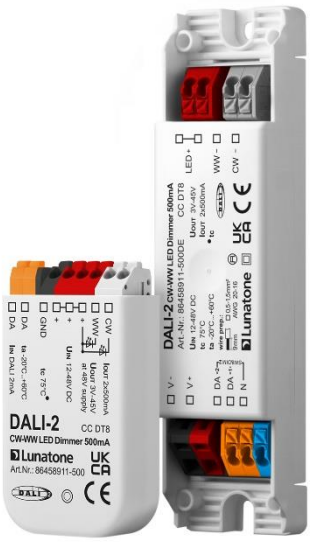
# DALI-2 CW-WW LED Dimmer CC




## Datasheet

**Control Gear**

DALI LED Dimmer (CC, DT8) for
the control of
tunable white luminaires (CW-WW)

common plus connector
Art. Nr. 86458911-350 (350mA)
Art.Nr. 86458911-350DE (350mA)
Art. Nr. 86458911-500 (500mA)
Art. Nr. 86458911-500DE (500mA)
Art. Nr. 86458911-700 (700mA)
Art. Nr. 86458911-1000 (1000mA)

common minus connector
Art.Nr. 86458911-350GMDE (350mA)

Art.Nr. 86458911-500GMDE (500mA)
Art. Nr. 86458911-700GM (700mA)
Art. Nr. 86458911-1000GM (1000mA)

# DALI-2 CW-WW LED-Dimmer CC Control Gear

## Overview

- DALI-2 LED-Dimmer for the control of tunable white luminaires
- suitable for constant current LED-modules
- **Operating Mode DT8**: one DALI-address for the independent control of light level and colour temperature (DALI DT8, Colour Type Tc)
- **Operating Mode Balance&Dim:** control by 2 DALI-addresses, one for adjusting the light level and one for adjusting the channel balance (e.g. colour temperature)
- **Operating Mode Dim2Warm:** one DALI-address for simultaneous adjustment of light level and colour temperature
- **SwitchDim2**: 2 switch-inputs offer control of level and colour without DALI
- dimming range 0.1%-100%
- adjustable PWM-frequency (122Hz/244Hz/488Hz/976Hz from FW version 4.6 on changed PWM frequencies: 250Hz / 500Hz / 1kHz)
- types for constant currents of 350mA, 500mA, 700mA and 1000mA
- types with common plus and common minus connector available
- compact types for integration in luminaires or remote ceiling
- supply voltage from 12V to 48V DC
- output voltage up to 45VDC
- integrated short circuit protection
- low standby power consumption
- high efficiency
- configuration via PC-software DALI-Cockpit and DALI interface (e.g. DALI USB)
- user-friendly factory default settings

## Specification, Characteristics

### Common plus connector (GP)

| **type** | **DALI CW-WW 350/500mA** | **DALI CW-WW 350/500mA DE** | **DALI CW-WW 700mA** | **DALI CW-WW 1000mA** |
|---|---|---|---|---|
| article number | 86458911-350 / 86458911-500 | 86458911-350DE/500DE | 86458911-700 | 86458911-1000 |

**supply: V+, V- (GND)**

| | | | | |
|---|---|---|---|---|
| type of input | supply, DC | | | |
| marking terminals | +, GND | V+, V- | | |
| supply voltage $V_{in}$ | 12V DC … 48V DC (SELV) | | | |
| max. input current $I_{in\_max}$ | 350mA / 500mA | 350mA / 500mA | 700mA | 1000mA |
| rated power @12V | 4,2/6W | 4,2/6W | 8,4W | 12W |
| rated power @48V | 16,8/24W | 16,8/24W | 33,6W | 48W |
| standby power consumption | ~ 180mW @12V | | | |
| power on behaviour | configurable via DALI: 0%-100% or last actual level | | | |

**input: DA, DA**

| | |
|---|---|
| input type | DALI, control input |
| marking terminals | DA, DA |
| input voltage range | 9,5V … 22,5V (according to IEC62386-101) |
| current consumption DALI | 2mA |
| overvoltage protection | 250V |
| number of DALI-addresses | operating mode DT8, Dim2Warm: 1<br>operating mode Balance&Dim: 2 |

**input: N, SW&DIM2-1, SW&DIM2-2**

| | | |
|---|---|---|
| Input type | - | SwitchDim2 control input |
| marking terminals | - | N; SW&DIM2-1 (DA); SW&DIM2-2 (DA) |
| number of inputs | - | 2 |
| input voltage | - | 230V AC ±10% |
| frequency of input voltage | - | 50Hz |
| control pulse length | - | short press: >40ms, long press: > 400ms |
| input resistance | - | 200kΩ |
| max. voltage between inputs | - | 230V AC |

**output: LED+, CW-, WW-**

| | | | | |
|---|---|---|---|---|
| output type | LED dimmer, constant current PWM | | | |
| marking terminals | LED+, CW-, WW- | | | |
| number of outputs | 2 | | | |
| PWM frequency | FW: < 4.6. 122Hz/244Hz/488Hz/976Hz<br>FW: ≥ 4.6: 250Hz/ 500Hz / 1kHz | | | |
| output voltage range $V_{led}$ | 3V-45V (at 48V supply) | | | |
| max. output current per channel $I_{led}$ | 350/500 mA | 350/500mA | 700mA | 1000mA |
| max. output power per channel @45V | 15,75/22,5 W | 15,75/22,5 W | 31,5 W | 45W |
| overload protection | yes | | | |
| open circuit protection | yes | | | |
| short circuit protection | yes | | | |

**insulation data**

| | |
|---|---|
| impulse voltage category | II |
| pollution degree | 2 |
| rated insulation voltage | 250V |
| rated impulse withstanding voltage | 4kV |
| Isolation<br>supply <-> output | no insulation |
| DALI/Sw&Dim2 <-> output/supply | reinforced isolation |
| DALI/Sw&Dim2 <-> housing | reinforced isolation |
| Insulation test voltage | 3000VAC |

**environmental conditions:**

| | |
|---|---|
| operational ambient temperature Ta | -20°C … +60°C |
| storing and transportation temperature | -20°C … +75°C |
| rel. humidity, none condensing | 15% … 90% |

**general data**

| | | | |
|---|---|---|---|
| dimensions (l x w x h) | 59 x 33 x 15mm | 120 x 30 x 22mm | 120mm x 41mm x 22mm |
| mounting | back box | remote ceiling, integration in class II luminaires | |
| rated maximum temperature tc | 75°C | | |
| expected lifetime (T<Tc) | >100.000h | | |
| housing material | PC, class V0 | | |
| protection class | II in intended use | | |
| protection degree housing | IP40 | | |
| protection degree terminals | IP20 | | |

