OEM Information (Tridonic supported)

With these parameters it's possible to set the Additional OEM (Original Equipment Manufacturer) identification number.

3.5. DC Level, light level in %

With this parameter it's possible to set the light level in DC mode in percent.

3.6. Enhanced Power On Level in percent

The Enhanced Power on level defines the power level that is automatically set when the power is restored after a power failure.

The Enhanced Power On Level can be set to a fixed control value (0-100 %) or recall the memory value (MASK). The memory value is the last control value to which the LED driver was set before the power failure.

3.7. "Actuator configuration" of the LED driver

Bit	Value	Function		
0	0 = enabled; 1 = disabled	Intelligent Voltage Guard (IVG)		
1	2	not used		
2	4 = enabled; 0 = disabled	Enhanced Power On Level		
3 8 = enabled; Dimming/switching at DC mains 0 = disabled		Dimming/switching at DC mains		
		A CAUTION!		
		 If "Dimming/switching at DC mains" is activated, emergency mode is not recognized. The device no longer automatically switches to the emergency light level. Make sure that if Dimming on DC is activated an appropriate dimming level is selected for the emergency lighting mode! Please also note the following: Dimming on DC may only be activated by trained personnel! Dimming on DC must not be used in emergency lighting systems according to EN 50172. 		
4 16 = enabled; Over The Lifetime (OTL) 0 = disabled		Over The Lifetime (OTL)		
		If the OTL function is enabled, visual feedback is given as soon as the LED exceeds the expected LED lamp life. If the expected LED lamp life is exceeded, the luminaire flashes for 2 seconds after being switched on.		
5	32	not used		
6	64 = slave; 0 = master / sensor	PIR (Passive Infrared) profile in sensor slave mode		
7	128 = enabled; 0 = disabled	System failure level in sensor mode		

The Value to type in is the sum of the settings see example below.

TRIDONIC

EXAMPLE:

Bit	Value	Comment	
0	0	IVG enabled	
1	0	not used	
2	4	enhanced power on level enabled	
3	0	dimming at DC disabled	
4	16	OTL enabled	
5	0	not used	
6	0	PIR profile (master / sensor)	
7	0	system failure level in sensor mode disabled	
sum	20		

The correct actuator configuration is the sum of the values! In this example: 4 + 16 = 20.

3.8. Start Up Fading

The Start Up Fading defines how fast the light is faded in at start up.

Value range:

- 0 = fast fade time
- ▶ 1 10 = 0.7 16 s

3.9. Constant Light Output (CLO)

3.9.1. Description

The CLO function is a control to ensure that the required intensity remains constant over the entire LED lamp life.

The light output of an LED module reduces over the course of its life. The Constant Light Output function compensates for this natural decline by constantly increasing the output current of the LED driver throughout its life. As a results, a virtually uniform light output is achieved at all times.

For configuration purposes the expected module-specific values for lifetime and residual luminous flux must be specified. The output current is then controlled automatically on the basis of these values. The LED driver typically starts with an output current ("Required Intensity") that corresponds to the expected residual luminous flux and calculates the increase in the value on the basis of the anticipated lifetime.

If the Over the Lifetime function is enabled, visual feedback is given as soon as the LED exceeds the expected

LED lamp life. If the expected LED lamp life is exceeded, the luminaire flashes for 2 seconds after being switched on.



Over the Lifetime (OTL)

If the OTL function is enabled, visual feedback is given as soon as the LED exceeds the expected LED lamp life. If the expected LED lamp life is exceeded, the luminaire flashes for 2 seconds after being switched on. Activate OTL within the actuator configuration.

3.9.2. Parameters for the CLO function

The following two parameters are used to define the CLO function (see graph above).

(1) CLO Level Set

Required intensity after set time

A CAUTION!

With old drivers it might not be possible to set the CLO Level Set via ready2mains.

(2) CLO Timer Set

Expected LED life time

A CAUTION!

With old drivers it might not be possible to set the CLO Timer Set via ready2mains.

3.10. corridorFUNCTION

3.10.1. Description

Function used to automatically adjust the illuminance in an area (e.g. underground car park, underground walkways for pedestrians). When a motion sensor detects movement, the lighting switches to the presence value. When absence is detected, the lighting switches to the absence value. Then the lighting is switched off or stays at the absence value (depending on requirements and settings).

3.10.2. Parameters for the corridorFUNCTION



The following parameters are used to define the corridorFUNCTION (see graph above). In the masterCONFIGURATOR the same parameters are used, but have different names.

