

DALI CW-WW LED Dimmer CV

Datasheet

Control Gear



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

Art. Nr. 89453836 (4A)

Art. Nr. 86458673 (8A)

Art. Nr. 89453838 (10A)

Art. Nr. 89453841 (16A)

DALI CW-WW LED-Dimmer CV Control Gear

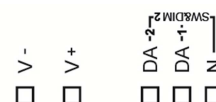
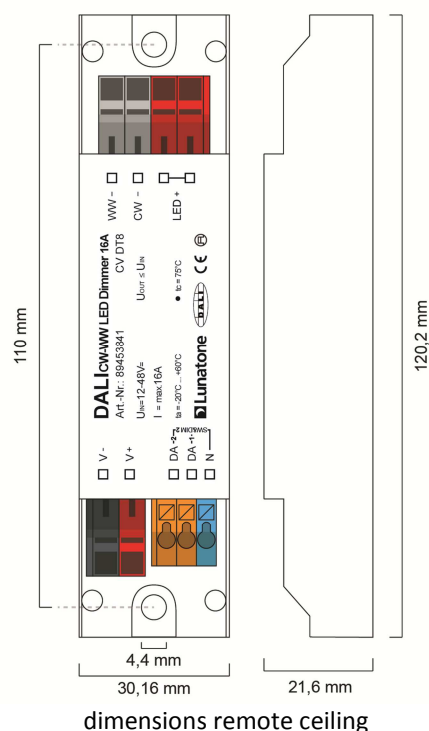
Overview

- DALI LED-Dimmer for the control of tunable white luminaires
- suitable for constant voltage LED-modules with operating voltages from 12V to 48V
- **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)
- compact types for integration in luminaires or remote ceiling
- supply voltage type dependent of 12V to 28V DC or from 12V to 48V DC (according to the operating voltage of the led modules)
- type dependent max. input currents of 4A, 8A, 10A or 16A
- the maximum input current can be distributed on the channels at will
- low standby power consumption
- high efficiency
- configuration via PC-software DALI-Cockpit and DALI USB-interface
- user-friendly factory default settings

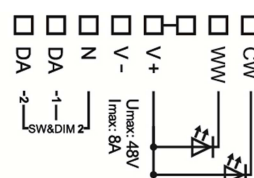
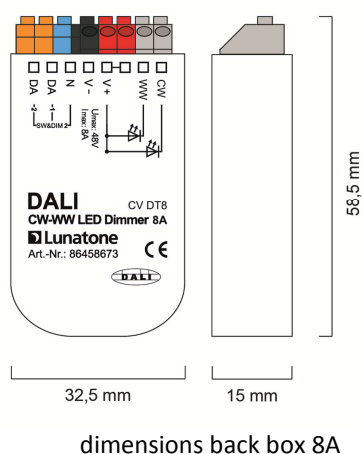
Specification, Characteristics

type	DALI CW-WW Led Dimmer CV			
article number	89453836	86458673	89453838	89453841
electrical data:				
supply voltage Vin	12VDC-28VDC	12VDC-48VDC		
maximum input current linmax	4A	8A	10A	16A
control input	DALI	DALI SwitchDim2		
current consumption DALI	2mA			
number of DALI-addresses	operating mode DT8, Dim2Warm: 1 operating mode Balance&Dim: 2			
standby power consumption (12V)	120 mW			

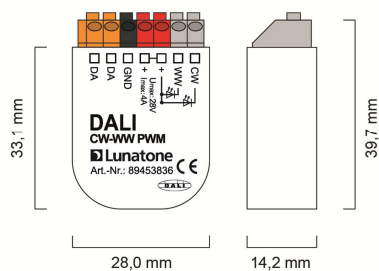
type	DALI CW-WW Led Dimmer CV			
article number	89453836	86458673	89453838	89453841
technical data:				
power on behaviour	configurable via DALI: 0%-100% or last value			
ambient temperature	-20°C bis +60°C			
expected lifetime (at Tc<=75°C)	>100000h			
protection class	IP20			
max. connecting wire cross section	1.5 mm ²		2.5 mm ² / DALI & SwDim: 1.5 mm ²	
dimensions (LxWxH)	40mm x 28mm x 15mm	59mm x 33mm x 15mm	120mmx30mmx22mm	
housing/mounting	back box		remote ceiling	