**terminals: V+, V-**

| | | |
|---|---|---|
| connection type | See section terminals DA,DA, N, LED+, CW-, WW- | spring terminal connector (cage clamp) |
| wire size solid core | | 0,08 … 2,5mm² (AWG 28 … AWG 12) |
| wire size fine wired | | 0,08 … 2,5mm² (AWG 28 … AWG 12) |
| wire size using wire end ferrule | | 0,25 … 1,5mm² |
| stripping length | | 5 … 6mm / 0,2 … 0,24 inch |
| housing material | | PA66, class V0 |
| actuation type | | operating tool |

**terminals: DA, DA, N, LED+, CW-, WW-**

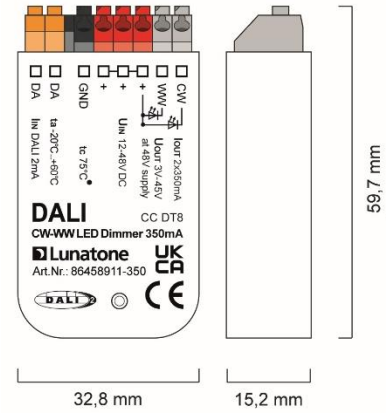
| | |
|---|---|
| connection type | spring terminal connector (push in cage clamp) |
| wire size solid core | 0,2 … 1,5mm² (AWG 24 … AWG 16) |
| wire size fine wired | 0,2 … 1,5mm² (AWG 24 … AWG 16) |
| wire size using wire end ferrule | 0,25 … 1mm² |
| stripping length | 8,5 … 9,5mm / 0,33 … 0,37 inch |
| housing material | PA66, class V0 |
| actuation type | push button |

**standards**

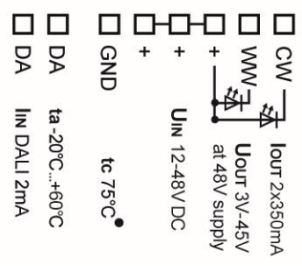
| | |
|---|---|
| DALI | EN 62386-101, EN 62386-102, EN 62386-207 |
| EMC | EN 61547<br>EN 55015 / IEC CISPR15 |
| electrical safety | EN 61347-2-13<br>EN 61357-1 |
| performance | EN 62384 |
| markings | CE, UKCA, DALI-2 |

on request: output currents from 100mA to 1000mA available

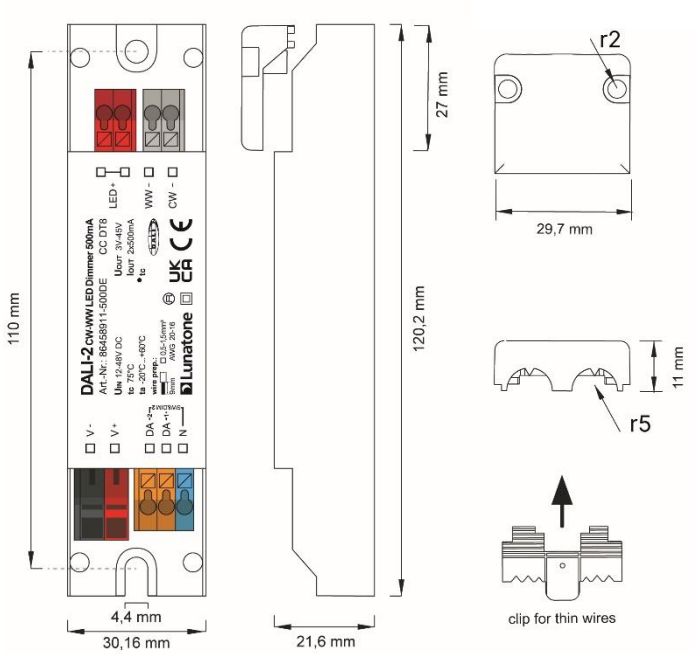
**Dimensions for constant currents up to 500mA, common plus**



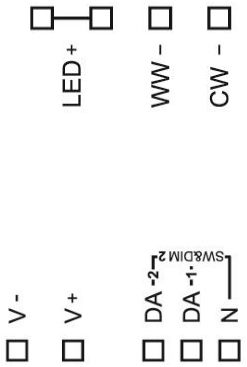

dimensions back box




connection plan back box

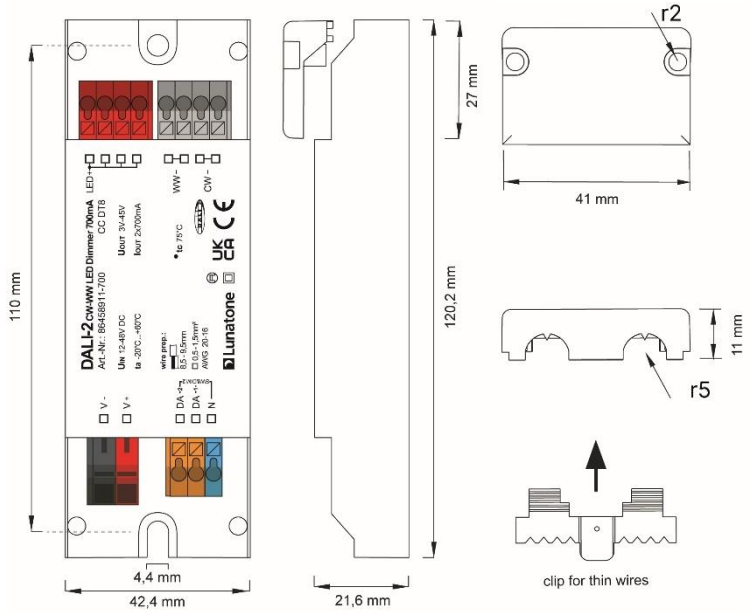



dimensions remote ceiling

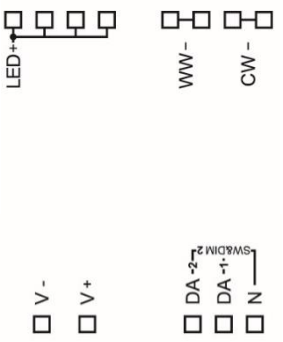



connection plan remote ceiling

**Dimensions for constant currents >500mA, common plus**




dimensions remote ceiling




connection plan remote ceiling

## Common minus connector (GM)

| type | DALI CW-WW 350/500mA GM DE | DALI CW-WW 700mA GM | DALI CW-WW 1000mA GM |
|---|---|---|---|
| article number | 86458911-350GMDE/500GMDE | 86458911-700GM | 86458911-1000GM |

