



DALI Digital Lighting Controller

**DLC-02 series**



DALI Controller



SELV 10



## ■ Features

- DALI-2 multi-master controller
- 2 independent DALI Bus channels with built in DALI power supply (up to 250mA per bus)
- Connect up to 2×64 DALI control gears and 2×12 input devices
- 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 DLC-02 software
- Effect setting with timer events and input devices
- Up to 255 timer events
- Support 8 sequences schedule up to 16 steps per sequence
- Support DALI-2 devices with Part 207/209/301/302/303/304
- Support DT8 colour control(Tunable white,RGBW,xy-coordinate)
- Built in with Modbus TCP/IP protocol
- 5 years warranty

## ■ Description

DLC-02 is a multi-master controller to obtain the regulation of the DALI-2 system from DALI input devices and control gears to make a DALI lighting system. Devices in the DALI bus can be scan, configure and setting through the DLC-02 software. DLC-02 supports up to 128 DALI participants via two independent DALI Bus. The DALI Bus power supply comes directly within DLC-02, 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 is also integrated with several features. The Effect function allows users to customize a series of events and function of input devices. Thanks to an embedded battery, time is memorized even AC is lost. The clock of DLC-02 can be synchronized in real-time; therefore, the regular events and actions can be scheduled by the Timer function accordingly. In addition, the built-in Modbus TCP/IP protocol is very flexible to adapt with other manufacturers' control software.

## ■ Model Encoding

**DLC - 02**



## ■ Applications

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

## ■ GTIN CODE

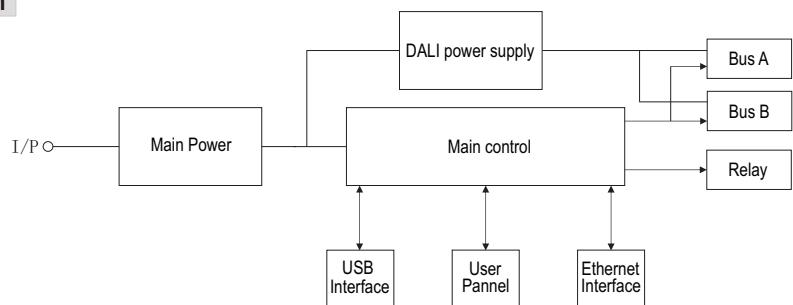
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



