DALI DT8 to DT6

Datasheet

DALI DT8 to DT6 converter

DALI-interface module for the conversion of DALI DT8-Tc commands to DALI DT6 commands

Art. Nr. 89453859

DALI DT8 to DT6 Interface

Overview

- for tunable white control of 2 DALI DT6 1-channel LED power supplies
- 1 DALI Address (DT8, Type Tc)
- Separate outputs for cold-white and warm-white channel (factory default)
- Alternative output mode: dim-levels for cold-white and warm-white channel are sent to groups (G0 and G1)
- Easy system expansion with the help of DALI Expander, DALI Expander3 or Repeater PS
- configuration with PC-software tool DALI-Cockpit and DALI USB interface

Specification, Characteristics

type	**DALI DT8 to DT6**
article number	89453859

input: DA+, DA-	
input type	DALI control input
marking terminals	DA+, DA-
input voltage range	12V … 22,5V [1]
current consumption DALI	4.5mA + current consumption subnet

output: DA+, DA-	
output type	2x DALI bus power supply
marking terminals	DA1+, DA1-, DA2+, DA2-
output voltage range	10Vdc … 20,5Vdc
guaranteed /max DALI supply current	4mA / 250mA each[2]
open circuit proof	yes
short circuit proof	yes
Number of DALI addresses	1 (DT8)
behaviour after power on	configurable via DALI

insulation data	
impulse voltage category	II
pollution degree	2
rated insulation voltage	250V
insulation DALI / mains	not isolated
insulation test voltage DALI / mains	3000Vac

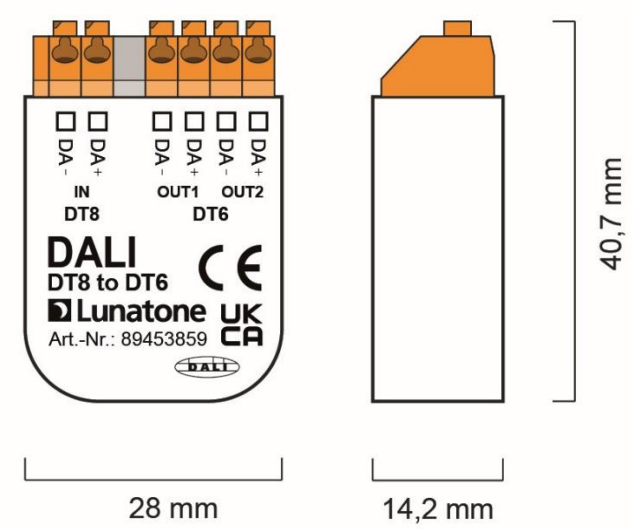
[1] at least 12V to ensure the necessary current and bus voltage (>10.5V) on the output side.
[2] an additional external DALI bus supply is not possible, expansion of subnet is possible via DALI-2 Expander

environmental conditions	
storing and transportation temperature	-20°C … 75°C
operational ambient temperature	-20°C … 60°C
rel. humidity, not condensing	15% … 90%

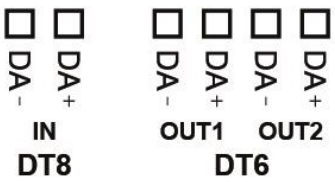
general data	
dimensions (l x w x h)	40mm x 28mm x 14mm
mounting	back box
protection class	II (when used/installed as intended)
protection degree housing	IP40
protection degree terminals	IP20

terminals	
connection type	spring terminal connectors
wire size: solid core	0,5 … 1,5 mm^2 (AWG20 … AWG16)
wire size: fine wired	0,5 … 1,5 mm^2 (AWG20 …AWG16)
wire size: using wire end ferrule	0,25 … 1 mm^2
stripping length	8,5 … 9,5 mm / 0,33 … 0,37 inch
tightening/ release of wire	push mechanism