| **supply: V+, V-** | | | |
|---|---|---|---|
| type of input | supply, DC | | |
| marking terminals | V+, V- | | |
| supply voltage $U_{in}$ | 12V DC … 48V DC (SELV) | | |
| max. input current $I_{in\_max}$ | 350/500mA | 700mA | 1000mA |
| rated power @12V | 4,2/6W | 8,4W | 12W |
| rated power @48V | 16,8 /24W | 33,6W | 48W |
| standby power consumption | ~ 180 mW @12V | | |
| power on behaviour | configurable via DALI: 0%-100% or last actual level | | |

| **input: DA, DA** | |
|---|---|
| input type | DALI, control input |
| marking terminals | DA, DA |
| input voltage range | 9,5V … 22,5V (according to IEC62386-101) |
| max. current consumption DALI | 2mA |
| overvoltage protection | 250V |
| number of DALI-addresses | operating mode DT8, Dim2Warm: 1<br>operating mode Balance&Dim: 2 |

| **input: N, SW&DIM2-1, SW&DIM2-2** | |
|---|---|
| input type | SwitchDim2 control input |
| marking terminals | N; SW&DIM2-1 (DA); SW&DIM2-2 (DA) |
| number of inputs | 2 |
| input voltage | 230V AC ±10% |
| frequency of input voltage | 50Hz |
| control pulse length | short press: >40ms, long press: > 400ms |
| input resistance | 200kΩ |
| max. voltage between inputs | 230V AC |

| **output: LED-, CW+, WW+** | | | |
|---|---|---|---|
| output type | LED dimmer, constant current PWM | | |
| marking terminals | LED-, CW+, WW+ | | |
| number of outputs | 2 | | |
| PWM frequency | FW: < 4.6. 122Hz/244Hz/488Hz/976Hz<br>FW: >= 4.6: 250Hz/ 500Hz / 1kHz | | |
| output voltage range $V_{led}$ | 3V-45V (at 48V supply) | | |
| max. output current per channel $I_{led}$ | 350/500mA | 700mA | 1000mA |
| max. output power per channel @45V | 15,75/22,5W | 31,5W | 45W |
| overload protection | yes | | |
| open circuit protection | yes | | |
| short circuit protection | yes | | |

| **insulation data** | |
|---|---|
| impulse voltage category | II |
| pollution degree | 2 |

| | |
|---|---|
| rated insulation voltage | 250V |
| rated impulse withstanding voltage | 4kV |
| insulation | |
| supply <-> output | no insolation |
| DALI/Sw&Dim2 <-> output/supply | reinforced isolation |
| DALI/Sw&Dim2 <-> housing | reinforced isolation |
| Insulation test voltage | 3000VAC |

**environmental conditions**

| | |
|---|---|
| operational ambient temperature | -20°C … +60°C |
| storing and transportation temperature | -20°C … +75°C |
| rel. humidity, none condensing | 15% … 90% |

**general data**

| | | |
|---|---|---|
| dimensions (l x w x h) | 120 x 30 x 22mm | 120mm x 41mm x 22mm |
| mounting | remote ceiling, integration in class II luminaires | |
| rated maximum temperature tc | 75°C | |
| expected lifetime (T<Tc) | >100.000h | |
| housing material | PC, class V0 | |
| protection class | II in intended use | |
| protection degree housing | IP40 | |
| protection degree terminals | IP20 | |

**terminals: V+, V-**

| | |
|---|---|
| connection type | spring terminal connector (cage clamp) |
| wire size solid core | 0,08 … 2,5mm$^2$ (AWG 28 … AWG 12) |
| wire size fine wired | 0,08 … 2,5mm$^2$ (AWG 28 … AWG 12) |
| wire size using wire end ferrule | 0,25 … 1,5mm$^2$ |
| stripping length | 5 … 6mm / 0,2 … 0,24 inch |
| housing material | PA66, class V0 |
| actuation type | operating tool |

**terminals: DA, DA, N, LED-, CW+, WW+**

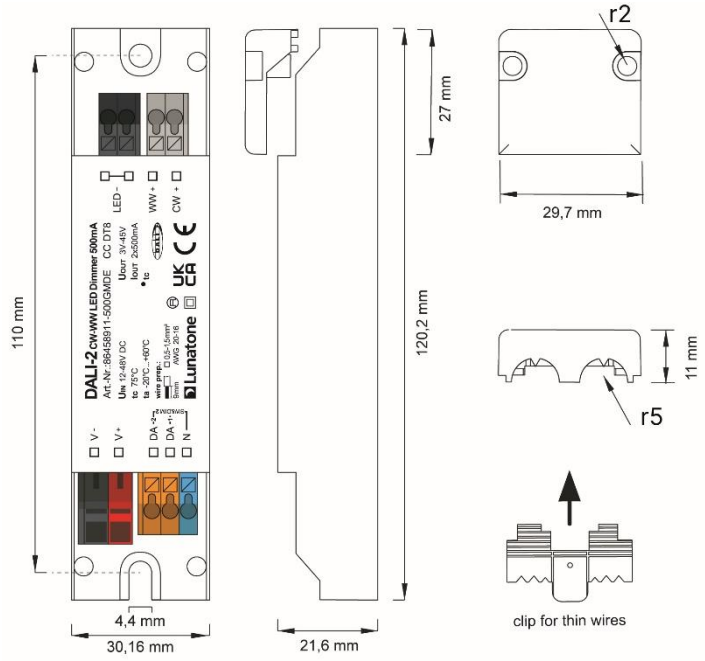
| | |
|---|---|
| connection type | spring terminal connector (push in cage clamp) |
| wire size solid core | 0,2 … 1,5mm$^2$ (AWG 24 … AWG 16) |
| wire size fine wired | 0,2 … 1,5mm$^2$ (AWG 24 … AWG 16) |
| wire size using wire end ferrule | 0,25 … 1mm$^2$ |
| stripping length | 8,5 … 9,5mm / 0,33 … 0,37 inch |
| housing material | PA66, class V0 |
| actuation type | push button |

