

## DALI LED Power Supply CW-WW

### Datasheet Control Gear



DALI LED Power Supply (DT8) for independent control of light level and colourtemperature of tunable white luminaires

constant voltage:

Art.Nr. 89453849-CWW-24V (24V, 25W)

Art.Nr. 89453849-CWW-36V (36V, 25W)

constant current:

Art.Nr. 89453849-CWW-350 (15W, 350mA)

Art.Nr. 89453849-CWW-500 (20W, 500mA)

Art.Nr. 89453849-CWW-700 (25W, 700mA)

Art.Nr. 89453849-CWW-800 (25W, 800mA)

Art.Nr. 89453849-CWW-1100 (25W, 1100mA)

# DALI LED Power Supply CW-WW Control Gear

## Overview

- DALI LED Power Supply for the control of tunable white luminaires
- types for constant voltage and constant current LED-modules available
- **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)
- supply voltage 230V AC
- CV-Type: output 24V PWM (max. 1A) or 36V PWM (max. 700mA)
- CC-Type: output currents of up to 1100mA
- configuration via PC-software DALI-Cockpit and DALI USB-interface
- overtemperature shutdown, integrated short circuit protection
- user-friendly factory default settings

## Specification, Characteristics

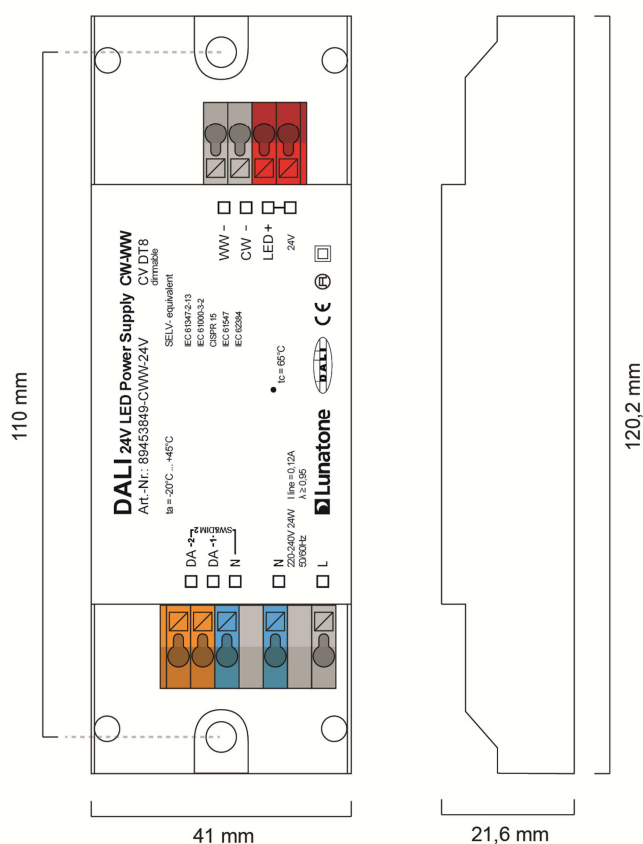
### constant voltage (CV):

type	DALI 25W LED Power Supply CW-WW CV 24V	
article number	89453849-CWW-24V	89453849-CWW-36V
<b>electrical data:</b>		
supply voltage	220-240V AC / 50-60Hz, $\text{lin}=0.12\text{A}$ , power factor > 0.95, inrush current < 0.2A	
output	24V $\pm$ 0.5V PWM	36V $\pm$ 0.5V PWM
max. output current $I_{\text{led}}$	1A	700mA
control input	DALI or SwitchDim2	
number of DALI-addresses	2mA	
number of DALI addresses	operating mode DT8, Dim2Warm: 1 operating mode Balance&Dim: 2	

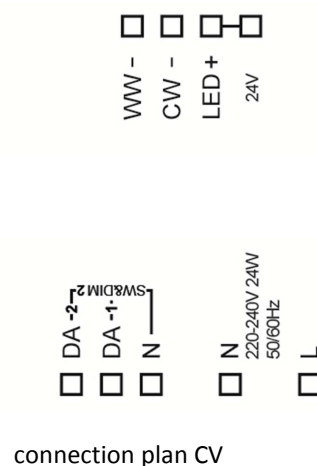
type	<b>DALI 25W LED Power Supply CW-WW CV</b>	
article number	89453849-CWW-24V	89453849-CWW-36V
<b>technical data:</b>		
power on behaviour	configurable via DALI: 0%-100% or last value	
storing and transportation temperature	-20°C ... +75°C	
operational ambient temperature	-20°C ... +45°C	
expected lifetime (at tc≤65°C)	>50000h	
protection class	IP20	
max. connecting wire cross section	1.5 mm <sup>2</sup>	
dimensions (LxWxH)	120mmx41mmx22mm	
mounting/housing	remote ceiling / integration in luminaires	