standards	
DALI	IEC62386-101
EMV	EN 61547 EN 50015 / IEC CISPR15
safety	EN 61347-2-11 EN 61347-1
markings	CE, UKCA



dimensions DALI DT8 to DT6



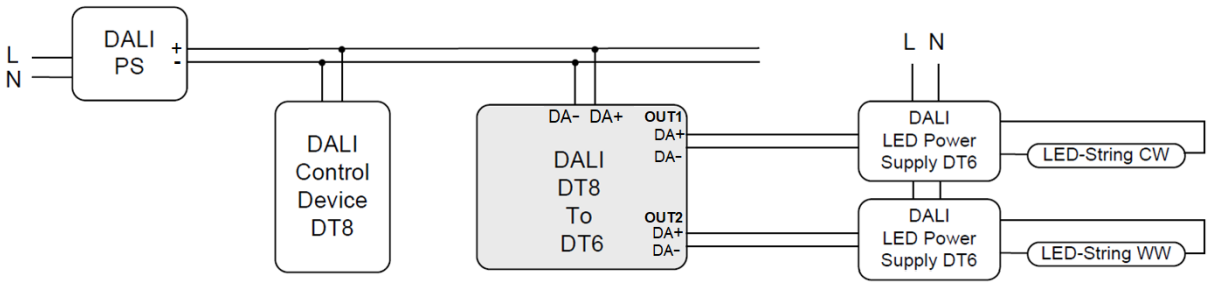
connection plan DT8 to DT6

Factory Default

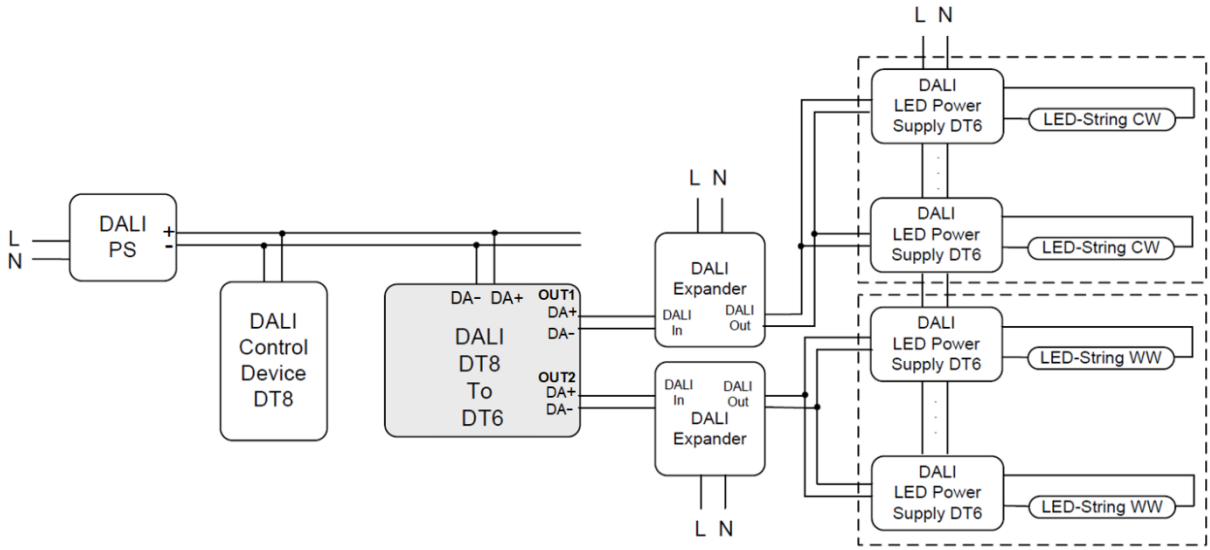
The following configuration is implemented on delivery (factory default setting). If necessary, this can be changed and adapted.

operating mode	out1: cold; out2: warm
behaviour on power on	last level (MASK)
ignore broadcast commands	deactivated
repetition - cycle time	disabled