**standards**

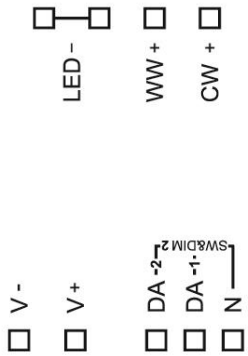
| | |
|---|---|
| DALI | EN 62386-101, EN 62386-102, EN 62386-207 |
| EMC | EN 61547<br>EN 55015 / IEC CISPR15 |
| electrical safety | EN 61347-2-13<br>EN 61357-1 |
| performance | EN 62384 |
| markings | CE, UKCA, DALI-2 |

on request: output currents from 100mA to 1400mA available

**Dimensions for constant currents up to 500mA (on request up to 700mA), common minus**

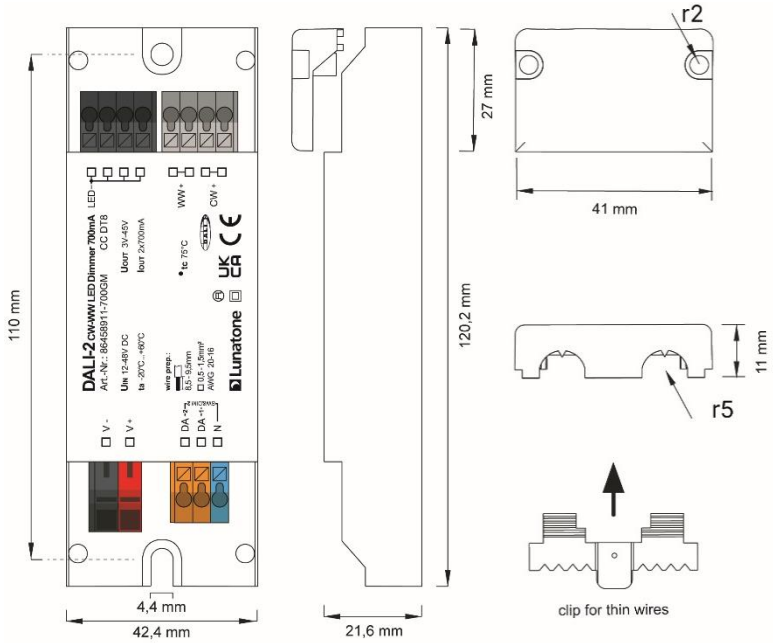



dimensions remote ceiling

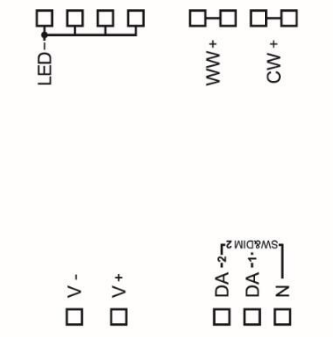



connection plan remote ceiling

**Dimensions for constant currents > 500mA, common minus**




dimensions remote ceiling




connection plan remote ceiling

## Installation

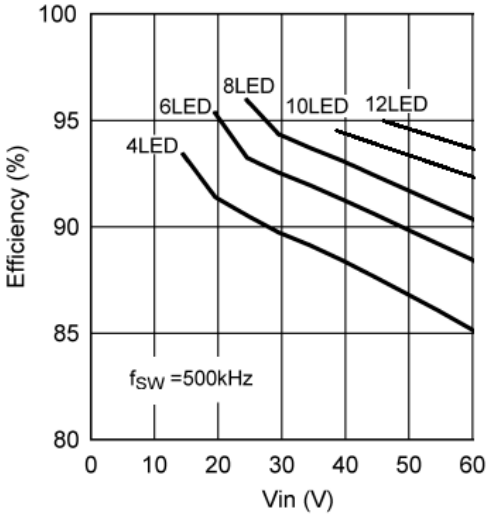
- The DALI CW-WW LED Dimmer is an independent control gear, it is suitable for remote ceiling and integration in luminaires.
- Ensure proper working cable relief for installation in protection class II equipment.
- The wiring should be carried out as a permanent installation in a dry and clean environment.
- Installation may only be carried out in a voltage-free state of the system and by qualified specialists.
- National regulations for setting up electrical systems must be followed.
- Connect the terminals V+ and V- only to a DC supply voltage of category SELV (Safety Extra Low Voltage).
- the connection to the DALI-line (DA,DA) is polarity free .
- If used in Sw&Dim2 mode for both inputs the same phase has to be used.
- The DALI-interface can handle mains voltage, protecting the device in case wrong wiring.
- Wiring topology of the DALI-line: line, tree, star
- Connect only one wire on each terminal, if twin ferrules are used take care to the maximum wire size.
- The DALI wiring can be realised with standard low-voltage installation material. No special cables are required.
- The DALI line may be routed together with the mains voltage (in one cable or as single wires in a tube).

**Attention:** The DALI-signal is not classified as SELV circuit (Safety Extra Low Voltage). Therefore, the installation regulations for low voltage apply.

The voltage drop on the DALI line must not exceed 2V at maximum length (300m) and maximum bus load (250mA).

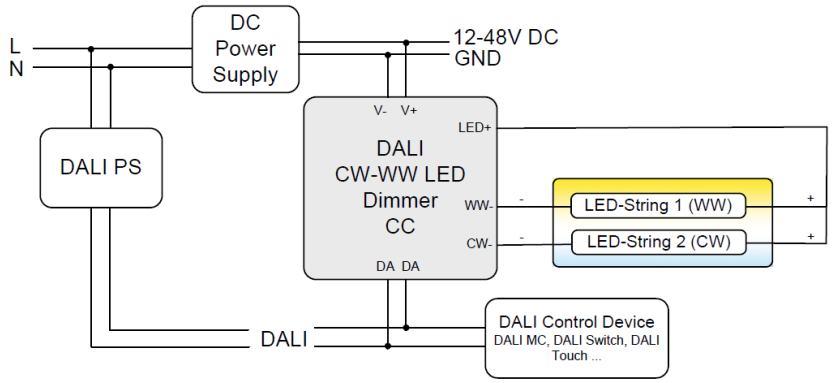
**Hint:**
For highest efficiency the input voltage should range between 3V and 10V above the LED-voltage:

4-6 LEDs: 24V
6-9LEDs: 36V
10-12 LEDS: 48V

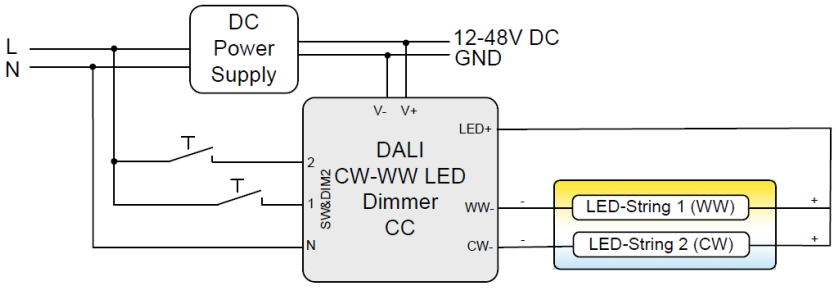


## Application Example

**DALI (common plus connector type)**




**SwitchDim2 (common plus connector type)**




## Commissioning

- After connection the Dimmer is ready to use. Delivery default settings see page 17.
- The DALI-2 2Ch Dimmer can be addressed with the DALI Cockpit PC Software. When using the DALI Cockpit Software, the PC must be connected to the DALI bus via a suitable interface module (DALI-2 USB; DALI USB, DALI-2 WLAN, DALI-2 Display, DALI-2 IoT, DALI 4Net, DALI SCI RS232). The DALI Dimmer is automatically recognised by the DALI Cockpit during the addressing process and listed in the device overview.
- Scene values, groups, DALI parameters and device specific settings can be configured in the DALI Cockpit, see section DALI Cockpit: General Settings page 12 and following.