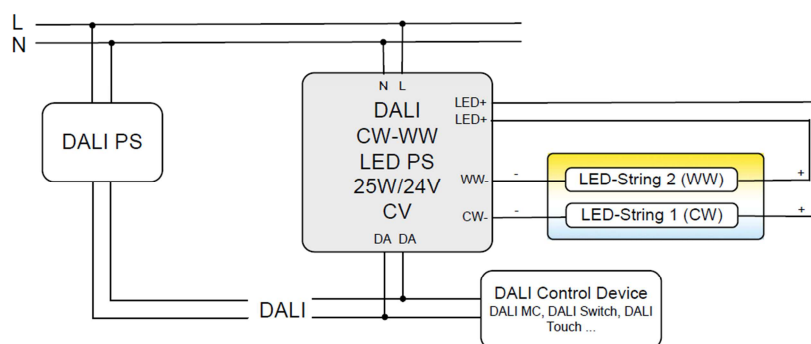
IEC 61347-2-13  
IEC 61000-3-2  
CISPR 15  
IEC 61547  
IEC 62384



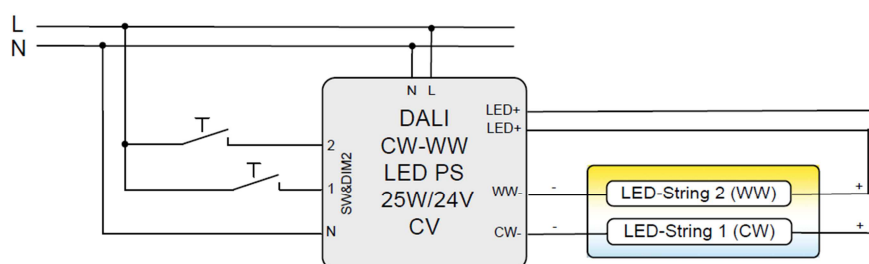
dimensions CV



DALI:



SwitchDim2:



**constant current (CC):**

type	DALI LED Power Supply CW-WW CC				
article number	89453849-CWW-350	89453849-CWW-500	89453849-CWW-700	89453849-CWW-800	89453849-CWW-1100

**electrical data:**

supply voltage	220-240V AC / 50-60Hz, $I_{in}=0.12A$ , power factor > 0.95, inrush current < 0.2A				
max. output current $I_{led}$	350mA	500mA	700mA	800mA	1100mA
output voltage range $V_{led}$	12V-44V	12V-36V	12V-32V	12V-28V	12V-16V
control input	DALI				
current consumption DALI	2mA				
number of DALI-addresses	operating mode DT8, Dim2Warm: 1 operating mode Balance&Dim: 2				

