DALI gateway Colour, 1-gang for KNX

Specification	Order No.	Packing unit	PS	EAN
DRA	2111 00	1	66	4010337110064

Features

General

- Depending on the device variant, either one DALI system (1-gang device variant) or in two separate DALI systems (2-gang device variant).
- Compatible with DALI and DALI-2 Standard.
- Switching and dimming of a maximum of 64 lights with DALI operating device (e.g. electronic ballast) per DALI system.
- Up to 6 different addressing types enable group-oriented or individually addressed control of DALI lights using KNX telegrams.
- A total of 64 DALI device channels are available per DALI system. These can be used either for a maximum of 64 individually addressed DALI operating devices or for any combination of group-addressed (max. 32) and individually addressed DALI operating devices.
- Support for the control of DALI operating devices of the “Tunable White” device type (DALI Device Type 8 - TW). Control of colour temperature via relative or absolute dimming and also via scenes and effects. The colour temperature is controlled largely independently of the brightness control for the light sources used.
- Realisation of a dim-to-warm function optionally static (via ETS parameters) or dynamic (via KNX communication object).
- Realisation of a daytime colour temperature curve for the implementation of biologically effective lighting (HCL: Human Centric Lighting) possible. Up to four HCL matrices that can be freely configured in terms of brightness and colour temperature are available for this purpose and can be activated and switched by the user or according to the time of day and day of the week
- Control of the light colour when using DALI operating devices of the “Colour Control” device type (DALI Device Type 8 - RGBW Colour Control). The gateway enables flexible colour control in the “RGB”, “RGBW”, and “HSV” colour spaces. In the “RGB” colour spaces, the colour can be controlled by relative or absolute dimming either via combined or separate communication objects according to the KNX specifications. In the “HSV” colour space, separate objects are always available for absolute control of the light colour by hue (H), saturation (S) and brightness value (V).
- A colour transition can be implemented to create different colour moods depending on the time of day and day of the week (CTM: Colour Transition Mode). Up to four CTM matrices that can be freely configured are available for this purpose. Each matrix allows individual colour preferences to be set, with or without brightness adjustment. The matrices can be individually activated and switched when the gateway is in operation.
- With colour control: Execution of automatic colour circle and brightness cycles. The colour cycle is used for automatic overall colour control of DALI lights. This function uses the cyclical adjustment of the hue in the colour circle. This results in continuous colour transitions that can be started and stopped as preferred during the gateway’s runtime. The automatic brightness cycle functions in the same way. This function adjusts the brightness in the entire brightness range in cycles, thereby creating individual brightness scenarios.
- Optional central control of all connected DALI components possible (broadcast). This eliminates the need to start up DALI, which means that lighting systems with low functional requirements can be put into operation quickly and easily (simplified configuration without starting up DALI).

- Manual operation of the groups and individual devices independently of the bus (also site operation with broadcast control) separated for the DALI systems. Control of switching condition and brightness.
- Feedback about DALI error status, DALI Busy, or DALI short circuit and notification of power supply failure.
- Up to 6 central switching and dimming functions.
- Global switching status and standby switch-off of the connected electronic ballasts can be implemented. Group feedback of all switching conditions possible.
- Groups and individual devices can be included in up to 16 light scenes per DALI system to control brightness, colour temperature, and colour.
- Implementation of DALI start-up and DALI test via Device Configuration App, which is fully integrated into the ETS and supplements the standard parameter dialogue.
- Support for DALI-2 sensors (DALI-2 input device). Supported DALI sensors: DALI buttons/button interface, DALI knob/slider, DALI presence detector, DALI brightness sensor
- Commands from DALI sensors are displayed on KNX (switching, dimming etc.).
- Broadcast control via KNX communication objects as an additional control option for DALI group or individual control.

Group and device functions

- Each group and each individual device has the full range of functions without restriction. All channel-oriented functions can be parameterised separately for each group or each individual device. This enables independent and multifunctional control of the DALI operating devices.
- Active status messages for switching status, brightness value, colour temperature and colour are possible.
- Brightness and colour temperature limits (minimum, maximum) can be set.
- Dimming behaviour and dimming characteristics can be parameterised.
- Gentle switching on and off of lights (soft ON, soft OFF).
- Disable function or alternative forced setting function can be parameterised. Light groups and individual devices may flash when the disable function is activated.
- Time functions (switch-on/switch-off delay, staircase light function - also with advance warning function).
- Elapsed operating time meter.
- DALI Power-ON level and DALI system failure level can be set via the “After bus/mains voltage recovery” and “In the event of bus/mains voltage failure” behaviour parameters respectively.
- Reactions in the event of bus/mains voltage failure and recovery and after an ETS programming process can be set (for brightness control). Fixed for colour temperature and colour control.