## Operating Modes

The device offers several operating modes:

**DT8 (factory default)**
Default when connected to DALI in this operating mode one DALI-address for the independent control of light level and colour temperature is used (Device Type 8 Mode Tc). From FW version 4.6 on Lunatone LED Dimmer are DALI 2 compatible and support DALI 2 commands.

**SwitchDim2:** Alternatively, the device can be controlled using 2 switch-inputs for mains voltage (SwitchDim2):

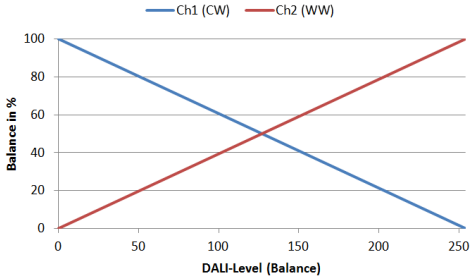
SW&DIM2-1: light level
short press: On/Off
long press: dimming
SW&DIM2-2: colour temperature
long press: change colour temperature

**Balance&Dim**
This operating mode is also suitable for operating tunable white luminaires using two DALI-addresses. The first controls the light level and the second is used for changing the distribution on the output channels (e.g. for tunable white applications or balancing direct/indirect lighting).

The Balance&Dim mode allows colour temperature adjustments without affecting the light level and vice versa. For each channel only DALI-standard commands like dim up/down but also DAP are used. Thus, the device can be used with all common controls and gateways (e.g. KNX). The Balance&Dim mode provides an alternative to the DT8-Tc mode.

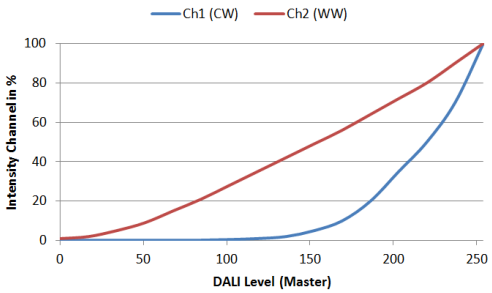
**Can be operated via DALI or SwitchDim2:**

DALI-address 1, SW&DIM2-1: light level
DALI-address 2, SW&DIM2-2: balance




**Dim2Warm**
Both output channels are controlled by one DALI-address or SwitchDim2-input. The balance is coupled directly to the DALI dim level – the smaller the dim level the warmer the light.

DALI-address / SW&DIM2-1: Dim2Warm (Master)
short press: On/Off
long press: dimming

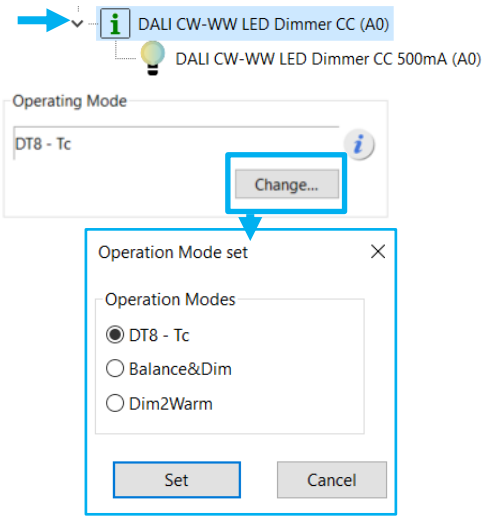



SW&DIM2-2: scene selector

The dim2warm table can be edited in the DALI Cockpit Software, see section DALI Cockpit: General Settings page 12 (Overview operating mode Dim2Warm).

### Selection of operating mode

With the help of the PC-software tool DALI-Cockpit the operating mode can be easily set on the general settings page.




Switching between operating modes can also be done with the help of the DALI-command SET OPERATING MODE (IEC 62386-102 Ed.2). When changing the operating mode, the number of used DALI-addresses can change as well, and this requires a new addressing procedure. In the DALI-Cockpit this address assignment is performed automatically.

Operating Mode:

| Number | Operating Mode |
|---|---|
| 0x0 | DT8 (factory default) |
| 0x92 | DT8 |
| 0x94 | Balance&Dim |
| 0x95 | Dim2Warm |

## DALI Cockpit: General Settings

On the overview page respective control elements are available for each operating mode

- *DT8:* 2 sliders, one for level and one for colour temperature
- *Balance&Dim:* 2 sliders, one for level and one for balance
- Dim2Warm: 1 slider for input value adaption and an Edit-Function for the Dim2Warm-table.

Additionally, the following configurations can be made:

### PWM Frequency

The PWM frequency can be selected:
122Hz / 244Hz / 488Hz / 976Hz.
From FW version 4.6 changed PWM frequencies: 250Hz / 500Hz / 1kHz.

### Ignore Broadcast Commands

The broadcast control of each channel can be deactivated individually. Through selection of “Ignore Broadcast”, the respective channel does no longer respond to broadcast commands on the DALI bus (group assignments are not ignored).

### Adjustable RESET behaviour

From FW 4.6. on the response to a DALI reset command is configurable. The following options are available:

- *Ignore command*: the DALI reset command does not trigger any changes to the device settings.
- *DALI standard*: the selected device settings are reset to the values defined in the DALI standard (see table 1 below - second column: DALI standard values)
- *Custom settings*: the current device settings can be saved. With a DALI Reset command, the selected parameters (6

check boxes) are then reset to these saved values.

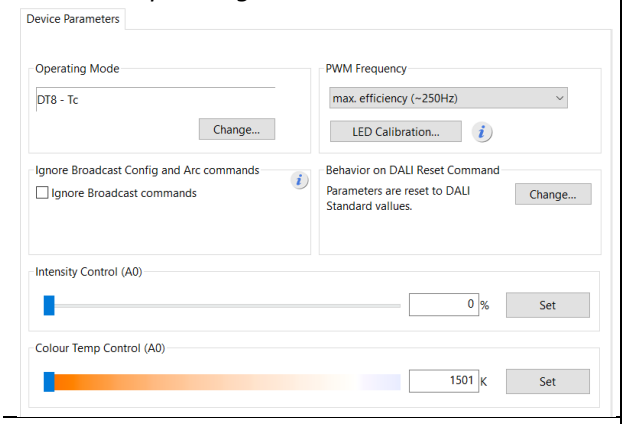
### Calibration - light adjustment

The dimming range reaches from 0.1% to 100%. From FW version 4.6 on, it is possible to calibrate different light sources, with the option: “LED Calibration”.

