

KNX-DALI Gateway

User's Manual



SELV



## Features

- KNX to DALI gateway(DALI-2)
- 2 independent DALI Bus channels with built in DALI power supply (up to 250mA per bus)
- Connect up to 2×64 DALI ECGs
- Max 16 scenes and groups setting per channel
- OLED display, LED indicators and buttons for local operation
- Built in with 250V/5A(×4) relay
- Easy installation and configuration via ETS(database and DCA)
- Program via ETS5 / ETS6 software
- Up to 16 Effect (32 Steps per Effect) and 16 Timer (6 Operations per Timer) can be parameterized
- Support DALI-2 devices with part 202/207/208/209 (DT1/DT6/DT7/DT8)
- Built in with web browser
- 5 years warranty

## Applications

- Office lighting
- Smart home lighting
- Luxury villas lighting
- LED indoor lighting
- Human centric lighting control
- RGBW lighting control
- Building automation system

## GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

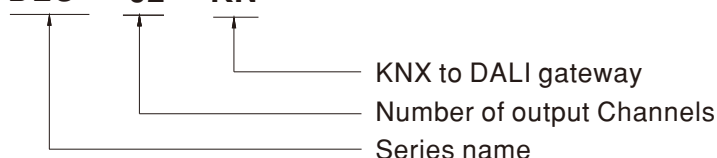
## Description

DLC-02-KN is a KNX to DALI gateway used to connect a digital DALI lighting system to the KNX installation. It enables the room-based lighting control units to be conveniently incorporated into the higher-level KNX building management system. This device transforms switch and dim commands from the connected KNX system into DALI telegrams and status information from the DALI bus into KNX telegrams. Besides being programmed via ETS software, user may conduct quick tests on DALI ECGs via a web browser. DLC-02-KN supports up to 128 DALI participants via two independent DALI Bus. The DALI Bus power supply comes directly within DLC-02-KN, so no additional DALI power supply is required. This device comes in 4 built-in relays, providing switching possibilities for home applications and non-dimmable lighting.

In addition, DLC-02-KN is also integrated with several features. The Effect function allows users to customize a series of brightness values and color gradients with limited cycles (1-255) or unlimited cycles, which is suitable for entertainment applications. Thanks to an embedded battery, time is memorized even AC is lost. The clock of DLC-02-KN can be synchronized in real-time; therefore, the regular events and actions can be scheduled by the Timer function accordingly. Furthermore, Standby switch-off function can be realized in combination with a KNX switch actuator (e.g., KAA-8R-S). Through this setup, when all DALI devices are under OFF status, DLC-02-KN can inform the actuator to cut-off AC input of DALI ECGs to save energy.

