

KNX-DALI Gateway



Datasheet

KNX-DALI Gateway

KNX to DALI and
DALI to KNX gateway,
multi-master capability

Art. Nr. 89453899



KNX-DALI Gateway Interface

Overview

- **DALI-2 multi-master capable**
- **up to 63 addressable DALI devices**
- 20 KNX gates
- Use of broadcast, individual addresses and groups is possible
- **KNX color control RGB, RGBW**
- **color temperature control (Tunable White)**
- light control of various device types (DT0, DT2, DT3, DT4, DT6, DT8)
- recall of DALI scenes (0...15)
- KNX communication objects for relative and absolute control
- Color control via standard KNX objects and **percentage values**
- KNX communication objects for light status
- **Luminaire failure detection**
- alternative color control with DT6 (RGB, RGBW)
- Luminaire test for system set up
- Product database for ETS 5 / ETS 6
- easy configuration via Lunatone DALI USB interface and free DALI-Cockpit Software tool
- **DALI-2 Event** conversion to KNX supported instance events:
 - lightlevel instance type 4
 - universal instance type 0not supported:
 - motion instance type 3
 - pushbutton instance type 1
- **DALI-2** and KNX certified



Specification, Characteristics

type		KNX-DALI Gateway
article number		89453899
input: KNX		
input type		KNX / TP
input voltage range		DC 21...32V SELV
max. input supply current		6mA
max. power consumption		150mW
input: DA, DA		
input type		DALI-2
marking terminals		DA DA
input voltage range		10...22,5V (IEC 62386-101)
max. current consumption DALI		3mA
insulation data:		
impulse voltage category		II
pollution degree		2

rated insulation voltage	250V
insulation DALI (DA,DA) / KNX(+,-) KNX(+,-) / DALI (DA,DA)	reinforced isolation
insulation test voltage DALI- output/mains	3000Vac

environmental conditions:

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

general data:

dimensions (l x w x h)	98mm x 17,5mm x 56mm
mounting	DIN rail
expected lifetime @ ta = 25°C	50.000h
protection degree housing	IP40
protection degree terminals	IP20

terminals DALI:

connection type	screw connector
wire size solid core	0,5 ... 2,5 mm ² (AWG20 ... AWG14)
wire size fine wired	0,5 ... 2,5 mm ² (AWG20 ...AWG14)
wire size using wire end ferrule	0,25 ... 1,5 mm ²
stripping length	7 mm / 0,27 inch
locking torque	0,5Nm

General description

The gateway connects the KNX world with the DALI world. It is DALI-2 and KNX certified and multi-master capable (DALI-2 standard).

The gateway's multi-master capability allows the ballasts to be controlled in parallel using DALI-2 control devices. In this case, the gateway detects the current states and updates the KNX status accordingly.

The device supports color temperature control (CW-WW), color control (RGB, RGBW) as well as the control of other light sources (DT0, DT2, DT3, DT4, DT6) and DALI-2 event messages.

Usually the DALI Device Type 8 (DT8) is used for color control. However, the gateway also offers the option to implement color control of RGB and RGBW using DT6 ballasts.

DALI **scene recalls** are possible with KNX communication objects for scenes. The scenes can be assigned with the help of a table. Teach-in of scenes is possible using the Scene Control communication object.

DALI-2 events can be provided on KNX with the DALI KNX gateway. Depending on the event information, it is possible to choose between different communication objects.

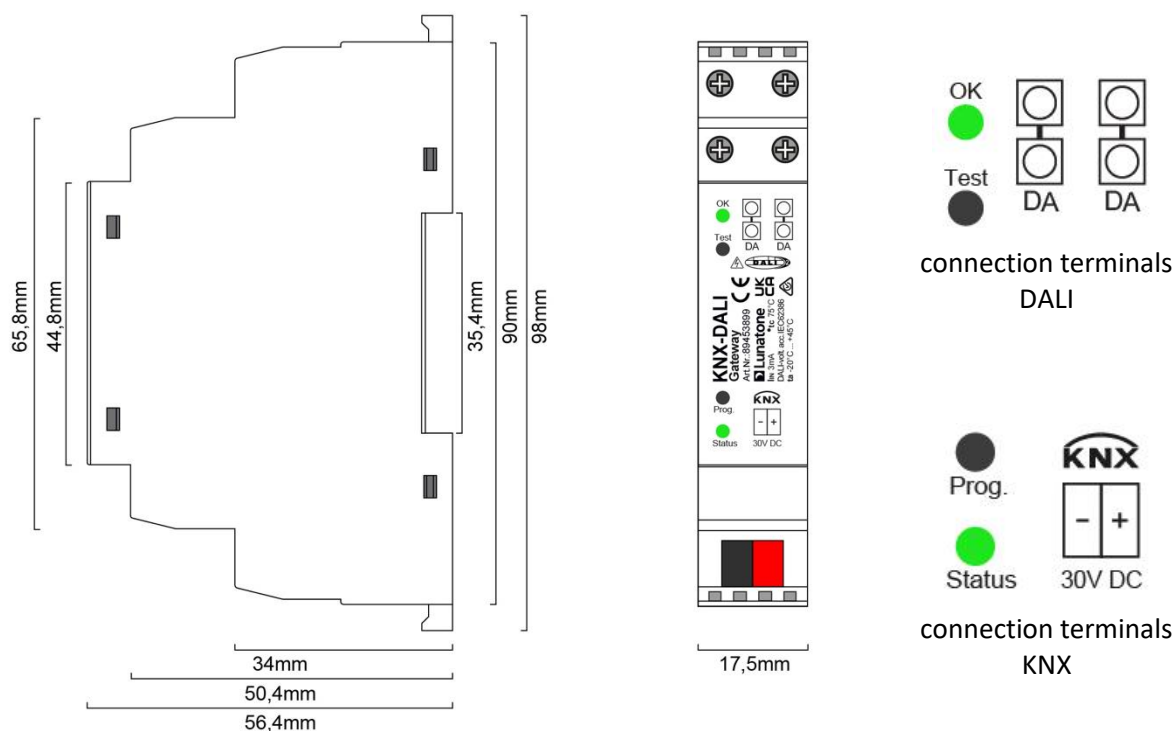
The DALI-KNX Gateway can be configured with a product database for ETS5.