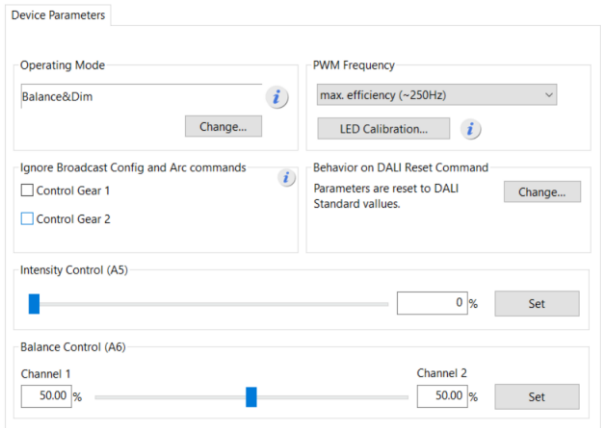
For each channel, the MIN level (default: 0.1%) an intermediate value (default: 33%) and the MAX level (default: 100%) can be adjusted and matched between light sources.

To do this, the desired level with the upper slider needs to be set. Apply the value and start the fine adjustment by pressing the button next to it. The appropriate fine adjustments can now be made with the calibration slider below. See also Figure 1

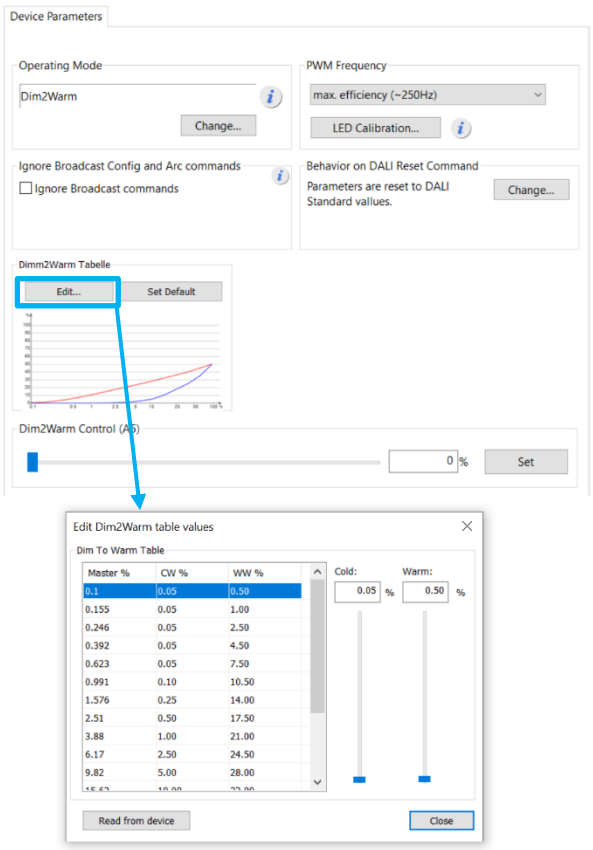
*Overview operating mode DT8*




*Overview operating mode Balance&Dim*




*Overview operating mode Dim2Warm*




**change of the Dim2Warm table are being saved via “Save” to the device as other device parameters*

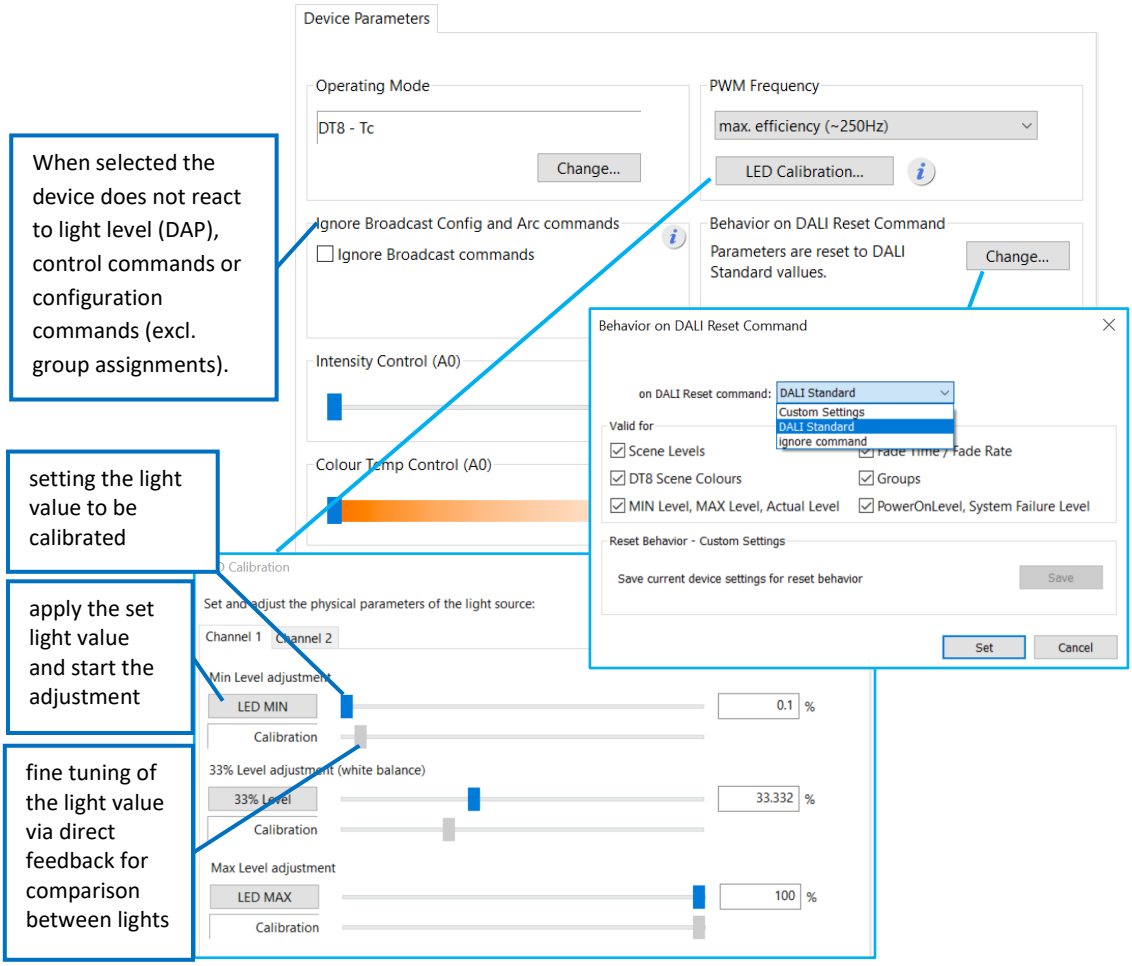
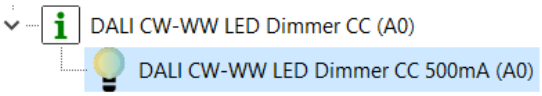



*Figure 1 Cockpit overview page – LED calibration and settable RESET behaviour*

## DALI Cockpit: Additional Settings

Besides the settings on the general page each channel can be selected separately in the component tree for individual configuration.