## Model Encoding

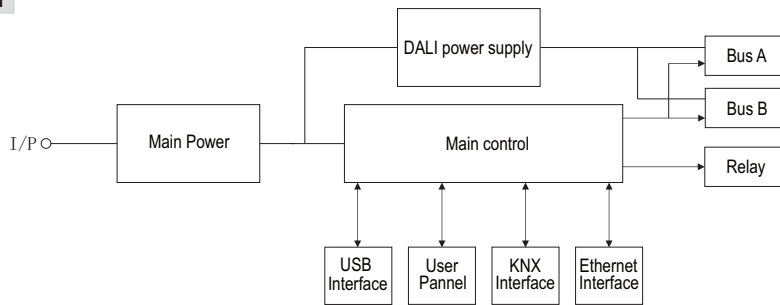
**DLC - 02 - KN**



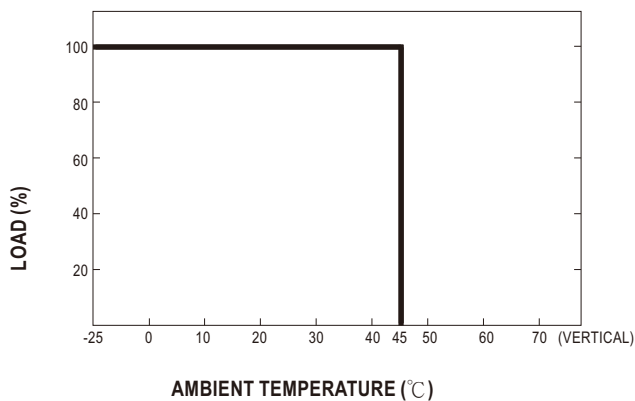
## SPECIFICATION

<b>MODEL</b>		<b>DLC-02-KN</b>
<b>OUTPUT</b>	<b>BUS VOLTAGE</b>	Built-in DALI bus power supply; Voltage range : 2x16V
	<b>GUARANTEED SUPPLY CURRENT</b>	2x240mA
	<b>MAXIMUM SUPPLY CURRENT</b>	2x250mA
	<b>RATED POWER</b>	7.68W
	<b>SETUP,RISE TIME</b>	250ms/115VAC,50ms/230VAC
<b>INPUT</b>	<b>VOLTAGE RANGE</b>	100~305VAC, 140~430VDC,(class II )
	<b>FREQUENCY RANGE</b>	47~63Hz
	<b>AC CURRENT(Typ.)</b>	0.5A/115VAC 0.25A/230VAC
	<b>INRUSH CURRENT(Typ.)</b>	COLD START 45A/230VAC
<b>PROTECTION</b>	<b>SHORT CIRCUIT</b>	Short circuit delay 0.7S shutdown,Restart period 5S, Retry time 0.7S
<b>FUNCTION</b>	<b>USB INTERFACE</b>	1 USB slave connector , type-B
	<b>DISPLAY</b>	OLED display for easy operation
	<b>INDICATOR</b>	2*LED indicators for BUS voltage; 4*LED indicators for relay ;1*LED indicators for power on.
	<b>GENERIC SETTING</b>	Three buttons( MOVE, SET,ESC) on the front panel to set and view settings
	<b>KNX</b>	DALI Gateway(KNX type)
	<b>Ethernet</b>	Control via web browser (RJ-45)
	<b>Relay</b>	10A/125VAC ,5A/250VAC
<b>ENVIRONMENT</b>	<b>WORKING TEMP.</b>	-25 ~ +45℃
	<b>WORKING HUMIDITY</b>	5 ~ 93% RH non-condensing; comply with climatic EN50090-2-2
	<b>STORAGE TEMP., HUMIDITY</b>	-25 ~ +70℃ , 10 ~ 95% RH non-condensing
	<b>VIBRATION</b>	5 ~ 150Hz, 2G 12min./1cycle, each along X, Y, Z axes according to EN50090-2-2
<b>SAFETY &amp; EMC</b>	<b>SAFETY STANDARDS</b>	Compliance to BS EN/EN63044-1, BS EN/EN63044-3
	<b>DALI STANDARDS</b>	Compliance to BS EN/EN62368-101,BS EN/EN62386-103
	<b>EMC EMISSION</b>	Compliance to BS EN/EN63044-5-2, BS EN/EN63044-5-3(BS EN/EN50491-5-2/3)
	<b>EMC IMMUNITY</b>	Compliance to BS EN/EN63044-5-2, BS EN/EN63044-5-3(BS EN/EN50491-5-2/3)
<b>OTHERS</b>	<b>MTBF</b>	562.4K hrs min. Telcordia SR-332 (Bellcore) ; 167.2K hrs min. MIL-HDBK-217F (25℃)
	<b>DIMENSION</b>	144*90*58.3mm (L*W*H)
	<b>PACKING</b>	0.43Kg; 30pcs/13.9Kg/ 1.30CUFT
	<b>DIN RAIL MOUNTING</b>	35 mm rail ; 8 units wide
	<b>ENCLOSURE MATERIAL</b>	ABS-V0
<b>NOTE</b>	1. All parameters NOT specially mentioned are measured at 230VAC input and 25℃ of ambient temperature. 2. Maximum allowable DALI driver is 64 per channel. 3. The devices may be operated only up to 2000m(6500ft). ⌘ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>	