(1) CF Active Fade Time

The time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value (named "Fade-in time" in masterCONFIGURATOR).

Value range:

▶ 0 - 9600 s

A CAUTION!

With old drivers it might not be possible to set the CF Active Fade Time via ready2mains.

(2) CF Hold Time [s]

The time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the CF Hold Time the CF Hold Time is restarted from zero. If no presence is detected during the CF Hold Time, the fade time is started as soon as the CF Hold Time expires (named "Run-on time" in masterCONFIGURATOR).

Value range:

▶ 0 - 2550 s

With old drivers it might not be possible to set the CF Hold Time via ready2mains.

(3) CF Passive Fade Time

The time during which the luminous intensity is faded from the presence value to the absence value (named "Fade time" in masterCONFIGURATOR).

Value range:

▶ 0 - 9600 s

A CAUTION!

With old drivers it might not be possible to set the CF Passive Fade Time via ready2mains.

(4) CF Off Delay Time [sec]

The time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined (named "Switch off delay" in masterCONFIGURATOR).

Value range:

- ▶ 0 2550 s
- never OFF: the lighting remains at the absence value until further movement is detected and the motion sensor switches to the presence value. The luminaire group is never switched off by the motion sensor.

A CAUTION!

With old drivers it might not be possible to set the CF Off Delay via ready2mains.

(5) CF Passive Level [%]

The luminous intensity when there is no person present (named "Absence value" in masterCONFIGURATOR).

Value range:

▶ 0 - 100%

A CAUTION!

With old drivers it might not be possible to set the CF Passive Level via ready2mains.

(6) CF Active Level [%]

The luminous intensity when persons are present (named "Presence value" in masterCONFIGURATOR).

Value range:

0 - 100%

A CAUTION!

With old drivers it might not be possible to set the CF Active Level via ready2mains.

3.11. ITG Offset Temperature

The ITG (Intelligent Temperature Guard) Offset Temperature is used to reduce the temperature thresholds for the ITG function of the LED driver.

Value range:

▶ 0 - 255 °C

1 NOTICE

The ITG temperature thresholds cannot be increased.

A CAUTION!

With old drivers it might not be possible to set the ITG Offset temperature via ready2mains.

3.12. Set Operating Mode

Device operating mode	Description	Value
DALI mode	The LED driver detects only DALI commands.	1
Automatic mode	The LED driver detects the incoming signal and switches automatically to the corresponding device operating mode.	128
DSI mode	The LED driver detects only DSI commands.	129
switchDIM mode	The luminaires connected to the LED driver can only be smoothly adjusted using manual momentary-action switches. The mains voltage is used as a control signal. The LED driver interprets the signal as either a smooth adjustment or switch command depending on how long the manual momentary-action switch is pressed.	130
corridor mode	Function used to automatically adjust the illuminance in an area (e.g. underground car park, underground walkways for pedestrians). When a motion sensor detects movement, the lighting switches to the presence value. When absence is detected, the lighting switches to the absence value. Then the lighting is switched off or stays at the absence value (depending on requirements and settings). For more information see corridorFUNCTION , p. 11.	131
1 - 10 V mode	The LED driver detects only 1 - 10 V (if available).	132
ready2mains mode	The LED driver detects only ready2mains commands.	133
chronoSTEP mode	The LED driver works in chronoSTEP mode (If available, also see chronoSTEP 2, p. 15)	134

A CAUTION!

With old drivers it might not be possible to set the operating mode via ready2mains.

4. chronoSTEP 2

4.1. Description

In the outdoor lighting and street lighting sector, it often makes sense to dim the lighting level during night hours in order to save energy. The chronostep2 function is a tool that makes this easy to do. The device automatically measures the switch on and switch off times of the lighting installation over the past three days. The switch on and switch off times at which the sun sets and rises. The midpoint of these two reference points is the time referred to as Virtual Midnight. To allow immediate operation it is possible to send time difference from actual time to midnight by mains programming command (for the first night). The overall time between switch ON and switch OFF is called "On Time".

Overall there are 8 profiles, 5 are predefined by factory and 3 can be programmed by customer using mains programming protocol U6Me2. Balancing and output current can also be set via this way as well as reset to factory values and selecting of the intended scene. Programming is also possible via DALI commands and ready2mains.