The DALI system can be configured with a Lunatone DALI USB interface and the software tool DALI-Cockpit. When using the DALI-Cockpit Software, the PC must be connected to the DALI bus via a suitable interface module (e.g. DALI USB, DALI SCI RS232).

The gateway is supplied by the DALI system as well as the KNX bus. A DALI bus power supply (e.g. DALI PS Art. Nr.: 24033444) is required.

Installation

- 1.) Mount the Gateway on a DIN rail
- 2.) Connect the Gateway according to the drawing (Fig.1 typical application)
- 3.) Activate the KNX and DALI bus supply.



dimensions KNX-DALI Gateway Art.Nr.: 89453899

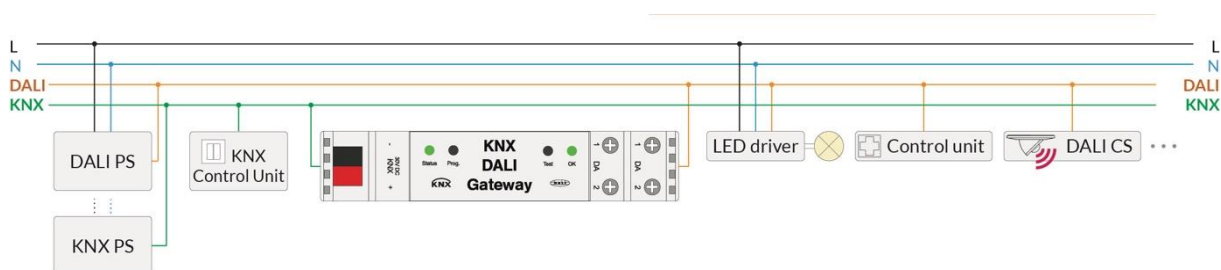


Figure 1 typical application

Set-up the Software

- 1.) Start ETS5/6 and load the Gateway's product database.
- 2.) Assign KNX address to the Gateway:
-> When requested, press the "Prog. button" on the device housing. If the address has been assigned successfully, the red LED will turn off.
- 3.) Start the Lunatone DALI Cockpit Software and make the desired configurations for the DALI System.
- 4.) Configure the required gates in the ETS (function, DALI address).
- 5.) Load the settings made in the ETS into the Gateway.

ETS (KNX configuration Software)

An ETS (version ETS 5) product database for the gateway is available. Download link for ETS product database:

<https://www.lunatone.com/en/downloads-a-z/>

All necessary settings for the KNX system can be made using the ETS. For larger projects, it can be useful to rename the gates and enter the used DALI addresses - this can increase clarity in the product database. See Fig.2

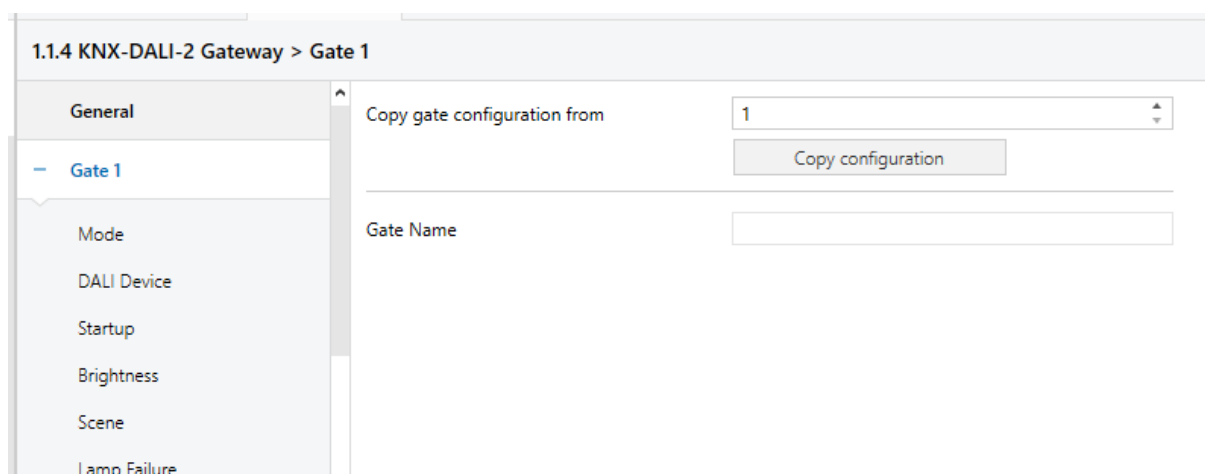


Figure 2 Gate settings

DALI Cockpit

DALI Cockpit is a configuration software developed by Lunatone for DALI devices (Windows operating system). Requirement: Interface to the DALI bus e.g. DALI USB
Art.Nr.: 24138923-HS

Download link for DALI Cockpit Software:
<https://www.lunatone.com/en/product/dali-cockpit/>

The following DALI settings can be made:

- Assignment of DALI addresses
- definition of groups
- definition of scenes
- configuration of the DALI operating devices
- defining fade time
- saving and loading DALI configurations
- sending DALI commands manually

DALI multi-master

The gateway supports the DALI multi-master operation. This makes it possible to use local control devices (with application controller) on the DALI bus.