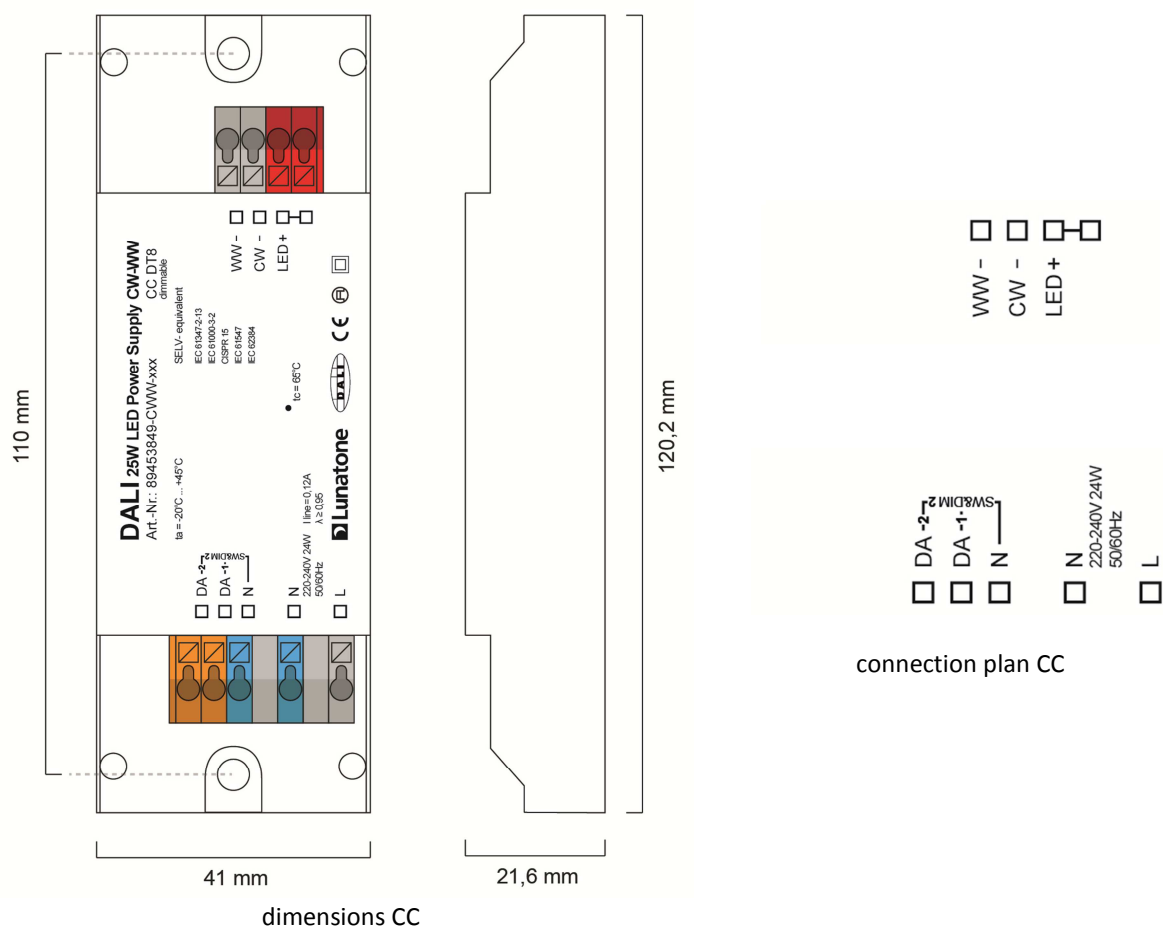
**technical data:**

power on behaviour	configurable via DALI: 0%-100% or last value
storage/transportation temp.	-20°C ... +75°C
ambient temperature	-20°C ... +45°C
expected lifetime (at $t_c \leq 65^\circ C$ )	>50000h
protection class	IP20
connecting wire cross section	$\leq 1.5 \text{ mm}^2$
dimensions (LxWxH)	120mmx41mmx22mm
mounting/housing	remote ceiling / integration in luminaires

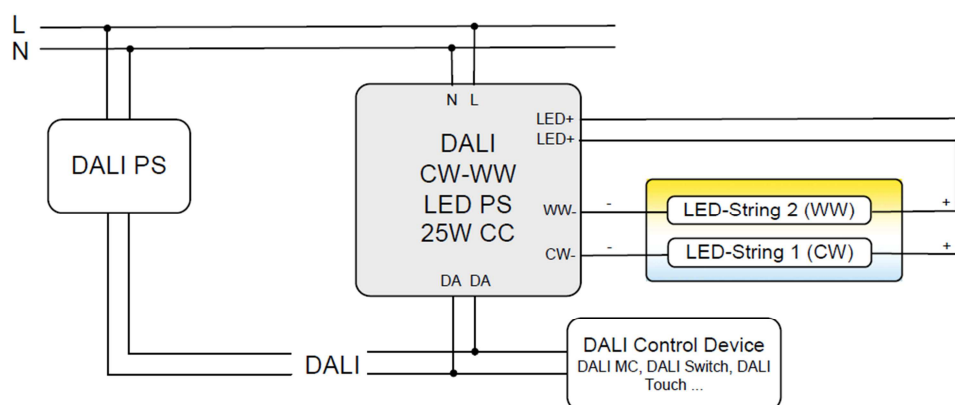
on request: output currents from 250mA to 1100mA available