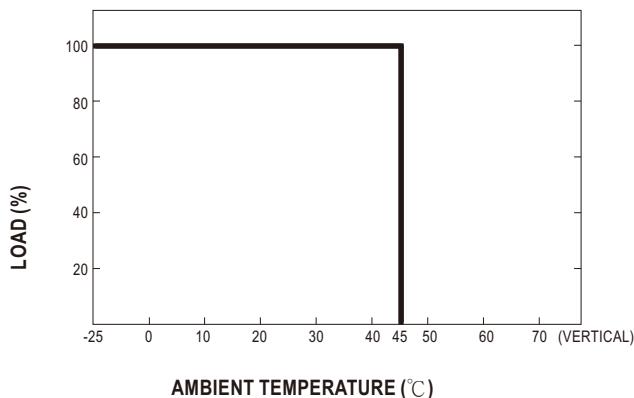
## SPECIFICATION

MODEL	DLC-02	
OUTPUT	<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
INPUT	<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
PROTECTION	<b>SHORT CIRCUIT</b>	Short circuit delay 0.7S shutdown,Restart period 5S, Retry time 0.7S
FUNCTION	<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>Ethernet</b>	Control via Modbus TCP/IP protocol (RJ-45)
	<b>Relay</b>	10A/125VAC ,5A/250VAC
ENVIRONMENT	<b>WORKING TEMP.</b>	-25 ~ +45°C
	<b>WORKING HUMIDITY</b>	5 ~ 93% RH non-condensing; comply with climatic EN50090-2-2
	<b>STORAGE TEMP., HUMIDITY</b>	-25 ~ +70°C , 10 ~ 95% RH non-condensing
	<b>VIBRATION</b>	5 ~ 150Hz, 2G 12min./1cycle, each along X, Y, Z axes according to EN50090-2-2
SAFETY & EMC	<b>SAFETY STANDARDS</b>	Compliance to BS EN/EN61347-1, BS EN/EN61347-2-11
	<b>DALI STANDARDS</b>	Compliance to BS EN/EN62368-101,BS EN/EN62386-103
	<b>EMC EMISSION</b>	Compliance to BS EN/EN55015,Harmonic current class A
	<b>EMC IMMUNITY</b>	Compliance to BS EN/EN61547
OTHERS	<b>MTBF</b>	618.9K hrs min. Telcordia SR-332 (Bellcore) ; 190.1K hrs min. MIL-HDBK-217F (25°C)
	<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
NOTE	<ol style="list-style-type: none"><li>1. All parameters NOT specially mentioned are measured at 230VAC input and 25°C of ambient temperature.</li><li>2. Maximum allowable DALI driver is 64 control gears per channel.</li><li>3. The maximum allowable input device depends on the connected DALI drivers and the current requirement of input device. For example , if 64 control gears is connected, the maximum driver current available in the DALI bus is 250mA-(2mA×64)=122mA. If the specific power consumption of an input device is 10mA then the maximum of input device should be 12 pcs.</li><li>4. The devices may be operated only up to 2000m(6500ft).</li></ol> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>	

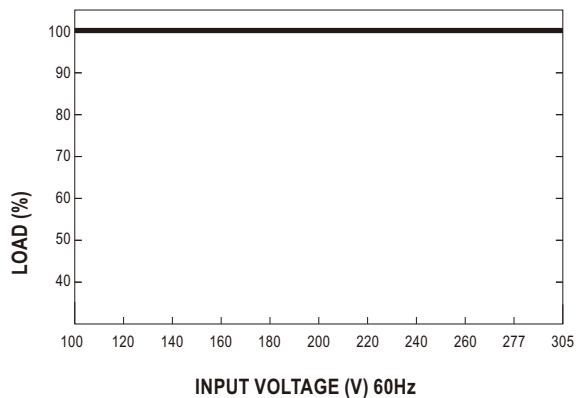
## ■ Block Diagram



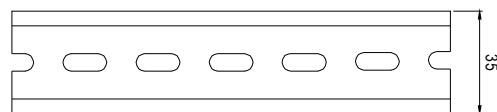
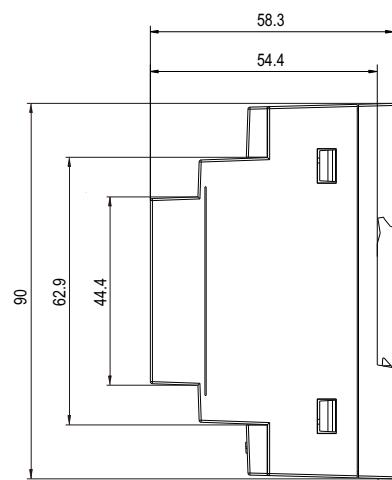
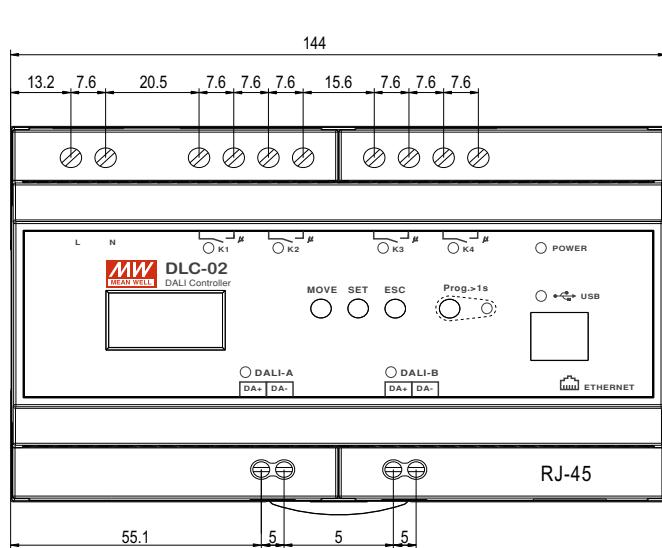
## ■ Derating Curve