Figure 3 shows an exemplary DALI system with 2 groups (yellow rectangles). The light actuators of group 2 are switched with 2 DALI switches and a DALI sensor. In group 1 the light actuators can also be switched with a KNX switch as well as a DALI switch and sensor.

The gateway records all changes to the DALI bus and sends status messages (in the event of a change) to the KNX devices. This means that the current light status is known to the KNX switch, even if the light is switched using a DALI switch. Of course, this principle can be used not only for switching but also for color control.

The installation in figure 2 furthermore includes a KNX switch for central switching of group 1 and 2.

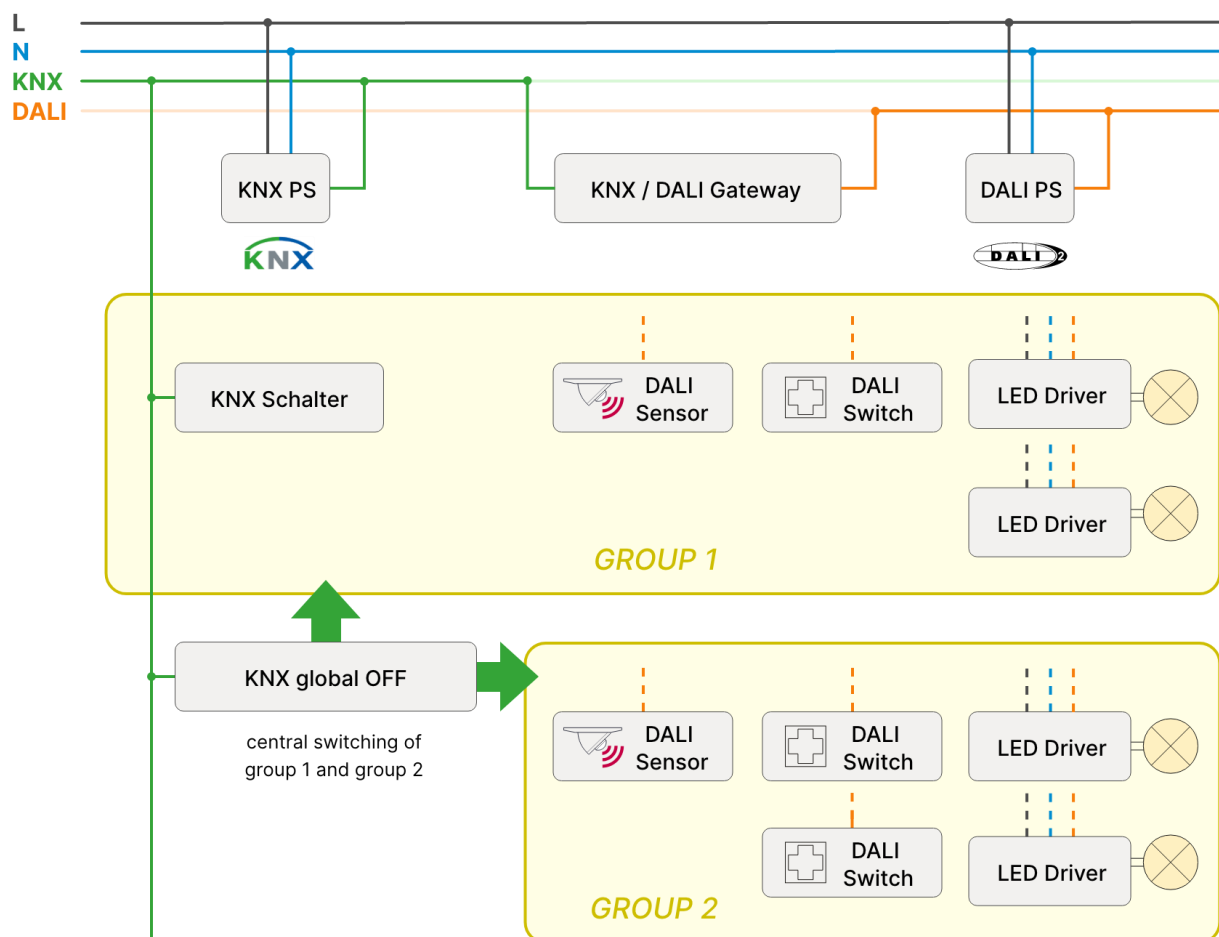


Figure 3 application with multi-master

Assigning DALI addresses

In the product database of the KNX gateway (ETS KNX Software) 20 gates are available. To each of the gates a DALI address can be assigned. It is possible to select individual addresses, group addresses or broadcast.

On the DALI bus, using the DALI Cockpit Software, all devices are automatically assigned an individual address.

After addressing, up to 16 groups can be defined and recalled with group addresses.

With broadcast, all devices are controlled simultaneously, if this is the preferred control method a configuration with DALI Cockpit is not required.

With group or broadcast addressing the assigned devices will receive DALI commands simultaneously, hence a synchronous lighting control can be realized.