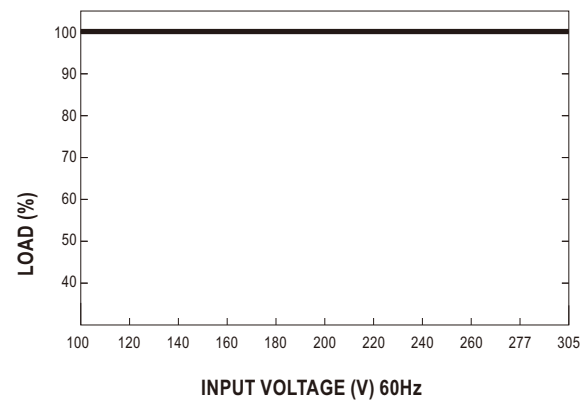
## ■ Block Diagram



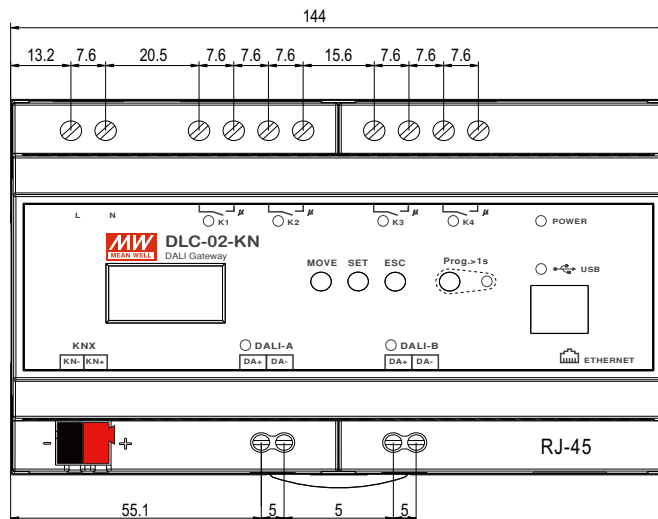
## ■ Derating Curve



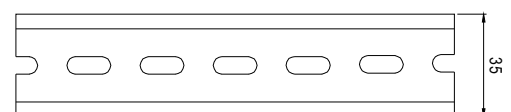
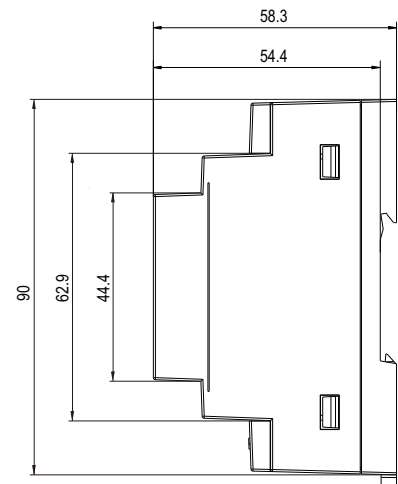
## ■ Static Characteristics