More detailed information is available in the U6Me2 Manual: chronoSTEP Manual

4.2. Parameters for chonoSTEP 2

4.2.1. PowerOnLevel

The Power On Level is the dimming level when the LED driver is switched on.

4.2.2. Time2Midnight

The time between switching on and the virtual midnight.



4.2.3. Reduction Time

Reduction Time 1 - 8 for Sequence 5 - 7

4.2.4. Reduction Level

Reduction Level 1 - 8 for Sequence 5 - 7

4.2.5. Sequence selector

With the sequence selector the active profile is set.

There are 7 profiles available. 4 profiles are predefined standard profiles. The other 3 profiles can be adjusted individually.

Sequence / Profile	Definition
0	chronoSTEP off
1 - 4	predefined sequences
5 - 7	user defined sequences

5. basicDIM DGC Parameters

5.1. Room Profiles

With this parameter it's possible to set the room profile.

Profile No.	Description
1	Individual Office
2	Classroom
3	Corridor
4	Toilet
5	Free-standing luminaire

5.2. Device-specific Configuration

5.2.1. Difference from Output 2 to Output 1

Determines the difference between output 2 and output 1.

Range of values: -95% - +95%, adjustable in 5% steps

5.2.2. T1 / T2 Effective Range

Range that is operated by momentary-action switch input T1 or T2:

Bit	Value	Description if activated
0	1 = activated; 0 = deactivated	Output 1
1	2 = activated; 0 = deactivated	Output 2
2	4 = activated; 0 = deactivated	Relay Output (only in relay output mode)

The value to type in is the sum of the settings (see example below).

EXAMPLE:

Bit	Value	Comment
0	1	Output 1 activated
1	2	Output 2 activated
2	0	Relays output deactivated
sum	3	

The correct effective range of T1 or T2 is the sum of the values! In this example 1 + 2 = 3 for Output 1 and Output 2.

5.2.3. T1 / T2 Function

Determines the reaction of the lighting when the momentary action switch is pressed:

Bit	Value	Description if activated			
Briefly press momentary-action switch (if ON and OFF is needed, activate both!):					
0	1 = activated; 0 = deactivated	Only ON / Relays ON			
1	2 = activated; 0 = deactivated	Only OFF / Relays OFF			
Hold down momentary-action switch (if brighten and dim is needed, activate both!):					
2	4 = activated; 0 = deactivated	Brighten			
3	8 = activated;	Dim			

Double click the momentary-action switch:

0 = deactivated

4	16 = activated;	Save desired value
	0 = deactivated	

The Value to type in is the sum of the settings (see example below).

EXAMPLE:

Bit	Value	Comment
0	1	only ON / Relays ON
1	2	only OFF / Relays OFF
2	4	brighten
3	8	dim
4	0	save desired value
sum	15	

The correct Function of T1 or T2 is the sum of the values!

In this example 1 + 2 + 4 + 8 = 15 for ON and OFF after briefly pressing the momentary-action switch and brighten and dim after a long press of the momentary-action switch.

5.2.4. Light regulation lock desired value

If the Lock desired value has been activated, the nominal value cannot be changed via remote control or the momentary-action switch input.

Value range:

- 0 = configuration locked
- 1 = configuration open

5.2.5. Relay output operating mode

Determines the settings for the operation mode.

Value range:

- 0 = Standby: If the basicDIM DGC module is switched off, the relay will switch off (after 10 minutes). If the basicDIM DGC is switched on, the relay will switch on. Switching: Relay in standby mode.
- ▶ 1 = ON/OFF: The relay is switched on or off via the presence detector.
- 2 = onlyOFF: The relay is switched on via momentary-action switch or remote control. The relay is switched off via the presence detector if no presence is detected.
- ▶ 3 = Relay output: The relay can be used as 3rd output channel.

5.2.6. Output 1 and Output 2 mode selector

Determines the settings for output 1 and output 2.

TRIDONIC

Value range:

- 5 = both outputs: DALI
- 10 = both outputs: DSI
- 13 = output 1: DALI; output 2: linking (DALI In Deactivated)
- 14 = output 1: DSI; output 2: linking (DALI In Deactivated)

5.2.7. Relays output delay time

Determines the settings for the delay time (in energy-saving mode the contact is opened after the delay time).

Value range:

▶ 1 - 1800 s

5.3. Motion Sensor



5.3.1. Parameters for the Motion Sensor

Power on behaviour

Indicates how the motion sensor will react after failure of the DALI power supply.