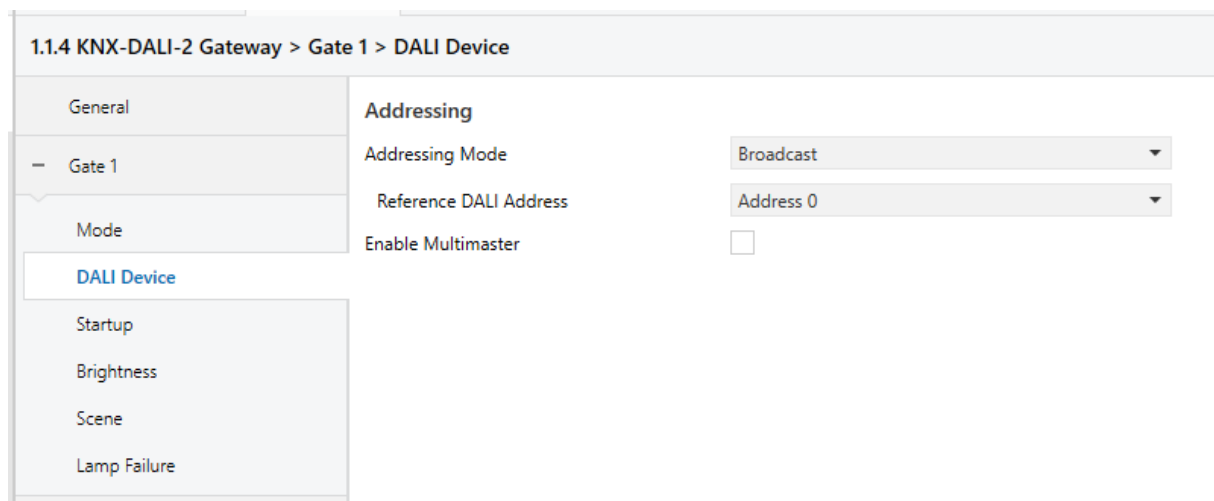


Figure 4 gate-settings ETS: DALI device addressing

DALI Scenes

16 scenes can be defined in a DALI system. When a scene is recalled, all devices adopt the set scene values. Scenes can either be defined using the DALI Cockpit Software or via KNX scene control object.

DALI Device Types

In the DALI standard, devices are divided into different types. The following device types are supported by the gateway:

- DT0 fluorescent lamps
- DT2 discharge lamps
- DT3 low voltage halogen lamps
- DT4 incandescent light bulbs
- DT6 single color LEDs - 1 channel
- DT8 color management of Tuneable White CW-WW and color RGB / RGBW LEDs

DT8 LED dimmers are used to control the brightness and color temperature or colour of Tuneable White CW-WWW, RGB or RGBW capable luminaires. The devices are DALI Device Type 8 (DT8), which means only one DALI address is needed to control up to 4 outputs.

DT8 operating devices can be replaced by DT6 operating devices.

Lunatone offers DT6 LED dimmers with up to 4 separately controllable channels. Each channel has its own DALI address, to receive commands for the connected LED strings.

For color control RGB (W) three or four channels are required, one for each color

Gateway start-up (reset) behaviour

There are two possible start-up behaviours:

- Specification by the gateway: Values can be defined with the ETS, at start-up the values are then sent to the ballasts and the status communication objects are sent once.
- Readback: The gateway reads the current status from the reference dimmer and takes over these values. The status communication objects are sent once accordingly.

These options are available in the ETS product database for each gate.

DALI luminaire tests

The gateway offers the option to send lamp errors messages as status objects to the KNX devices. To do this, the lamp status of DALI devices has to be queried. In the ETS product database you can select whether the query should be carried out cyclic or when the light is switched on.



Attention: When group or broadcast addressing is used, it is not clear which lamps are faulty, but it is clear that at least one of the lamps must be faulty.

DALI commissioning test

The commissioning test can be activated and deactivated using the test button on the gateway. The goal is to determine whether all control units are connected to the gateway. The following tests can be activated using the test button.

Test option	description
Short press (LED flashes quickly)	All lamps (broadcast) are switched on. Another short press of the test button switches off all lamps and exits test mode.
Long press (LED flashes quickly)	An automatic lighting sequence with up/down dimming is sent to all lamps. A short press of the test button exits test mode.

Note:

In test mode, no KNX status objects are changed. After exiting the test mode, the status objects might not match the actual light values.

Table 1 Test mode options



Info: LED on device housing:
LED ON -> test active
LED OFF -> test inactive

Gateway General Information

Multi-master Mode

For all gates except the Sensor Event Gate, it is possible to activate multi-master mode in the "DALI Device" settings.

If this is activated, the gateway detects when the (for the gate selected) reference dimmer is controlled by a DALI control device. The gateway detects the resulting light changes, adopts them, and sends the status objects to the KNX devices. Note, if the reference dimmer of a gate is not addressed, the change are not recognized.

This makes it possible to control dimmers simultaneously via DALI and KNX and receive the correct KNX status values.

Reference DALI Address

A reference address has to be specified in the "DALI Device" settings.

This information is omitted for option "Short Address," in which the addressed dimmer is also the reference dimmer. For options "Broadcast" and "Group", the DALI address of a reference dimmer has to be specified. For "Group", the selected address should be part of that group.

During operation, the gateway reads information from the reference dimmer to determine its current status. If an incorrect dimmer or a non-existent address is assigned, this will result in incorrect gateway behaviour.

Mode

The gate functionality of all 20 gates can be configured using the Mode setting. The following options are available:

- **None:** das Gate is not used
- **Switch & Dim:** The gate is used to switch and dim lights. Scenes can be recalled and stored, and lamp errors are detected.
- **Color Gate:** TC(CW-WW), RGB, and RGBW control are supported. The gate is used to specify color and brightness. Scenes can be recalled and stored, and lamp errors are detected.
- **Sensor Event:** DALI-2 events for brightness, temperature, air pressure,... (see section "Sensor Event Gates") can be converted into KNX objects.