## ■ Mechanical Specification



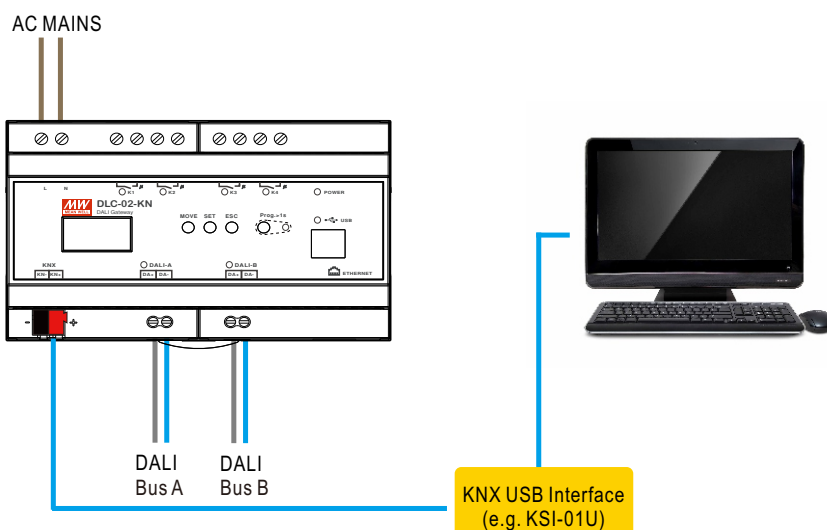
Case No. Unit:mm



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

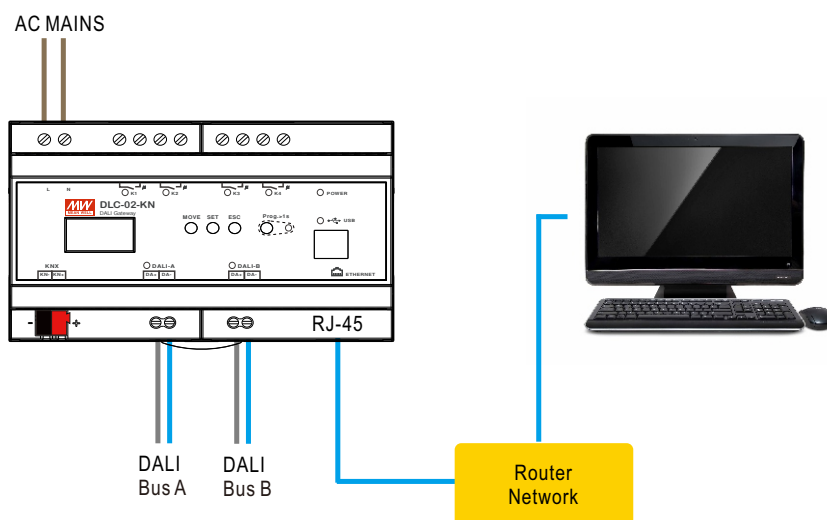
## ■ Program Setting

### ◎ Comission through ETS(database and DCA)

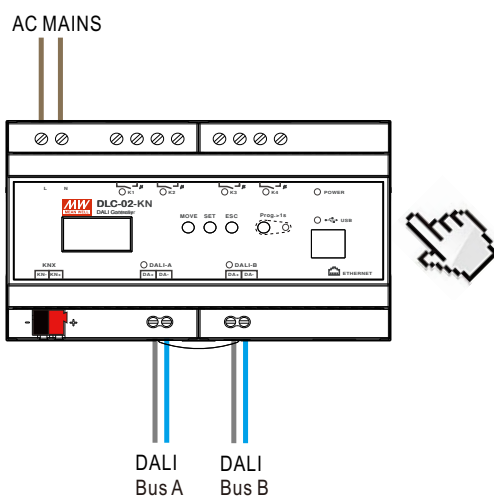


Database and DCA provide by MEANWELL

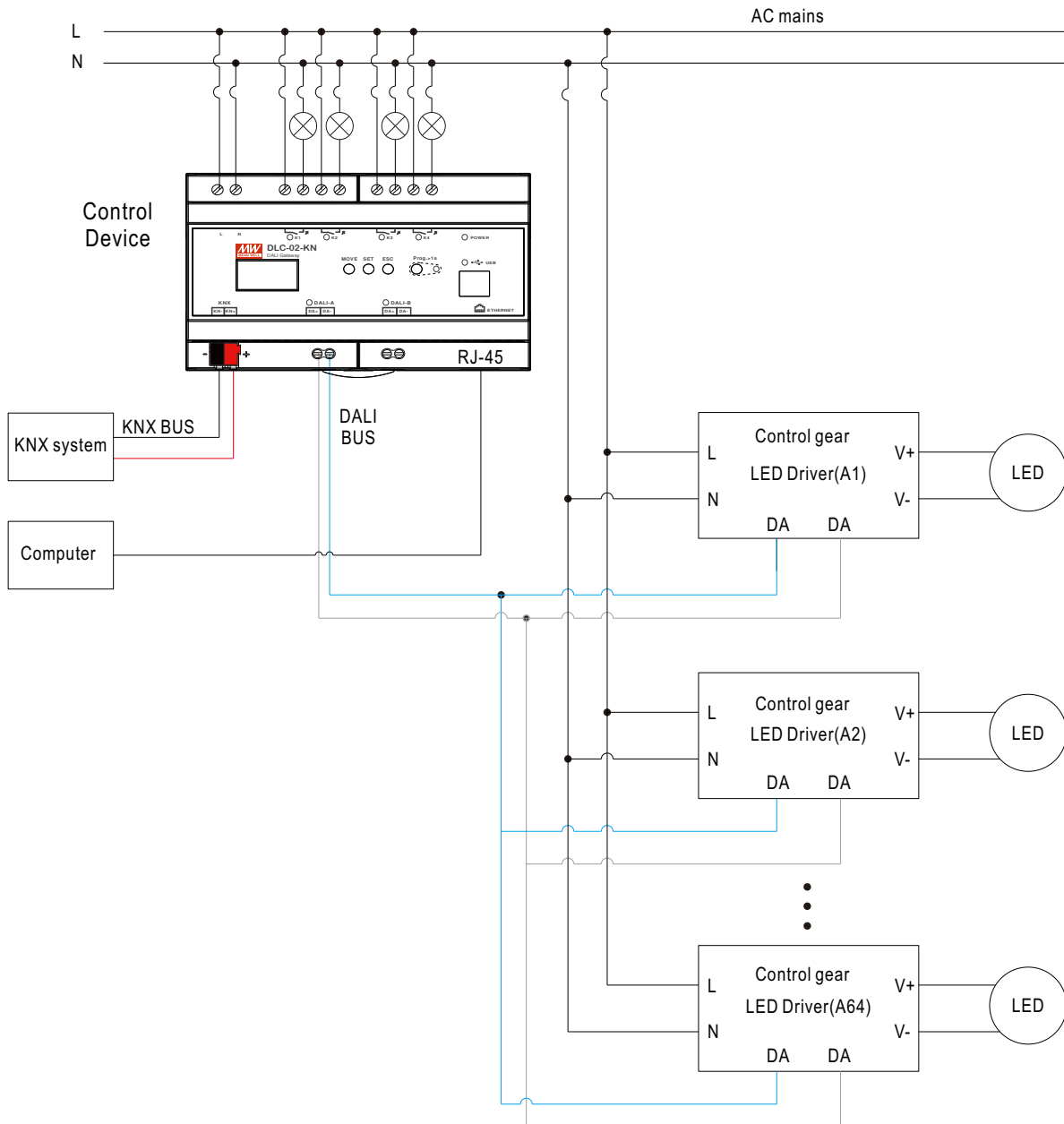
### ◎ Controlling DALI devices via web browser