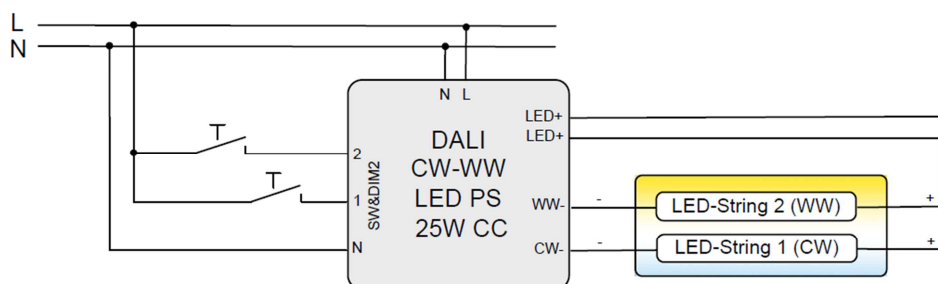
IEC 61347-2-13  
IEC 61000-3-2  
CISPR 15  
IEC 61547  
IEC 62384



DALI:



SwitchDim2:



## 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).

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

SwD1: light level

short press: On/Off

long press: dimming

SwD2: 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).

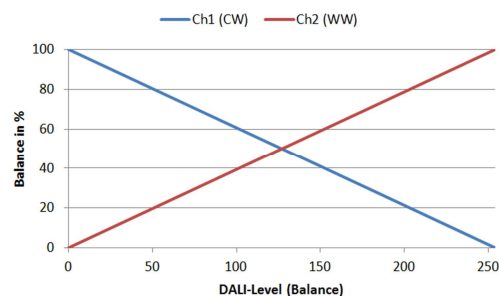
The Balance&Dim mode allows colour temperature adjustments without affecting the light level and vice versa. For each channel only DALI-standard commands like dim up/down but also DAP are used. Thus the device can be used with all common controls

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, SwD1: light level

DALI-address 2, SwD2: balance



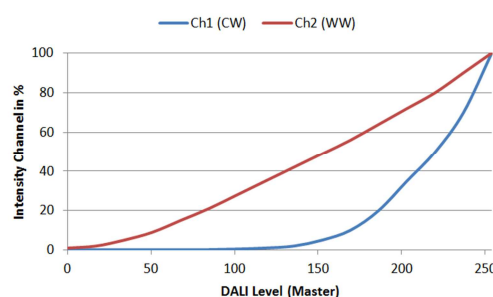
### Dim2Warm

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

DALI-address 1, SwD1: Dim2Warm (Master)

short press: On/Off

long press: dimming

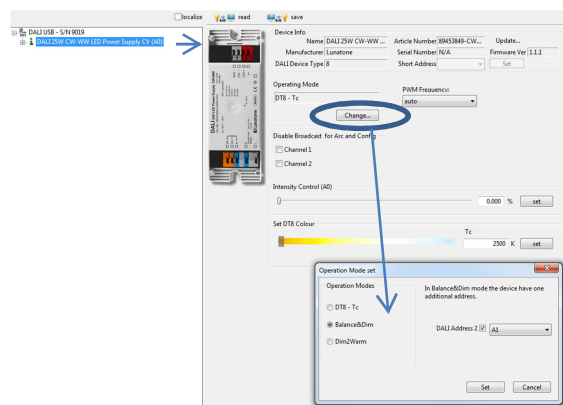


SwD2: scene selector

## Selection of operating mode

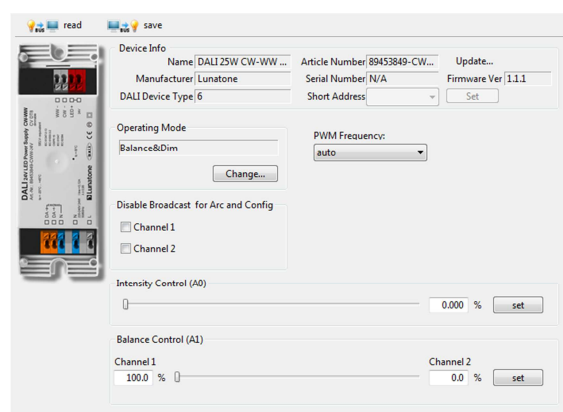
With the help of the PC-software tool DALI-Cockpit the operating mode can be easily set on the general settings page.