## ■ Static Characteristics



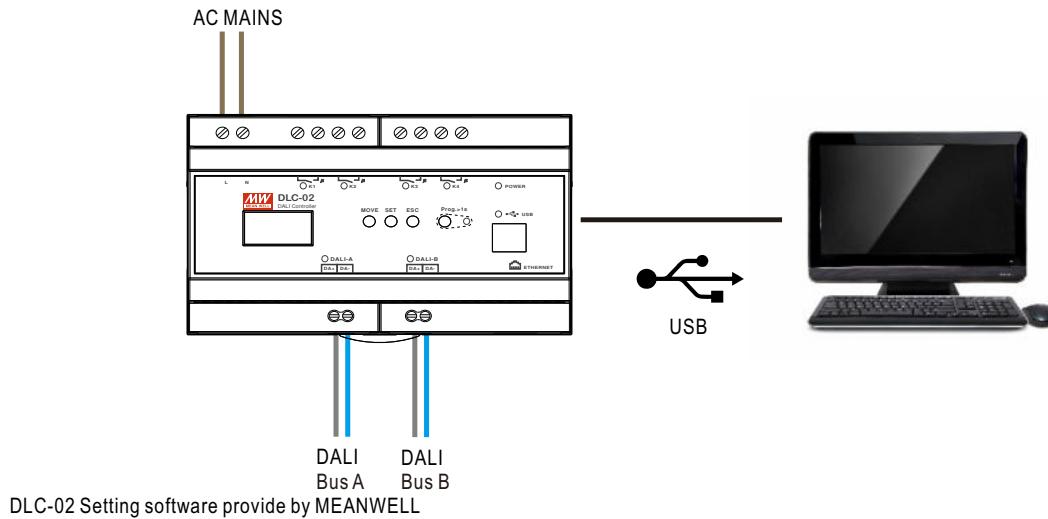
## ■ Mechanical Specification



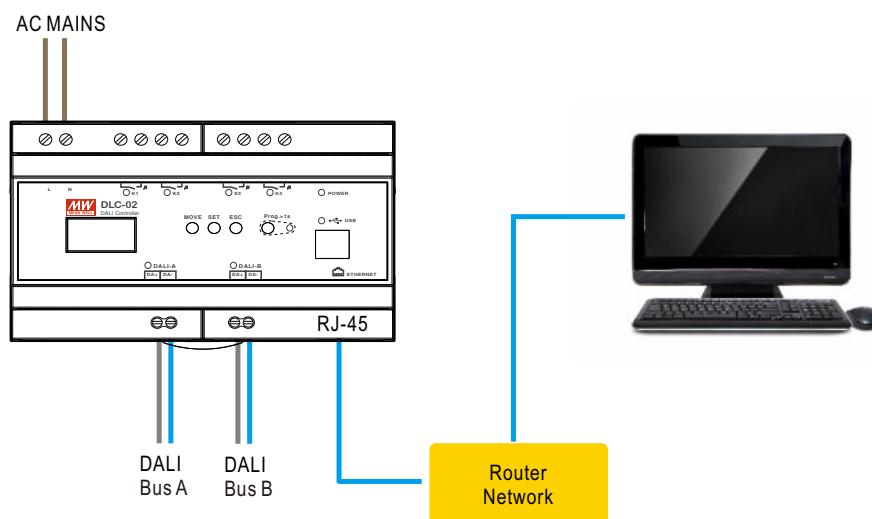
ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