### ◎ Local setting



## ■ Installation Diagram



Support DALI-2 Device Type

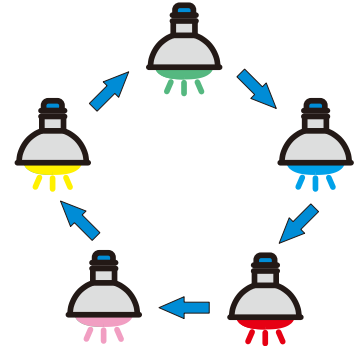
Part	Type of control gear	Device type number
202	<b>Self-contained emergency</b> control gear	Device Type 1 (DT1)
207	<b>LED lamp</b> control gear	Device Type 6 (DT6)
208	<b>Switching</b> (relay) control gear	Device Type 7 (DT7)
209	<b>Colour</b> control gear (Tc tunable white, RGBW, xy-coordinate)	Device Type 8 (DT8)

## Effect

Allows users to customize a series of brightness values and color gradients with limited cycles (1-255) or unlimited cycles.

### 1.1.1 DLC-02 KNX DALI Gateway > Effects > Effect 1

General	Step	DALI	NO.	Colour type	Colour value	White value	Brightness value	Fade time	Delay
+ A:ECGs	1	ECG (A)	5	RGB	#ABE011		9%	45.3s	288 s
+ B:ECGs	2	ECG (B)	11	RGBW	#2467F8	55	95%	16.0s	1020 s
- Effects	3	group (A)	4	Tc	2700	K	20%	8.0s	535 s
Effect 1	4	scene (A)	15					90.5s	120 s
	5	ECG (A)	1	none			no change	5.7s	89 s
	6	broadcast (A)		RGB	#F52F2F		32%	11.3s	100 s
	7	ECG (B)	7	RGBW	#FF00D8	37	10%	11.3s	88 s
	8	ECG (B)	2	RGBW	#FF0000	0	43%	2.0s	322 s
	9	group (A)	3	Tc	4200	K	63%	4.0s	850 s
	10	group (B)	1	RGBW	#FFEB00	44	47%	45.3s	66 s

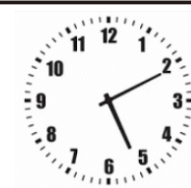
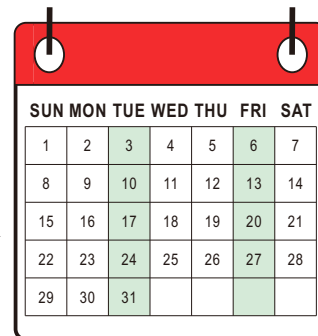


## Timer

Regular events and actions can be scheduled by the Timer function.