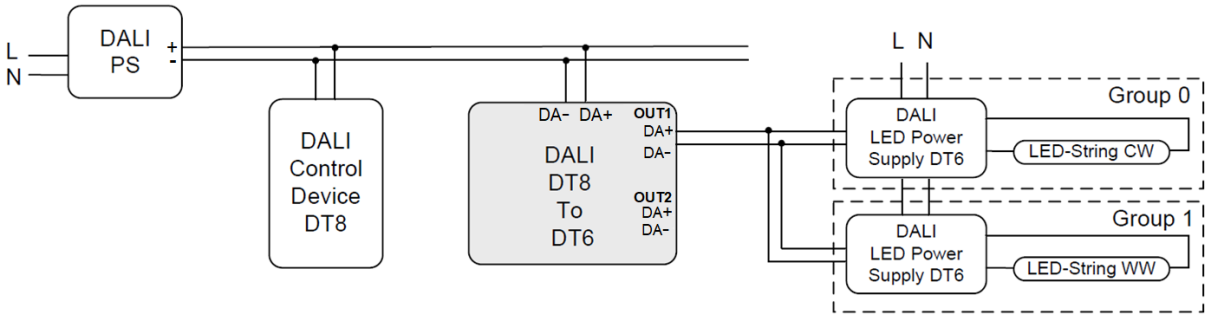
Application Examples



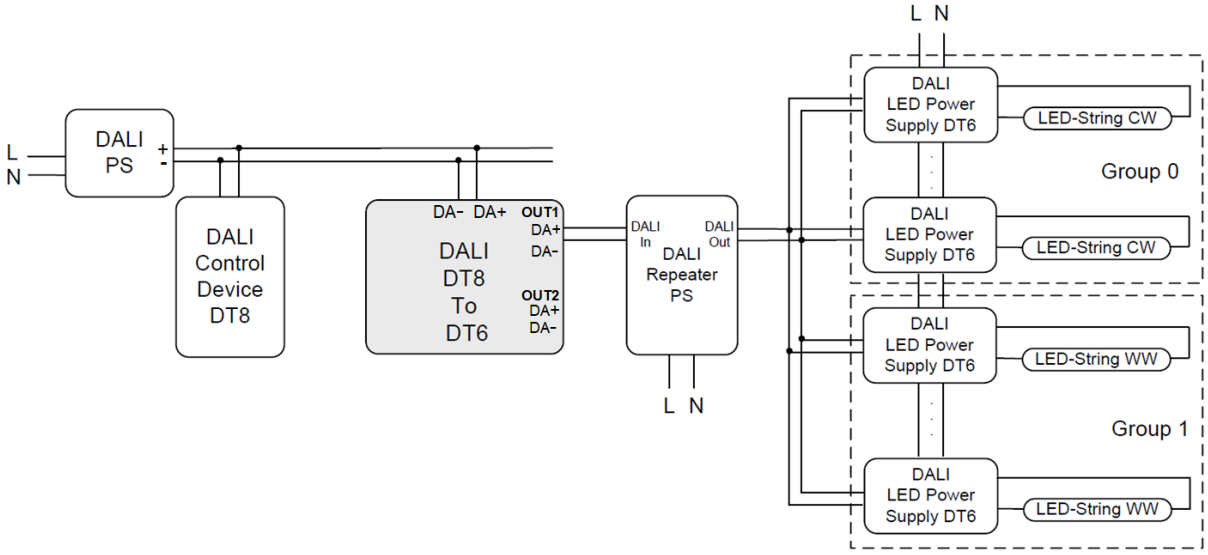
CW and WW channel on separated outputs



CW and WW channel on separated outputs, DALI-Expanders are used for increasing the number of LED power supplies



CW and WW on same output: the LED power supplies must be assigned to group G0 (for CW) and G1 (for WW)



CW and WW on same output: DALI Repeater with integrated bus power supply is used for increasing the number of LED power supplies

Installation

- The DALI-DT8 to DT6 device can be installed in a flush-mounted installation box

- The device is directly connected and supplied by the DALI bus. A DALI bus power supply (e.g. DALI PS) is required. The current consumption depends on the number of connected DALI ballasts. The own consumption is 4.5 mA.