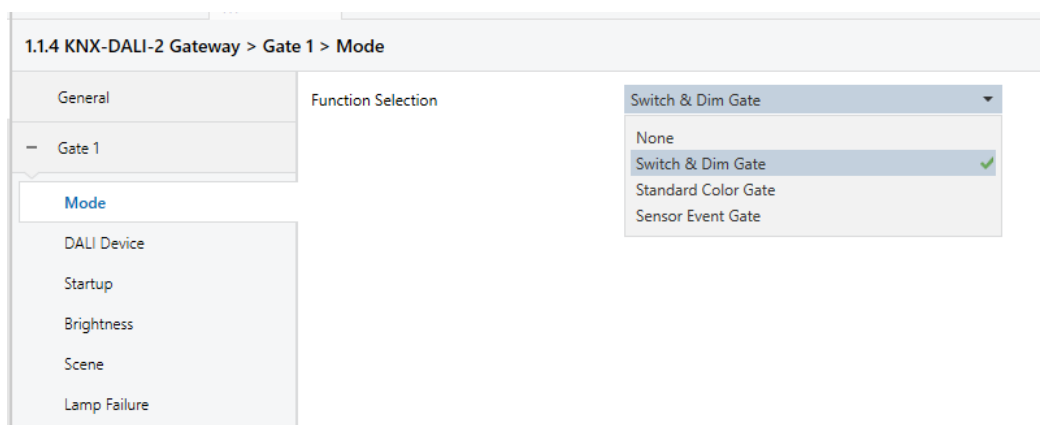


Figure 5 gate-settings ETS: Gate type selection

Overview Gate Types Switch&Dim and Color

DALI Device

The DALI dimmers (gears) to be controlled by the gate are assigned to the gate via addressing. Addresses and groups are assigned using DALI Cockpit..

Start-up

If the start-up behaviour is enabled, the values specified under “Start-up” are transmitted to the dimmers, and the corresponding status objects are sent to KNX. The light values are thereby set in the Gateway. If the start-up behaviour is disabled, the GW adopts the current values, from the reference dimmer, and the KNX status is set and sent accordingly. The light values are thus set by the reference dimmer. No KNX control objects are processed during the start-up phase.

Brightness

The Brightness settings determine how the gate should react to ON/Off and brightness objects.

- **Switch-On:** either a fixed brightness value is specified, or the brightness value before shutdown is used, if that value does not fall below a specified light threshold. If the light value was below the light threshold before shutdown, the light threshold value is used.
- **Switch-Off:** either 0% is used as the light value or the set minimum value for dimming (Minimum Dim Level).
- **Minimum Dim Level:** specifies the minimum value for relative dimming.
- **Linear/Logarithmic:** The default setting is logarithmic; linear should only be used in exceptional cases. Logarithmic uses the non-linear dimming curve used by DALI dimmers. Thus, the KNX specifications (brightness) in percent are not equal to the lamp power; instead, 50%

corresponds to DAP: 127, which corresponds to a lamp power of 3.12%. Linear means that a specification of 50% corresponds to a lamp power of 50% and a DAP: 229. Linear means that specifications <1% cannot be resolved well.

- **Fading:** the fading settings allow to specify the time (fading) required to reach the specified target values. The time can be set separately for each KNX control object. The last received KNX control object determines the fade time. The available times are taken from DALI..

Color

Not all gate modes have a Color setting. This setting contains specific settings required for the corresponding color mode.

- **TC (CW/WW):** the color temperature range can be adjusted. The controlled gears/lamps should support the range. If the color temperature is specified as a percentage, then WW = 0% and CW = 100%

Scene



Each gate allows the linking of 8 KNX with DALI scenes. Scenes can be linked using the data point type DPT 18.001. In this case, it can be selected which of the 8 scenes can be linked and which cannot. The fade time for scenes can be specified. The scene values are stored in the dimmers and not in the gateway.

Lamp Failure

The gateway supports detection of whether a lamp failure is present or not. Lamp failure checks can be performed either periodically or whenever the light is turned on. With group addressing, all dimmers in the group, or with broadcast addressing, all dimmers, are checked for lamp faults.

Standard Color Gates

The control is implemented via the data point types for color control specified in KNX. Table 3 lists the available options:

 KNX control <i>(Modes, data point types)</i>	Gateway (notes)	 DALI device types (supported color modes)
Tc color control		
Control Objects <ul style="list-style-type: none"> Switching: DPT 1.001 (On/Off) Absolute brightness: DPT 5.001 (0..100%) Relative Brightness: DPT 3.007 (B1U3) Absolute Brightness & TC: DPT 249.600 Absolute Tc: DPT 7.600 (Color Temp.) Absolute Tc: DPT 5.001 (0..100%) Relative. Tc: DPT 3.007 (B1U3) Scene Ctrl: DPT 18.001 Scene Nr: DPT 17.001 Status Objects <ul style="list-style-type: none"> Switching: DPT 1.001 (On/Off) Absolute Brightness: DPT 5.001 (0..100%) Absolute. Tc: DPT 7.600 (Color Temp.) Absolute. Tc: DPT 5.001 (0..100%) Scene Nr: DPT 17.001 Lampenfailure: DPT 1.005(Alarm) 	<p>The color temperature values and the brightness values are converted into a DT8 DALI command sequence.</p>	<p>DALI - DT8 Color display: Tc</p>
RGB(W) color control		
Option 1 (single object color): Control Objects <ul style="list-style-type: none"> RGB Switching: DPT 1.001 (On/Off) Red Switching: DPT 1.001 (On/Off) Green Switching: DPT 1.001 (On/Off) Blue Switching: DPT 1.001 (On/Off) (W): White Switching: DPT 1.001 (On/Off) Absolute Red: DPT 5.001 (0...100%) Absolute Green: DPT 5.001 (0...100%) Absolute Blue: DPT 5.001 (0...100%) (W): Absolute White: DPT 5.001 (0...100%) Relative Red: DPT_3.007 (B1U3) Relative Green: DPT_3.007 (B1U3) Relative Blue: DPT_3.007 (B1U3) (W): Relative White: DPT_3.007 (B1U3) Scene Control: DPT 18.001 Scene Number: DPT 17.001 Status Objects <ul style="list-style-type: none"> RGB Switching: DPT 1.001 (On/Off) Red Switching: DPT 1.001 (On/Off) 	<p>The RGBW color values and the brightness values are converted into a DT8 DALI command sequence.</p>	<p>DALI - DT8 Color display: RGBWAF</p>