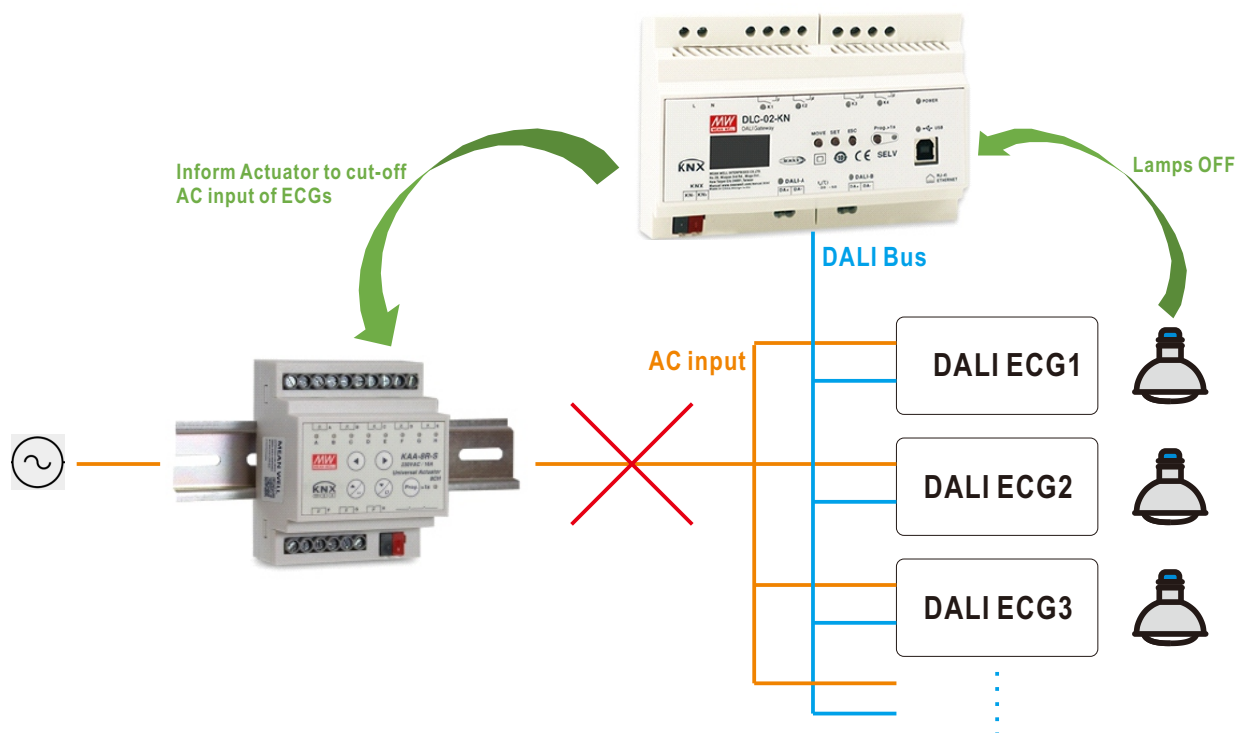
### 1.1.1 DLC-02 KNX DALI Gateway > Timers > Timer 1

+ General	Object-1 Type	Switch(DPT1.001)
+ A:ECGs	Object-2 Type	Colour Temperature(DPT7.600)
+ B:ECGs	Object-3 Type	Scene Number(DPT17.001)
+ Effects	Object-4 Type	RGBW(DPT251.600)
- Timers	Timer operation 1	<input checked="" type="checkbox"/>
Timer 1	Hours	17
	Minutes	10
	Monday	<input type="checkbox"/>
	Thursday	<input checked="" type="checkbox"/>
	Wednesday	<input type="checkbox"/>
	Thursday	<input type="checkbox"/>
	Friday	<input checked="" type="checkbox"/>
	Saturday	<input type="checkbox"/>
	Sunday	<input type="checkbox"/>
	Sending Object-1 value	<input checked="" type="checkbox"/>
	Switch value	<input type="radio"/> off <input checked="" type="radio"/> on
	Sending Object-2 value	<input type="checkbox"/>
	Sending Object-3 value	<input checked="" type="checkbox"/>
	Scene number	7
	Sending Object-4 value	<input type="checkbox"/>



## ■ Standby switch-off

When all DALI devices are under OFF status, DLC-02-KN can inform the actuator (e.g., KAA-8R-S) to cut-off AC input of DALI ECGs to save energy.



## ■ Recommended Screwdriver, Wire and Torque Setting

1. Screwdriver(Width\*Thick): Slotted screwdriver 2.5\*0.4~3.5\*0.6
2. Wire: 1~2.5mm<sup>2</sup> solid core or 1~2.5mm<sup>2</sup> finely stranded
3. Torque: 0.8Nm

## ■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>

## ■ Configuration and Commissioning

The application program(database and DCA) for ETS can be downloaded via <http://www.meanwell.com/productCatalog.aspx>