Operating mode DT8-Tc:

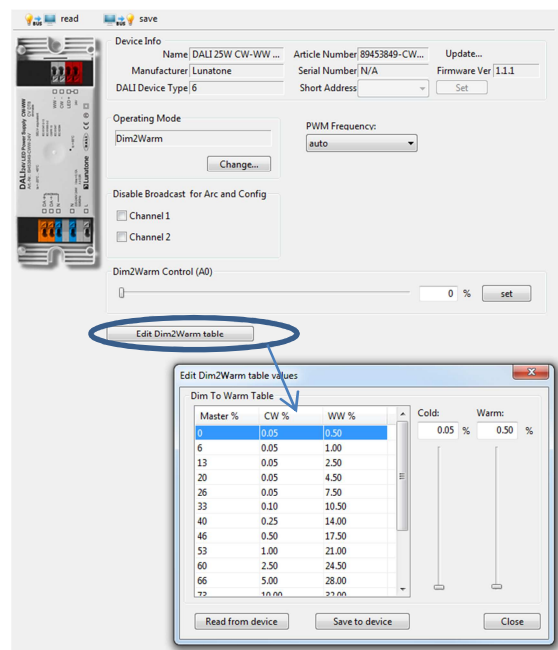


In addition, on the same page the PWM-frequency can be selected and basic control elements for testing each operating modes are available (DT8: slider for level and colour temperature). Furthermore the broadcast control can be deactivated for each channel individually.

Operating Mode Balance&Dim: slider for level and balance



Operating Mode Dim2Warm: slider for input value adaption and Edit-Function for the Dim2Warm-table



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.

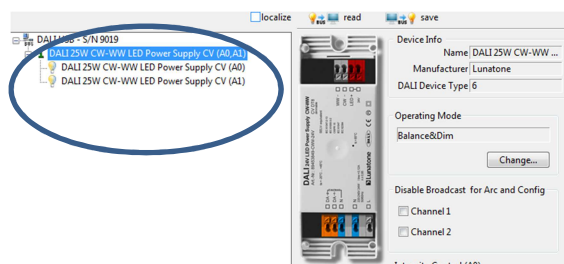
Operating Mode:

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

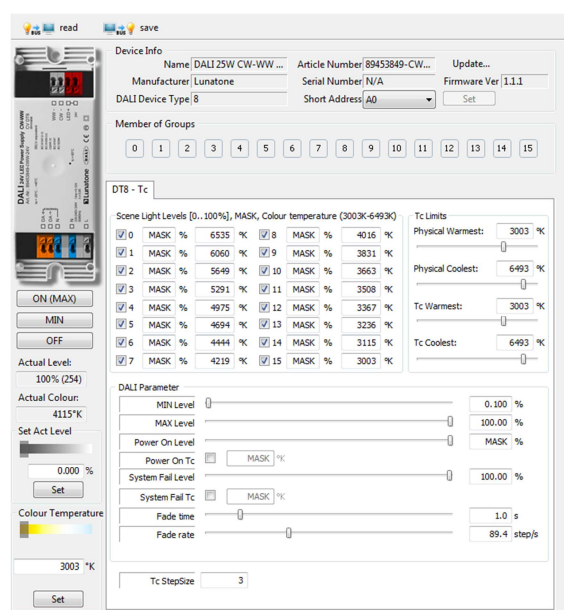
## Additional Settings

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

## Component Tree:



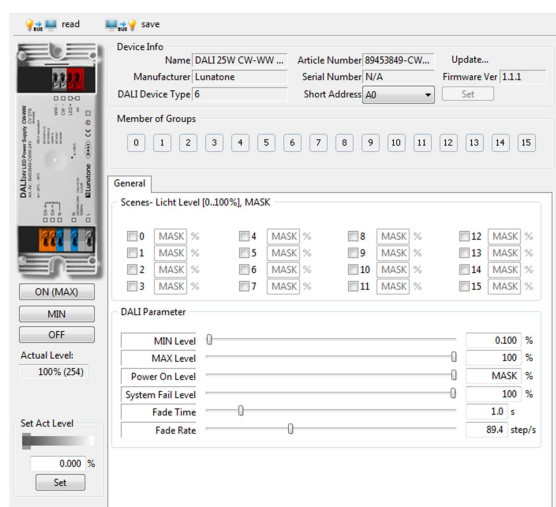
Settings in the operating mode DT8-Tc (displayed parameters are the factory default values):



Beside the DT8 Tc standard settings, the Tc stepsize can be increased, this is a simple way to speed up colour temperature changes when using the commands TC STEP COOLER/WARMER.