From firmware version 2.0.0 and application program version 2.2 (available from February 2025)

- DALI-2 sensors (e.g. pushbutton sensors, rotary sensors, presence detectors or light sensors) are supported as input devices in instant mode.
- Multimaster-compatible, DALI-2 sensors can be installed as application controllers in any DALI system (individual devices, groups and broadcast operation – no start-up via the gateway required).

  The gateway for KNX reads the telegrams and tracks the status for correct visualisation.
- Up to 32 DALI sensors are additionally addressable and configurable (the actual possible number depends on the power consumption of the sensors and the DALI operating devices).
- The button sensor type is supported for the following sensor functions: switching, dimming, blind/shutter/awning/roof window, value transmitter, scene auxiliary unit.
- The following sensor types are also supported: knob/slider, presence detector and brightness sensor. Instance types 1 to 4 and instance type 0 devices are supported: DALI flush-mounted rotary dimming insert with integrated power supply unit (2027 00) and DALI flush-mounted rotary dimming insert (2026 00).

ETS Device Configuration App (DCA)

- Convenient DALI start-up in the ETS (without external software components). DALI operating devices and DALI sensors are identified, addressed and assigned in the DALI start-up environment of the DCA, separated for both DALI systems.
- Rapid identification of DALI operating devices using keyboard control and automatic flashing function.
- Offline DALI configuration: After reading out the DALI installation, further extensive configuration of the previously detected DALI devices, such as assigning them to groups or individual devices etc., can also be carried out without an existing connection to the DALI installation.
- The allocation of the DALI short addresses can be influenced individually. Supplemented by group and device names, it is possible to uniquely identify DALI operating devices in this way.
- Optional deactivation of brightness adjustment during DALI device search (e.g. in existing systems).
- Checking of DALI device types when assigning DALI operating devices to configured groups or individual devices. This prevents functional incompatibilities after start-up.

- Compatibility mode to support non-DALI compliant operating devices.
- Partial DALI start-up: When this function is used, operating devices already found during a DALI device search are retained even if they do not respond to the gateway.
- Test function of all DALI groups created or individual DALI operating devices: central ON/OFF switching (broadcast), device test (ON/OFF, brightness value and colour temperature or colour specification, device status), group test (ON/OFF, brightness value and colour temperature or colour specification) and tests of scenes.
- Export and import of parameterisation templates in XML format.
- Documentation function for creating a configuration report as a PDF (overview of group assignment or entire device configuration).

Technical data

KNX medium:	TP256
Current consumption:	4.5 to 5.0 mA
Rated voltage	
- AC:	AC 110 to 240 V, 50/60 Hz
- DC:	DC 110 to 240 V
Power loss:	max. 3 W
DALI rated voltage:	DC 16 V (typ.)
Output current per DALI system:	typ. 128 mA, max. 250 mA for short periods
Guaranteed bus current per DALI system:	148 mA
Max. number of addressable DALI operating devices:	64 per DALI system
Max. number of addressable DALI sensors:	32 per DALI system
DALI transfer rate:	1.2 kbit/s
Connections	
- KNX:	Connection and junction terminal
- DALI:	Screw terminals
Cable lengths between gateway and operating device	
- Ø 1.5 mm²:	Max. 300 m
- Ø 1.0 mm²:	max. 238 m
- Ø 0.75 mm²:	max. 174 m
- Ø 0.5 mm²:	max. 116 m
Connection cross section:	Max. 4 mm²
Ambient temperature:	-5 °C to +45 °C

Notes

- KNX Data Secure compatible.
-
-
- The full functionality of the DALI system can only be ensured if exclusively DALI-2 operating devices are used.
- The DALI systems are supplied with power exclusively via the DALI gateway. The connection of an additional power supply to any of the DALI systems is not permitted.

Illustrations are similar and may deviate from originals.

-

Scope of supply

- Connection and junction terminal for KNX included with delivery.

Dimensions

Modular width (MW):	4