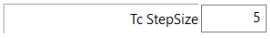

For each address the group membership can be set as well as scene values and DALI-parameters. In Balance&Dim operating mode all values assigned to channel 2 are representing the balance.

*Figure 2* on page 16 shows the setting options for operating mode DT8.

*Figure 3* on page 16 shows the settings for each channel for operating modes Balance&Dim and Dim2Warm.

### DT8 – Tc Limits and Colour Temperature step size

The Tc step size can be increased (instead of the DT8 Tc DALI standard value: 1), to speed up colour temperature changes when using the commands TC STEP COOLER/WARMER.



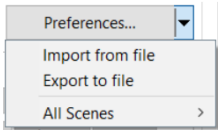

The values “Physical Warmest”/”LED Warmest” ad “Physical coolest”/”LED coolest” capture the range the connected LED allows.

“Tc warmest” and “Tc coolest” colour temperatures represent the limit values for

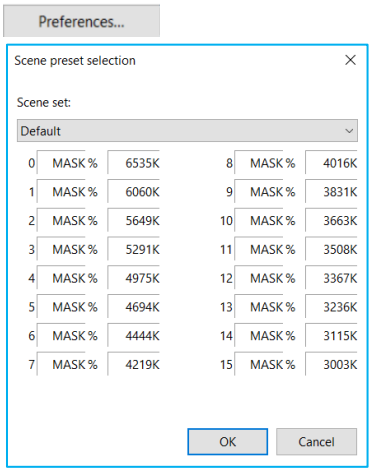
colour temperature like the Min and Max level do for the brightness. These values can be adjusted to compensate for colour differences between different light sources.


## Scene settings

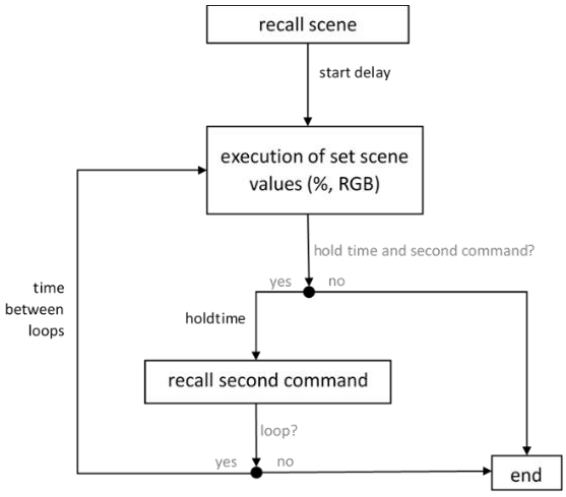
Via the arrow button the scene settings can be imported and exported.

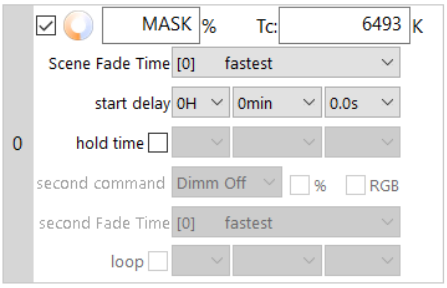



Via the button „Preferences“ the default scene settings can be loaded.

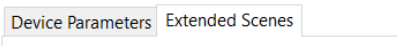



From FW 6.0 on, extended scene settings can be configured. With extended scenes it is possible to automatically change between 2 scene values (once or looped). Thereby enabling configuration of blinking lights, time delayed switch off or light repetitions, as well as traveling lights with multiple dimmers.

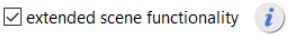



Extended Scenes are available for each of the 16 scenes on the second tab:

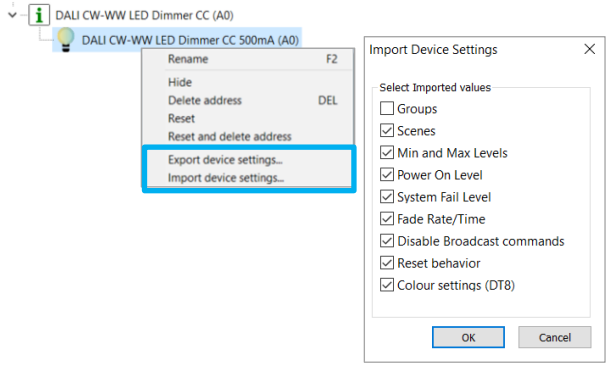



By enabling the extended scenes these are used instead of the standard scenes on the “Device Parameters” tab




## Import/Export settings

With a right click on the channel in the device-tree overview the device settings can be exported or imported.