- If more dimmers need to be connected to the output the number of led power supplies can be increased easily with the help of DALI Repeater PS, DALI Expander or DALI Expander 3. See also section “Application Examples” page 4

- the polarity of the output voltage is marked on the housing (DA+, DA-)

Attention: the polarity of the DALI connections must be taken into account.

- 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.
- The DALI line must not be connected to mains voltage or any extra low voltage (SELV) system
- The DALI wiring can be realised with standard low-voltage installation material. No special cables are required.
- Only 1 wire may be connected to each terminal. When using double wire end ferrules, the connection capacity of the terminal must be considered.
- Wiring topology of the DALI line: Line, Tree, Star structure

☞ **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).

Commissioning

After installation, the device is ready for use.

Addressing and Configuration

Addressing and changes to the factory settings are possible with the DALI Cockpit Software (Windows PC).

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 device is automatically recognised by the DALI Cockpit during the addressing process and listed in the device overview. The desired functions can then be configured on the device page – see section “Function” page 6.

Function

The DALI DT8 to DT6 converter represents one control gear on the DALI-line (DT8, Mode Tc). Commands for dimming and colour temperature adaption are converted in dim-levels for a cold white and a warm white channel.

Output Mode: Depending on the output mode the dim-levels are sent either broadcast on two separate outputs, (Out1: cold; Out2: warm, factory default) or on both outputs to group G0 (cold) and G1 (warm).

The output mode (DT8 to DT6 Transmit Mode) can be set easily in the DALI-Cockpit in the tab „Lunatone Extensions“, see *Figure 2* page 8.

Tc Stepsize: defines by how many steps the colour temperature value is changed with the DALI command: “Colour Temperature Tc Step Cooler/Warmer”.

Cycle time: The DT6 devices for colour temperature are controlled using light level (DAP) commands. The parameter specifies the time after which the last DAP commands are sent again if they have not been changed. range (1-255 seconds).

Ignore Broadcast Commands: All light level (Arc / DAP), DT8 and configuration commands, sent broadcast are ignored. Only single address and group commands are processed.