<ul style="list-style-type: none"> • Green Switching: DPT 1.001 (On/Off) • Blue Switching: DPT 1.001 (On/Off) • (W): White Switching: DPT 1.001 (On/Off) • Absolute Red: DPT 5.001 (0...100%) • Absolute Green: DPT 5.001 (0...100%) • Absolute Blue: DPT 5.001 (0...100%) • (W): Absolute White: DPT 5.001 (0...100%) • Scene Number: DPT 17.001 • Lampfailure: DPT 1.005(Alarm) 		
<p>Option 2: (kombiniertes Objekt Farbe)</p> <p>Steuer Objekte</p> <ul style="list-style-type: none"> • RGB Schalten: DPT 1.001 (On/Off) • Rot Schalten: DPT 1.001 (On/Off) • Grün Schalten: DPT 1.001 (On/Off) • Blau Schalten: DPT 1.001 (On/Off) • Abs. RGB: DPT 232.600 (RGB) • Rel. Rot: DPT_3.007 (B1U3) • Rel. Grün: DPT_3.007 (B1U3) • Rel. Blau: DPT_3.007 (B1U3) • Scene Ctrl: DPT 18.001 • Scene Nr: DPT 17.001 <p>Status Objekte</p> <ul style="list-style-type: none"> • RGB Schalten: DPT 1.001 (On/Off) • Rot Schalten: DPT 1.001 (On/Off) • Grün Schalten: DPT 1.001 (On/Off) • Blau Schalten: DPT 1.001 (On/Off) • Abs. RGB: DPT 232.600 (RGB) • Scene Nr: DPT 17.001 • Lampenfehler: DPT 1.005(Alarm) 	<p>The RGBW color values and the brightness values are converted into a DT6 DALI command sequence.</p>	<p>DALI - DT6 3 (4) channels 3 (4) DALI Adresses</p>

Table 2 Standard Color Gates

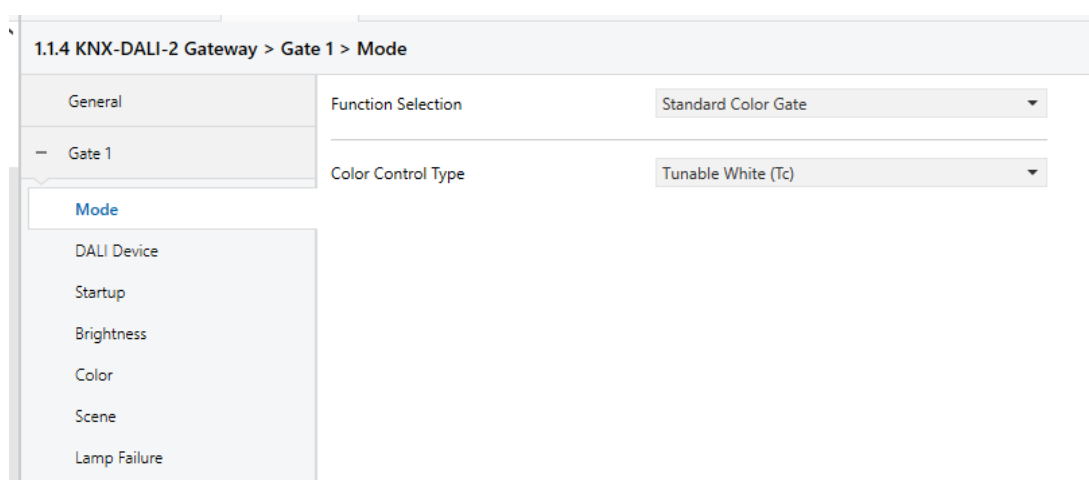


Figure 6 gate-settings ETS: tab "Mode" Standard Color Gate for Tuneable White

General	Addressing	
Gate 1	Addressing Mode	Broadcast
Mode	Reference DALI Address	Address 0
DALI Device	Enable Multimaster	<input checked="" type="checkbox"/>
Startup		
Brightness		
Color		
Scene		
Lamp Failure		

Figure 7 gate-settings ETS: tab "DALI Device" Standard Color Gate

General	Enable Startup Behaviour	<input checked="" type="checkbox"/>
Gate 1	Switch at Startup	<input type="radio"/> Off <input checked="" type="radio"/> On
Mode	Brightness at Startup	100 %
DALI Device	Tunable White (Tc) Value at Startup	4000 K
Startup	<p>i The dimming at startup uses the fade time that is configured for absolute dimming. (DALI Parameter -> Fading -> Fade for absolute dimming)</p>	
Brightness		
Color		
Scene		
Lamp Failure		

Figure 8 gate-settings ETS: tab "Startup" Standard Color Gate

General	Switching & Dimming	
Gate 1	Switch-On	Use last dim level before Off if > [%]
Mode		10 %
DALI Device	Switch-Off	Off [0%]
Startup	Minimum dim level	10 %
Brightness	Dimming value calculation type	<input type="radio"/> Linear <input checked="" type="radio"/> Logarithmic
Color	Fading	
Scene	Enable fading for Switch-On	<input checked="" type="checkbox"/>
Lamp Failure	Fade time Switch-On	1.0s
Gate 2, TC-DT8	Enable fading for Switch-Off	<input type="checkbox"/>
Gate 3	Enable fading for relative dimming	<input type="checkbox"/>
	Enable fading for absolute dimming	<input type="checkbox"/>

Figure 9 gate-settings ETS: tab "Brightness" Standard Color Gate

General	Limits
Gate 1	Warmest color temperature (0%) <input type="text" value="1000"/> K Coolest color temperature (100%) <input type="text" value="10000"/> K
Mode	Fading
DALI Device	Enable fading for relative color temperature <input type="checkbox"/>
Startup	Enable fading for absolute color temperature <input type="checkbox"/>
Brightness	
Color	
Scene	
Lamp Failure	