connection plan remote ceiling



connection plan back box 8A



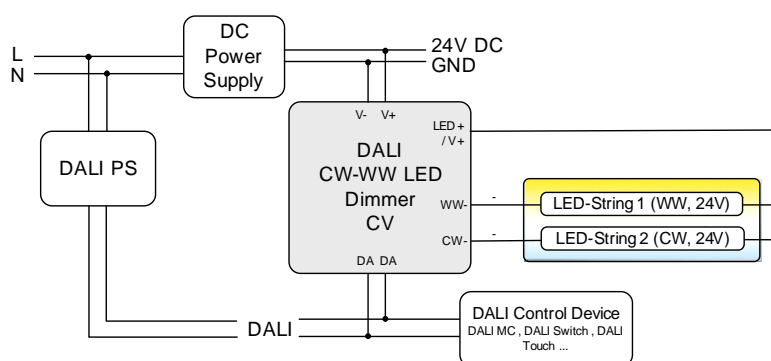
dimensions back box 4A



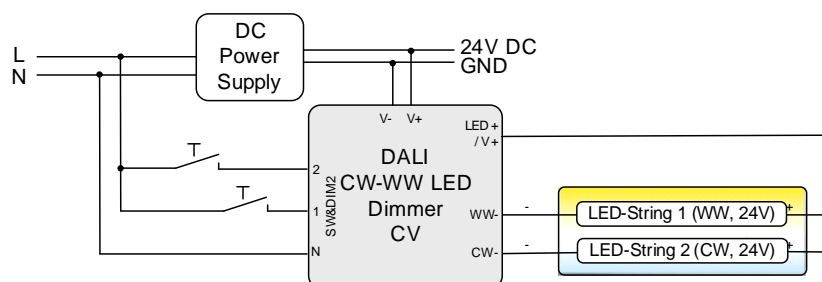
connection plan back box 4A

RECOMMENDATION: Care should be taken on keeping cable lengths between DC power supply and dimmer as well as between dimmer and luminaires (Led-Strings) as short as possible. This kind of installation will minimize the influence of voltage drops.

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

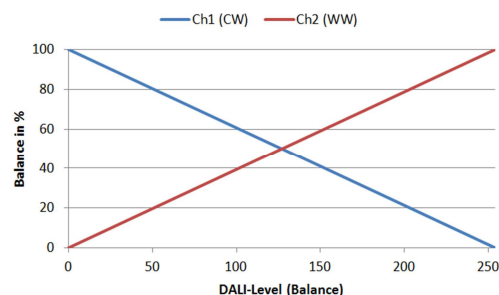
This operating mode is also suitable for operating tunable white luminaires using two DALI-addresses. The first controls the light level and the second is used for changing the distribution on the output channels (e.g. for tunable white applications or balancing direct/indirect lighting).