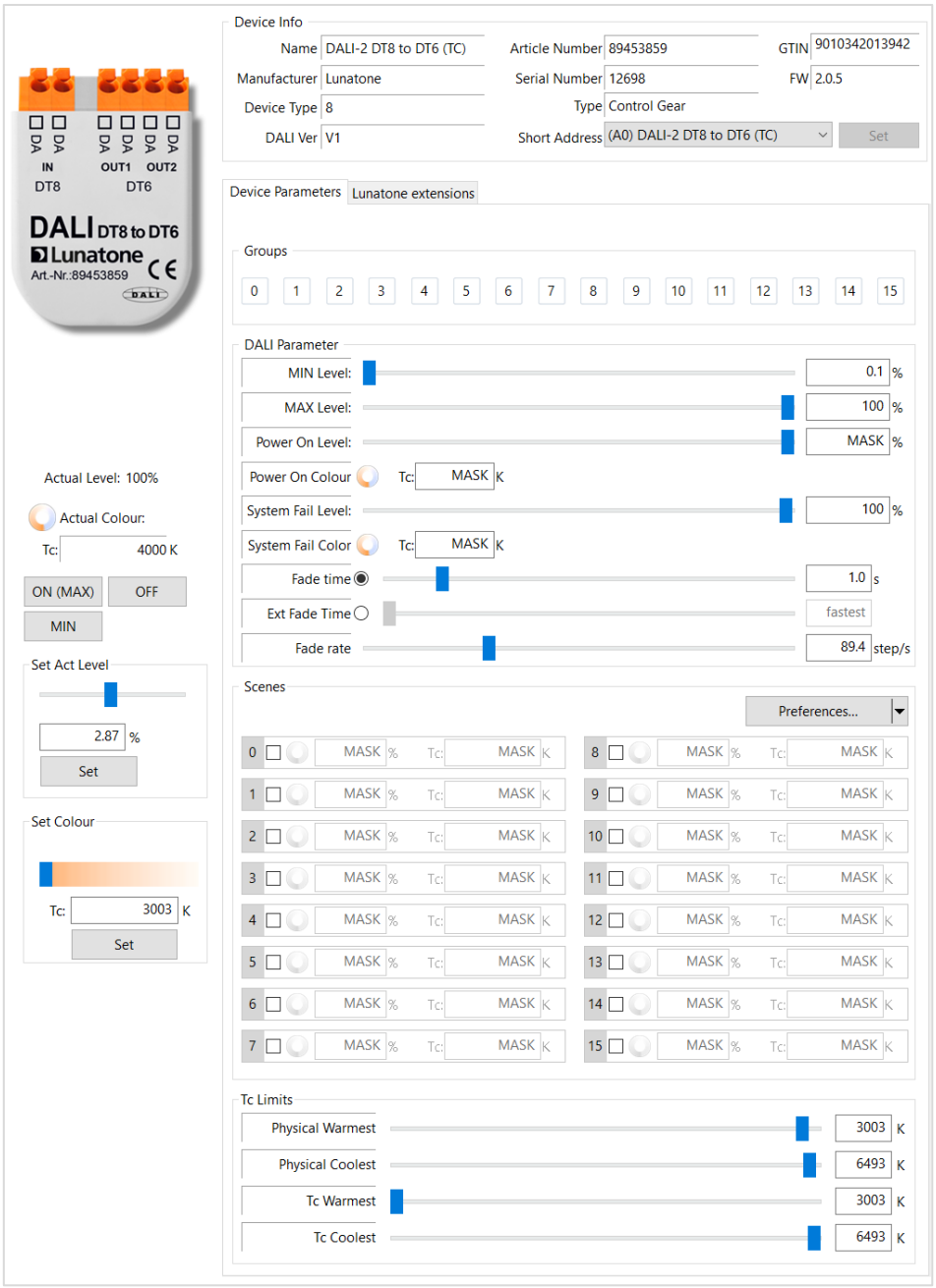


Figure 1 DALI Cockpit – tab: Device Parameters

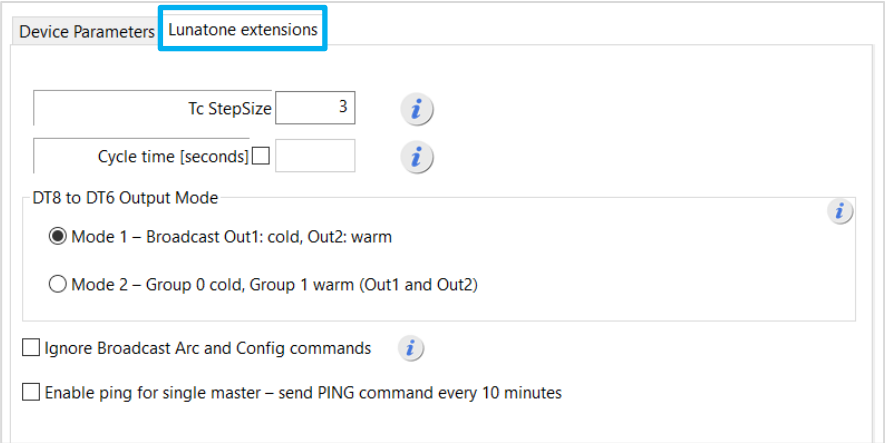


Figure 2 DALI Cockpit – tab: Lunatone Extensions

Purchase Information

Art.Nr. 89453859, DALI DT8 to DT6 Converter

Additional Information and Equipment

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

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

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.