### ■ Program Setting

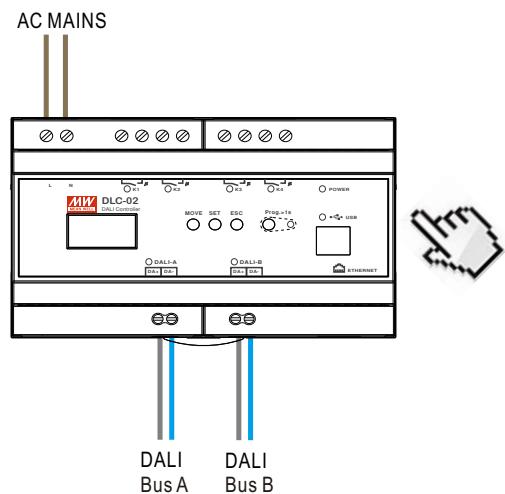
#### ◎ Comission through DLC-02 software



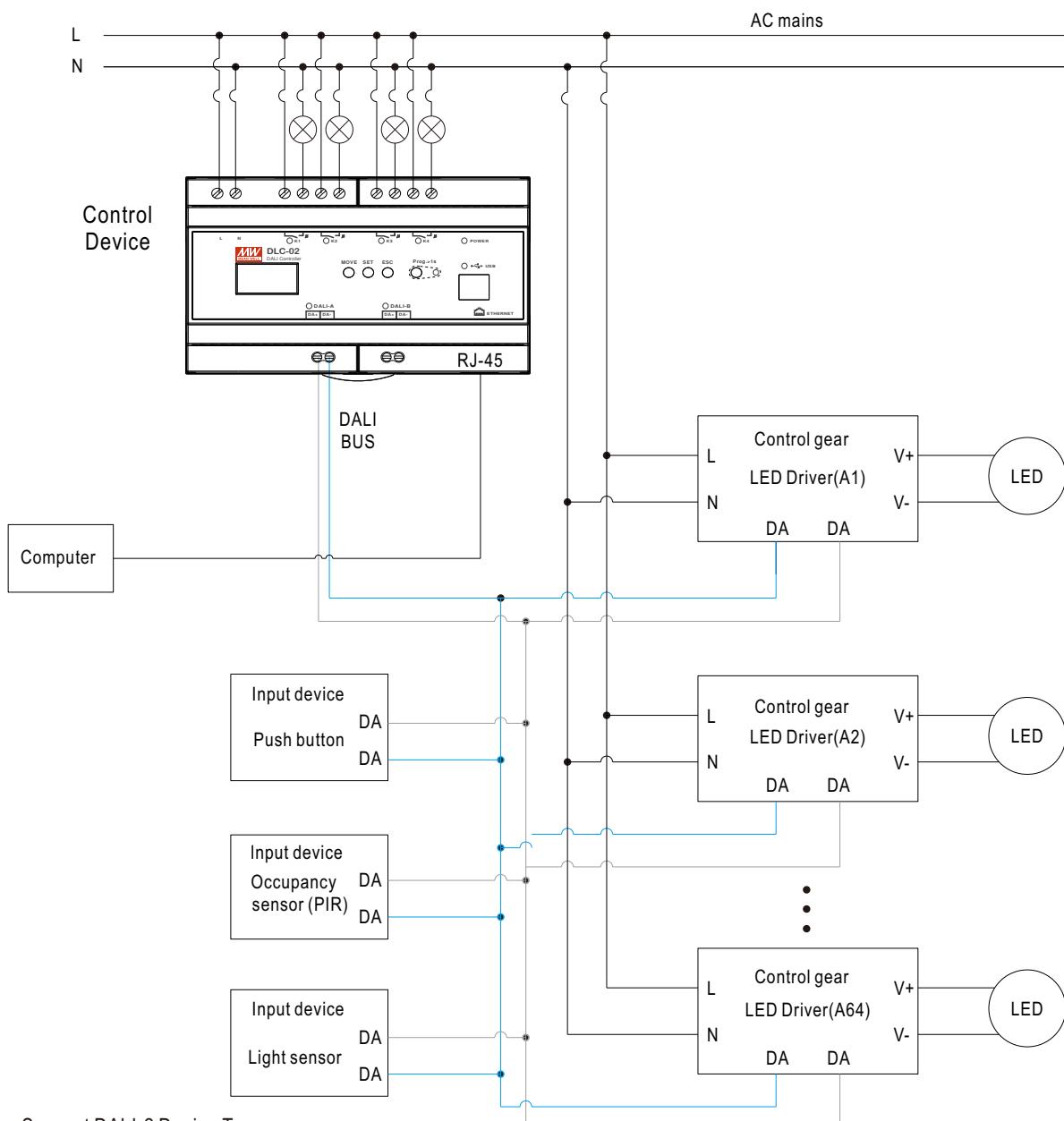
#### ◎ Controlling DALI devices via Modbus TCP/IP protocol