Figure 10 gate-settings ETS: tab "Color" Standard Color Gate

General	Select group object type	Scene Control (DPT 18.001)
Gate 1	Scene Mappings	
Mode	Enable Scene Mapping A	<input checked="" type="checkbox"/>
DALI Device	Select KNX scene	KNX Scene 1
Startup	Select DALI scene	DALI Scene 0
Brightness	Allow scene storage	<input checked="" type="checkbox"/>
Color	Enable Scene Mapping B	<input checked="" type="checkbox"/>
Scene	Select KNX scene	KNX Scene 2
Lamp Failure	Select DALI scene	DALI Scene 1
	Allow scene storage	<input type="checkbox"/>
+ Gate 2, TC-DT8	Enable Scene Mapping C	<input type="checkbox"/>
+ Gate 3	Enable Scene Mapping D	<input type="checkbox"/>
+ Gate 4, RGB-DT8	Enable Scene Mapping E	<input type="checkbox"/>
+ Gate 5	Enable Scene Mapping F	<input type="checkbox"/>
	Enable Scene Mapping G	<input type="checkbox"/>
	Enable Scene Mapping H	<input type="checkbox"/>

Figure 11 gate-settings ETS: tab "Scene" Standard Color Gate

General	Lamp Failure	Periodic
Gate 1	Lamp Failure Status	<input type="radio"/> Failure = 0 <input checked="" type="radio"/> Failure = 1
Mode		
DALI Device		
Startup		
Brightness		
Color		
Scene		
Lamp Failure		

Figure 12 gate-settings ETS: tab "Lamp Failure" Standard Color Gate

Switch&Dim Gates

The gate type Switch&Dim offers the possibility to switch and dim lights.



 KNX control <i>(Modes, data point types)</i>	Gateway (notes)	 DALI device types (supported color modes)
Control: Switch&Dim		
Control Objects <ul style="list-style-type: none"> Switching: DPT 1.001(On/Off) Absolute Brightness: DPT 5.001 (0...100%) Relative Brightness: DPT 3.007 (B1U3) Scene Control: DPT 18.001 Scene Number: DPT 17.001 Status Objects <ul style="list-style-type: none"> Switching: DPT 1.001(On/Off) Absolute Brightness: DPT 5.001 (0...100%) Scene Number: DPT 17.001 	Switchable DALI device types can be controlled.	DALI - DT0 fluorescent lamps
		DALI - DT2 discharge lamps
		DALI - DT3 low voltage halogen lamps
		DALI - DT4 incandescent light bulbs
		DALI - DT6 LED

Table 3 Switch&Dim Gates

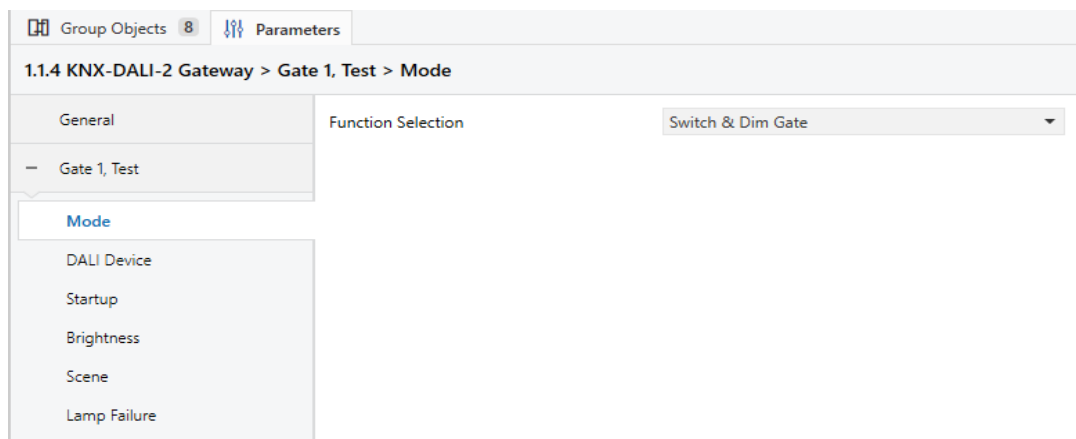


Figure 13 gate-settings ETS: tab "Mode" Switch&Dim Gate

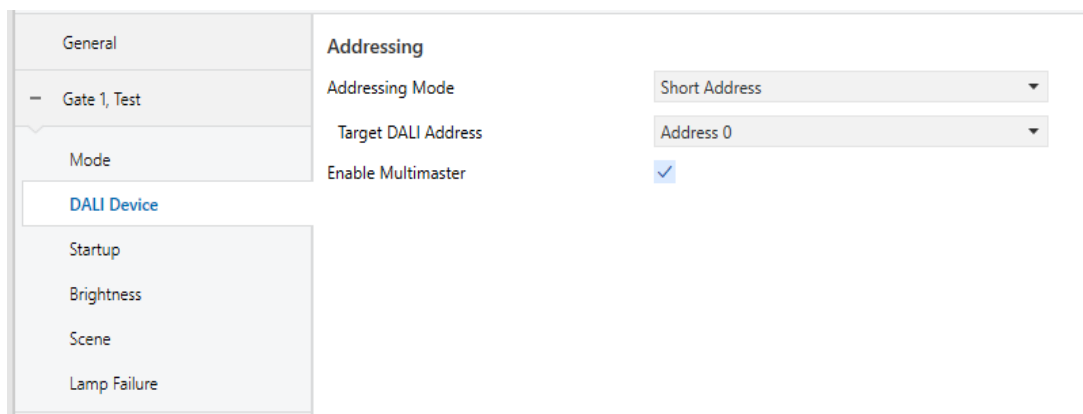


Figure 14 gate-settings ETS: tab “DALI Device” Switch&Dim Gate

Sensor Event Gates

The gate type “Sensor Event Gate” enables the conversion of DALI-2 events to KNX.