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



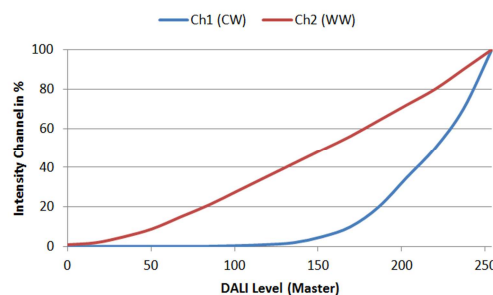
Dim2Warm

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

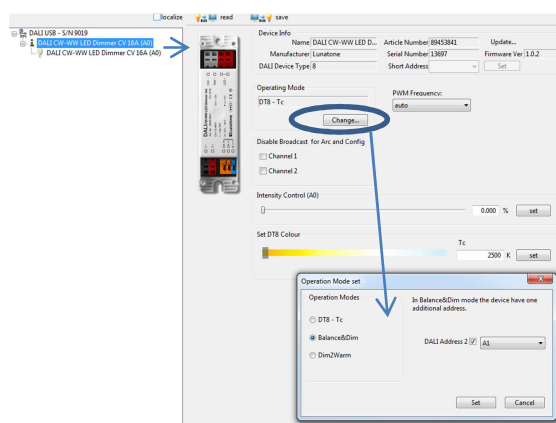


SwD2: scene selector

Selection of operating mode

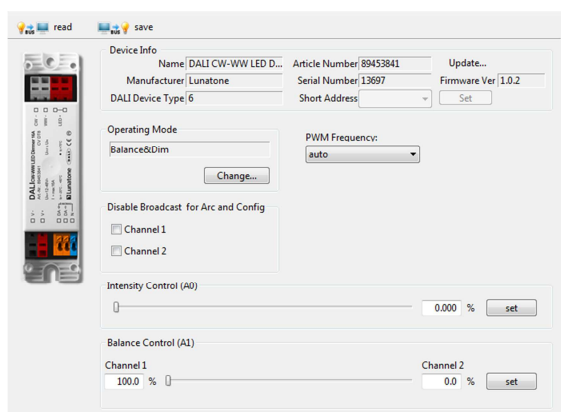
With the help of the PC-software tool DALI-Cockpit the operating mode can be easily set on the general settings page.

Operating mode DT8-Tc:

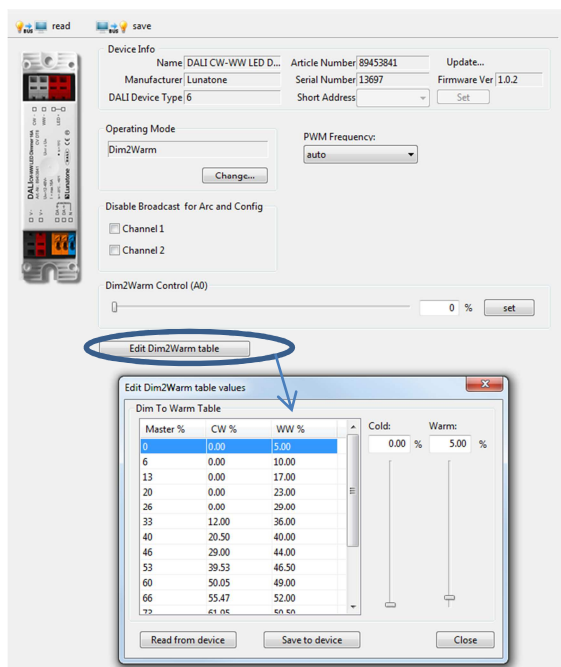


In addition, on the same page the PWM-frequency can be selected and basic control elements for testing each operating modes are available (DT8: slider for level and colour temperature, Balance&Dim: slider for level and balance, Dim2Warm: slider for input value adaption and Edit-Function for the Dim2Warm-table). Furthermore the broadcast control can be deactivated for each channel individually.

Operating Mode Balance&Dim:



Operating Mode Dim2Warm:



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.

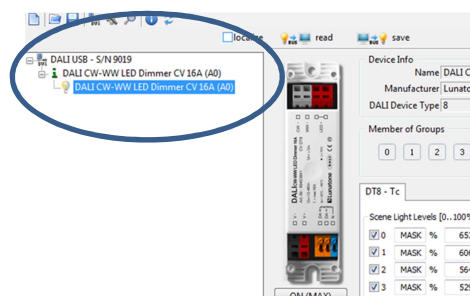
Operating Mode:

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

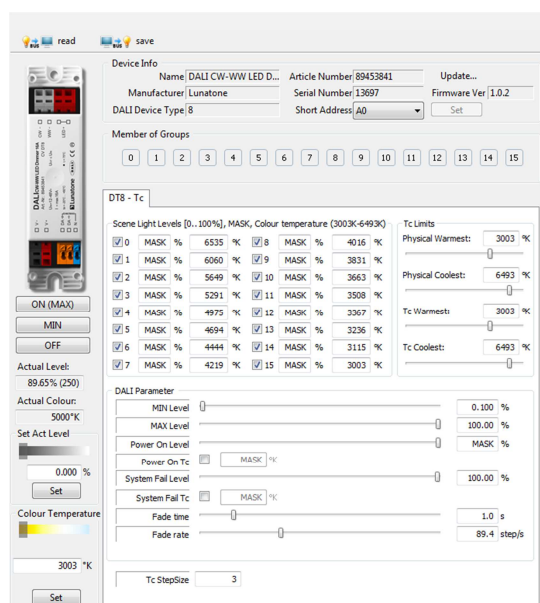
Additional Settings

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

Component Tree:



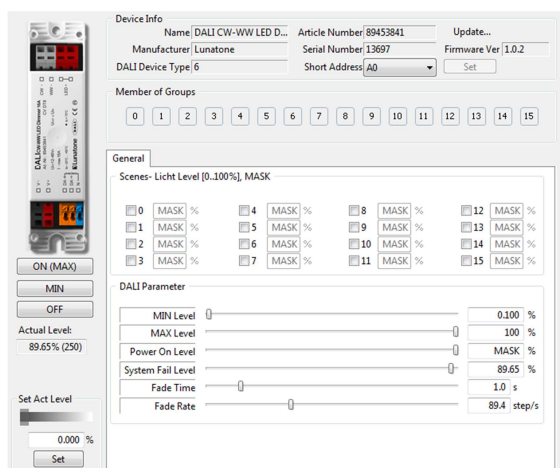
Settings in the operating mode DT8-Tc (displayed parameters are the factory default values):



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). By sending a DALI-Reset command the device is set to the DALI default values as defined in the standard.

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	122Hz																																																																																																
Groups before initial addressing:	G0 (or G0 and G1 in operating mode Balance&Dim)																																																																																																
Predefined Scene Values:	<table><tr><td><input checked="" type="checkbox"/></td><td>0</td><td>MASK</td><td>%</td><td>6535</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>8</td><td>MASK</td><td>%</td><td>4016</td><td>°K</td></tr><tr><td><input checked="" type="checkbox"/></td><td>1</td><td>MASK</td><td>%</td><td>6060</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>9</td><td>MASK</td><td>%</td><td>3831</td><td>°K</td></tr><tr><td><input checked="" type="checkbox"/></td><td>2</td><td>MASK</td><td>%</td><td>5649</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>10</td><td>MASK</td><td>%</td><td>3663</td><td>°K</td></tr><tr><td><input checked="" type="checkbox"/></td><td>3</td><td>MASK</td><td>%</td><td>5291</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>11</td><td>MASK</td><td>%</td><td>3508</td><td>°K</td></tr><tr><td><input checked="" type="checkbox"/></td><td>4</td><td>MASK</td><td>%</td><td>4975</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>12</td><td>MASK</td><td>%</td><td>3367</td><td>°K</td></tr><tr><td><input checked="" type="checkbox"/></td><td>5</td><td>MASK</td><td>%</td><td>4694</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>13</td><td>MASK</td><td>%</td><td>3236</td><td>°K</td></tr><tr><td><input checked="" type="checkbox"/></td><td>6</td><td>MASK</td><td>%</td><td>4444</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>14</td><td>MASK</td><td>%</td><td>3115</td><td>°K</td></tr><tr><td><input checked="" type="checkbox"/></td><td>7</td><td>MASK</td><td>%</td><td>4219</td><td>°K</td><td><input checked="" type="checkbox"/></td><td>15</td><td>MASK</td><td>%</td><td>3003</td><td>°K</td></tr></table>	<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
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Purchase Order Information

Art.Nr. 89453836: DALI CW-WW LED Dimmer, CV, input current 4A, 12V-28V DC, back box

Art.Nr. 86458673: DALI CW-WW LED Dimmer, CV, input current 8A, 12V-48V DC, SwitchDim2, back box

Art.Nr. 89453838: DALI CW-WW LED Dimmer, CV, input current 10A, 12V-48V DC, SwitchDim2, remote ceiling & integration in luminaires

Art.Nr. 89453841: DALI CW-WW LED Dimmer, CV, input current 16A, 12V-48V DC, SwitchDim2, remote ceiling & integration in luminaires

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

Technical Support: support@lunatone.com

Requests: sales@lunatone.com

www.lunatone.com



Disclaimer

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The datasheet refers to the current delivery.

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