#### ◎ Local setting



## ■ Installation Diagram



Support DALI-2 Device Type

Part	Type of control gear	Device type number
207	LED lamp control gear	Device Type 6 (DT6)
209	Colour control gear (Tc tunable white, RGBW, xy-coordinate)	Device Type 8 (DT8)

Part	Type of input device
301	Push-button input
302	Slider input
303	Occupancy sensor
304	Light sensor

### Effect

Allows users to customize a series of events and function of input devices.

**EFFECT NAME**

**INPUT DEVICE**

**OUTPUT DEVICE**

**Actions**

**All Effect**

**+ Add**

**Status : Connected**

### Timer

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

**Time**

**Date**

**Weekly**

**SUN MON TUE WED THU FRI SAT**

**17:10**

**1 2 3 4 5 6 7**

**8 9 10 11 12 13 14**

**15 16 17 18 19 20 21**

**22 23 24 25 26 27 28**

**29 30 31**

**17:10**

### Sequence

Allows users to customize a sequence schedule with cycles or not.

**Step**

**Bus ID**

**Lamp**

**Lamp Type**

**Colour Value**

**Light Value(%)**

**Fade Time**

**Delay Time(s)**

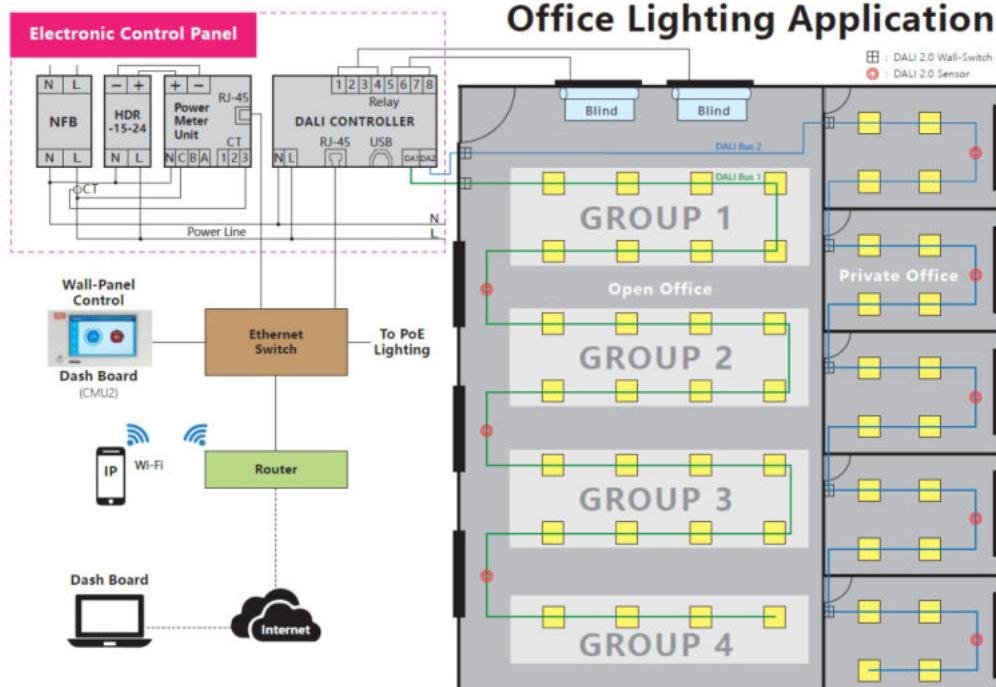
**Sequence 1**

Step	Bus ID	Lamp	Lamp Type	Colour Value	Light Value(%)	Fade Time	Delay Time(s)
1	Bus A	LED 5	RGB	172,224,17	93%	2.0 s	288
2	Bus A	LED 11	RGBW	6,32,103,244	83%	11.3 s	1020
3	Bus A	Group4	Colour Temperature	2700K	100%	no fade	535
4	Bus A	Group2	RGB	245,47,47	80%	32.0 s	120
5	Bus B	Group2	RGBW	94,254,0,0	100%	no fade	10
6	Bus B	Group3	RGBW	0,254,0,0	61%	no fade	5
7	Bus A	Broadcast	Colour Temperature	4500K	100%	64.0 s	100
8	Bus A	Group7	RGBW	112,254,235,0	48%	11.3 s	20
9	Disable	-	-	-	-	-	-
10	Disable	-	-	-	-	-	-
11	Disable	-	-	-	-	-	-

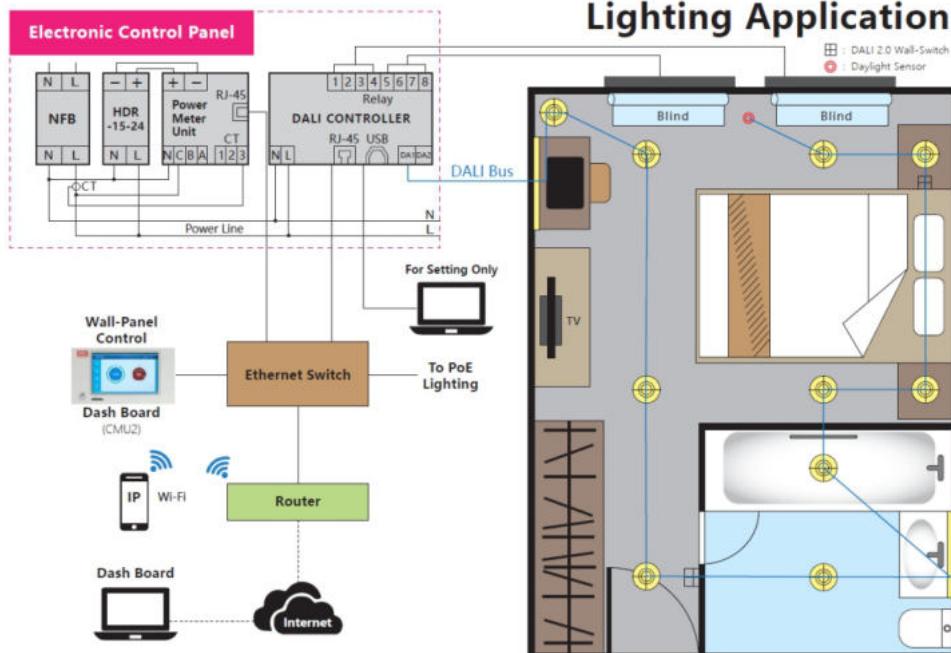
**Status : Connected**

**File Name:DLC-02-SPEC 2022-05-27**

## ■ Digital Light Application



## Hotel Room Lighting Application



## ■ 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 DLC-02 software can be downloaded via  
<http://www.meanwell.com/productCatalog.aspx>