The event information (10bit) is scaled by the gateway so that all common data point types can be supported. For Lunatone sensors the conversion factors are stored in the gateway and can be easily selected. Manual scaling (universal) is possible via parameters.

The event filter can be used to filter events. All DALI-2 event schemes are supported.

Each gate can be used to convert one DALI event into a KNX object. DALI sensors can provide information such as temperature, air pressure, brightness (lux), humidity, etc., which the gateway then converts into KNX objects.

Only event instances in the table below are supported. DALI Instancetype 3 – Motion detection events, and DALI Instancetype 1 – Pushbutton events, are **not** supported.

Mode

Settings in section “Mode” define which DALI event should be converted into which data point type and when the object is transmitted on the KNX side.

- **Select Category:** universal is the setting that can be used if an event that is not supported by Lunatone sensors should be processed. The settings for the multiplier and summand must be configured manually. If Lunatone sensors are used, the correct settings are already stored.
- **Type of Group Object:** the desired KNX object needs to be selected that should be used on the KNX side
- **Select Parameter Set:** The “Lunatone setting” uses the settings appropriate for Lunatone sensors for conversion. If this is not desired, custom settings can be made in section “Customer”.
- **Send cyclic:** the KNX object is sent periodically with the set cycle time
- **Send on change:** A hysteresis can be specified. If this value is exceeded or undershot, the object is sent. The hysteresis value is in the unit of the KNX object and not in percent.

DALI Event

To receive a DALI event, the DALI event messages have to be enabled in the DALI sensor.

For the event to be recognized by the gateway, the DALI-2 event scheme has to be configured.

The event scheme has to match with the scheme configured in the sensor. The delivery default can be checked in the sensor datasheets or in the DALI Cockpit. Depending

on the selected event scheme, further input may be required in the gateway.



<div> KNX data point types</div>				<div> DALI instance type</div>
Control: Events				
9.001	2-byte Float	°C	Temperature	Instance type 0 Lunatone sensor scaling
9.002	2-byte Float	K		
14.068	4-byte Float	°C		
14.069	4-byte Float	K		
9.006	2-byte Float	Pa	Air pressure	Instance type 0 Lunatone sensor scaling
14.058	4-byte Float	Pa		
9.007	2-byte Float	%	Rel. Humidity	Instance type 0 Lunatone sensor scaling
9.008	2-byte Float	ppm	Air quality	Instance type 0 Lunatone sensor scaling
203.100				
9.004	2-byte Float	Lux	Light intensity	Instance type 4 Lunatone sensor scaling
5.010	8-bit unsigned	-	Universal	Instance type 0, Instance type 2
6.010	8-bit signed	-		
7.001	2-byte unsigned	-		
8.001	2-byte signed	-		
12.001	4-byte unsigned	-		
13.001	4-byte signed	-		

Table 4 Event Gates

1.1.4 KNX-DALI-2 Gateway > Gate 1, Test > Mode

General	Function Selection	Sensor Event Gate
Gate 1, Test	Select category	Temperature
Mode	Type of Group Object	9.001 (Temperature °C)
DALI Event	Select parameter set	<input checked="" type="radio"/> Lunatone <input type="radio"/> Custom
+ Gate 2, TC-DT8	Send cyclic	<input type="radio"/> No <input checked="" type="radio"/> Yes
+ Gate 3	Cycle time	0.25 s
+ Gate 4, RGB-DT8	Send on change	<input type="radio"/> No <input checked="" type="radio"/> Yes
+ Gate 5	Hysteresis	0
+ Gate 6		

Figure 15 gate-settings ETS: tab "Mode" DALI-2 Event Gate


General	Event filter	
Gate 1, Test	DALI Event Scheme	Instance group
Mode	DALI Instance Group	0
DALI Event	DALI Instance Type	0 (Generic purpose)
+ Gate 2, TC-DT8		


Figure 16 gate-settings ETS: tab "DALI Event" DALI-2 Event Gate

Function overview DALI DT8 modes

The following color display modes are possible with DT8:

- Color temperature Tc
- RGBWAF
- XY coordinates (not supported by the gateway)
-

 Attention: Not every DALI DT8 operating device supports all colors modes specified for DT8.

 Attention: When selecting the DT8 control units, make sure that the required modes are supported!

Color temperature Tc

With this mode, the color temperature is transmitted directly to the DALI operating device. Advantage: color temperatures are not calculated in the control unit. Color temperatures can be controlled relative to the initial value. Since the control gear is already adjusted to the primary colors of the luminaire by the manufacturer, two-, three- or four-channel luminaires can be controlled.

A black body (perfectly radiant body) changes its color from red to yellow to white (Black-Body-Line - BBL) when its temperature rises. The absolute temperature T (Kelvin) of the black body is referred to as the color temperature Tc.



RGBWAF

With RGBWAF, up to a maximum of six output channels can be controlled independently of one another via the lamp power level. Each output channel is connected with an LED strip with e.g. a different color connected. The output channels must be assigned to the specific colors: R (red), G (green), B (blue), W (white), A (Amber) or F (freely selected color).

Purchase Information

Art.Nr.: 89453899 KNX DALI-2 Gateway: KNX to DALI and DALI to KNX gateway, multi-master capable, supports various color applications

Additional Information and Equipment

DALI-Cockpit – DALI system configuration tool, free when using a Lunatone interface device
<https://www.lunatone.com/en/product/dali-cockpit/>

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

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

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 function in installations with other devices must be tested for compatibility in advance.