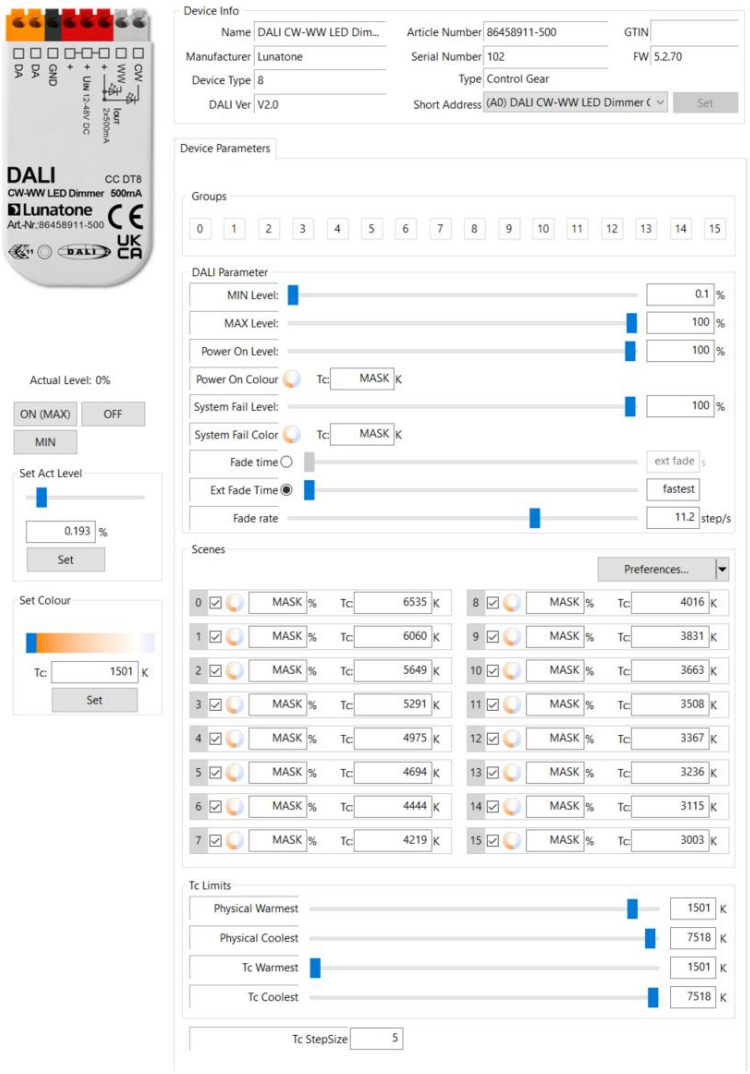



*Figure 2 Cockpit settings for DT8*

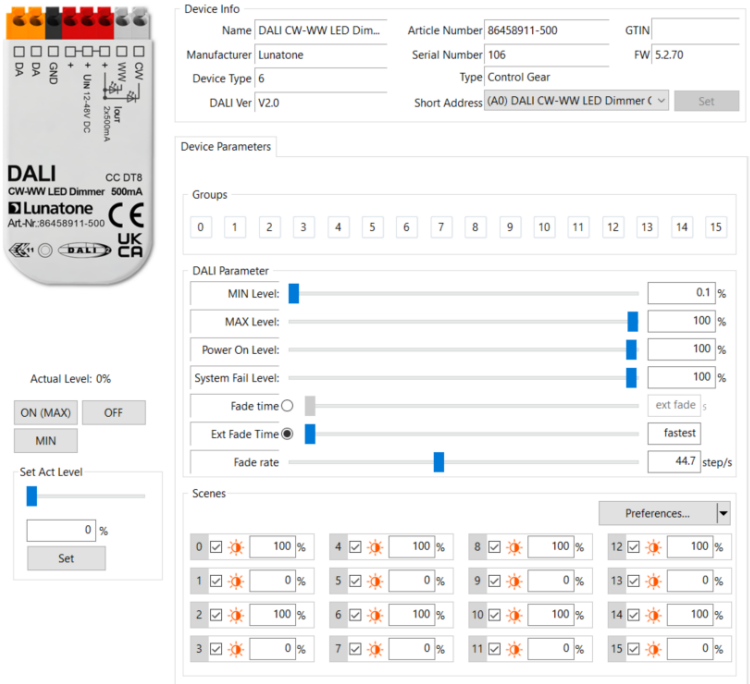



*Figure 3 Cockpit settings for each channel - Balance&Dim and Dim2Warm*

## Factory Default Settings

Before the initial addressing is performed, the device can already be controlled by group address G0. This predefined grouping will be deleted during the first addressing procedure. Afterwards groups can be assigned as usual (e.g. with the help of the DALI Cockpit).

By sending a DALI-Reset command the device is set to DALI default values as defined in the standard.
The factory default values as well as the DALI-norm values are summarised in *Table 1* below.

*Table 1 factory default settings column 1, DALI Standard settings column 2*

| | **Delivery default** | **DALI norm** |
|---|---|---|
| **Operating mode** | DT8 | N/A (remains unchanged) |
| **SwitchDim2** | SW&DIM2-1: light level<br>SW&DIM2-2: colour temperature | N/A (remains unchanged) |
| **Min Level** | 0.1% | 0.1% |
| **Max Level** | 100% | 100% |
| **Power On Level** | Last light level (= MASK) | 100% |
| **System Failure Level** | 100% | 100% |
| **Fade Time** | 1s [2] | none |
| **Fade Rate** | 89.4 steps/s [5] | 44.7 steps/s |
| **Tc-step size** | 3 | N/A (remains unchanged) |
| **PWM-Frequency** | FW ≥ 4.6: 1kHz<br>FW < 4.6: 122Hz | N/A (remains unchanged) |
| **Control before initial addressing** | G0<br>(G0 and G1 in operating mode Balance&Dim) | None |
| **Scene values** | see table below | All scene values MASK |
| **Behaviour on DALI RESET command** | set DALI Standard values, see column 2 | N/A (remains unchanged) |

| **Scene** | **light level** | **colour temperature** |
|---|---|---|
| 0 | MASK | 6535 K |
| 1 | MASK | 6060 K |
| 2 | MASK | 5649 K |
| 3 | MASK | 5291 K |
| 4 | MASK | 4975 K |
| 5 | MASK | 4694 K |
| 6 | MASK | 4444 K |
| 7 | MASK | 4219 K |
| 8 | MASK | 4016 K |
| 9 | MASK | 3831 K |
| 10 | MASK | 3663 K |
| 11 | MASK | 3508 K |
| 12 | MASK | 3367 K |
| 13 | MASK | 3236 K |
| 14 | MASK | 3115 K |
| 15 | MASK | 3003 K |

## Purchase Order Information

**Art.Nr. 86458911-xxx**:
DALI CW-WW LED Dimmer CC
constant current xxxmA - 100mA -500mA,
**common plus connector**,
supply 12V-48V DC,
output voltage range: 3V-45V,
back box

**Art.Nr. 86458911-xxxDE**:
DALI CW-WW LED Dimmer CC,
constant current xxxmA - 100mA-500mA,
**common plus connector**,
supply 12V-48V DC,
output voltage range: 3V-45V,
**SwitchDim2**,
remote ceiling & integration in luminaires

**Art.Nr. 86458911-xxx**:
DALI CW-WW LED Dimmer CC,
constant current xxxmA - 500mA -1000mA,
**common plus connector**,
supply 12V-48V DC,
output voltage range: 3V-45V,
**SwitchDim2**,
remote ceiling & integration in luminaires

**Art.Nr. 86458911-xxxGMDE**:
DALI CW-WW LED Dimmer CC,
constant current xxxmA – 100mA-500mA,
**common minus connector**,
supply 12V-48V DC,
output voltage range: 3V-45V,
**SwitchDim2**,
remote ceiling & integration in luminaires

**Art.Nr. 86458911-xxxGM**:
DALI CW-WW LED Dimmer CC
constant current xxxmA - 500mA -1400mA,
**common minus connector**,
supply 12V-48V DC,
output voltage range: 3V-45V,
**SwitchDim2**,
remote ceiling & integration in luminaires

## Additional Information and Equipment

Lunatone datasheets and manuals
https://www.lunatone.com/en/downloads-a-z/

Lunatone DALI products
https://www.lunatone.com/en/

DALI-Cockpit – free configuration tool from Lunatone for DALI systems
https://www.lunatone.com/en/product/dali-cockpit/

## Contact

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Requests: sales@lunatone.com

www.lunatone.com

### Disclaimer

Subject to change. Information provided without guarantee. The datasheet refers to the current delivery.

The compatibility with other devices must be tested in advance to the installation.