Value range:

- 32 = Standby
- 34 = Presence value

Operating Mode

Motion sensor operating mode:

- ▶ 0 = disabled: the motion sensor is disabled. The lighting must be switched on and off manually.
- 1 = enabled: the lighting is automatically switched on and off depending on whether presence is detected (factory setting).

2 = enabled (only OFF): the motion sensor switches the lighting off only. It must be switched on manually.

1) Fade-in Time

Time required to reach the presence value.

Value range:

- 0 = fast fade time
- ▶ 1 15 = 0.7 90.5 s

2) Run-on time

A time starting from the last detected movement in the room; when the run-on time expires, the fade time begins. If further movement is detected during the run-on time, it starts over again.

Value range:

- ▶ 1 s 12 h
- 0 = adaptive: The adaptive run-on time adapts the length of the run-on time automatically (between 4 and 20 min.) The length is calculated depending on the number of presence detections.

A) Presence Value

Value to which the luminaire group switches when presence is detected in the room.

3) Fade time

Time during which the lighting is smoothly adjusted to the absence value.

Value range:

- 0 = fast fade time
- ▶ 1 15 = 0.7 90.5 s

4) Switch-Off delay

Time for which the absence value is maintained if no movement is detected.

- 0 = no MIN-delay -> directly activate "OFF Event"
- ▶ 1 s 12 h
- -1 = never OFF: the lighting remains at the absence value until further movement is detected and the motion sensor switches to the presence value. The luminaire group is never switched off by the motion sensor.

B) Absence Value

Level to which the luminaire group switches during the switch-off delay.

5) Fade-out time

Time required to dim off from the absence value.

Value range:

- 0 = fast fade time
- ▶ 1 15 = 0.7 90.5 s

Dead Time (manual off)

Time started by manually switching off the lighting via the momentary-action switch or the remote control and during which the motion sensor is disabled. If movement is detected in the room during this time, the dead time starts over again. If at the end of the dead time no more movement is detected in the room, the motion sensor is enabled again.

Value range:

▶ 1 - 600 s

Display flashing pattern on sensor status LED at motion

Device status is displayed by a flashing pattern on sensor status LED

Value range:

- 0 = deactivated
- 1 = activated

5.4. Light Sensor

5.4.1. Output 1

Ambient light control for Output 1

- 0 = deactivated
- 1 = activated

5.4.2. Output 2

Ambient light control for Output 2.

Value Range:

- 0 = deactivated
- 2 = connected to output 1

5.4.3. Desired Value

Value used by the light sensor to regulate the control gear. On account of the room conditions and the installation height, the illuminance in the workspace may, however, be three to four times higher.

Value Range:

▶ 10 - 650 lx

5.4.4. Response to manual dimming

Available options:

- 0 = temporary desired value change
- 1 = permanent desired value change
- 2 = disable ambient light control

5.4.5. Dim off (bright out) Enable / Delay Time

If the measured illuminance exceeds the defined threshold for a period longer than the set delay time, the luminaire group is switched off even if motion is detected in the room. As soon as the measured illuminance falls below the desired value, the luminaire group is switched on again.

Value Range:

- 10 1800 s brightout activated
- 0 = brightout deactivated

5.4.6. Bright Out Treshold

Value above which the luminaire group is switched off by the light sensor.

Value Range:

100 - 300% of the desired value

5.4.7. Light regulation automatic control

Indicates the scene used to control the lighting based on whether presence is detected. If this scene is recalled the motion sensor is enabled and the luminaires are controlled based on whether presence is detected.

Value range:

Scene 0 -15

5.4.8. Control speed

Speed at which the control gear reaches the desired value.

Value range:

- increments 0 7, with 0 being the slowest and 7 the fastest.
- 16 = Maximum Level
- 32 = Automatic Mode

Calculation: light regulation speed 0 - 7 + one of the values for initial point after switch on.

5.4.9. Brightout display flashing pattern on sensor status LED

Device status is displayed by a flashing pattern on sensor status LED.

Value range:

- 0 = deactivated
- 1 = activated

5.5. Remote Control

5.5.1. IR Basic function

Operating functions of the remote controls:

- ▶ 0 = inactive: the keys of the remote control are inactive.
- 1 = active: the keys of the remote control are active.

6. Useful links

Additional infos to this parameters also available in this links:

basicDIM DGC Productpage

basicDIM DGC Produkt Manual

masterCONFIGURATOR Manual