In all other operating modes (Balance&Dim /Dim2Warm) the following settings are provided.

## Operating mode Balance&Dim; Dim2Warm:



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.

## Factory Default Settings

Before the initial addressing is performed, the device can already be controlled by a group address. 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).

Summary of the factory default settings (delivery state):

operating mode	DT8
SwitchDim2	SwD1: level SwD2: colour temperature
Min Level	0.1%
PowerOn Level	MASK (last value)
Fade Time	2 (1s)
Fade Rate	5 (89.4 steps/s)
Tc-Stepsize	3 increments
PWM-frequency	CV: 488Hz fixed CC: auto
Groups before initial addressing:	G0 (or G0 and G1 in operating mode Balance&Dim)



## Predefined Scene Values:

<input checked="" type="checkbox"/> 0	MASK	%	6535	°K	<input checked="" type="checkbox"/> 8	MASK	%	4016	°K
<input checked="" type="checkbox"/> 1	MASK	%	6060	°K	<input checked="" type="checkbox"/> 9	MASK	%	3831	°K
<input checked="" type="checkbox"/> 2	MASK	%	5649	°K	<input checked="" type="checkbox"/> 10	MASK	%	3663	°K
<input checked="" type="checkbox"/> 3	MASK	%	5291	°K	<input checked="" type="checkbox"/> 11	MASK	%	3508	°K
<input checked="" type="checkbox"/> 4	MASK	%	4975	°K	<input checked="" type="checkbox"/> 12	MASK	%	3367	°K
<input checked="" type="checkbox"/> 5	MASK	%	4694	°K	<input checked="" type="checkbox"/> 13	MASK	%	3236	°K
<input checked="" type="checkbox"/> 6	MASK	%	4444	°K	<input checked="" type="checkbox"/> 14	MASK	%	3115	°K
<input checked="" type="checkbox"/> 7	MASK	%	4219	°K	<input checked="" type="checkbox"/> 15	MASK	%	3003	°K

## Purchase Order Information

**Art. Nr. 89453849-CWW-24V:** DALI 25W CW-WW LED Power Supply, constant voltage (CV), 24V, 25W, I<sub>max</sub>=1A, SwitchDim2, remote ceiling

**Art. Nr. 89453849-CWW-36V:** DALI 25W CW-WW LED Power Supply, constant voltage (CV), 36V, 25W, I<sub>max</sub>=700mA, SwitchDim2, remote ceiling

**Art. Nr. 89453849-CWW-350:** DALI CW-WW LED Power Supply, constant current (CC) 350mA, Ausgangsspannungsbereich 12V-44V, SwitchDim2, remote ceiling

**Art. Nr. 89453849-CWW-500:** DALI CW-WW LED Power Supply, constant current (CC) 500mA, Ausgangsspannungsbereich 12V-36V, SwitchDim2, remote ceiling

**Art. Nr. 89453849-CWW-700:** DALI CW-WW LED Power Supply, constant current (CC) 700mA, Ausgangsspannungsbereich 12V-32V, SwitchDim2, remote ceiling

**Art. Nr. 89453849-CWW-800:** DALI CW-WW LED Power Supply, constant current (CC) 800mA, Ausgangsspannungsbereich 12V-28V, SwitchDim2, remote ceiling

**Art. Nr. 89453849-CWW-1100:** DALI CW-WW LED Power Supply, constant current (CC) 1100mA, Ausgangsspannungsbereich 12V-16V, SwitchDim2, remote ceiling

## Additional Information and Equipment

DALI-Cockpit – free configuration tool from Lunatone for DALI systems

<http://lunatone.at/en/downloads/Lunatone-DALI-Cockpit.zip>

Lunatone DALI products

<http://www.lunatone.at/en/>

Lunatone datasheets and manuals

<http://lunatone.at/en/downloads/>

## Contact

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[www.lunatone.com](http://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.