



DALI Controller

User's Manual



SELV



## 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

## 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 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

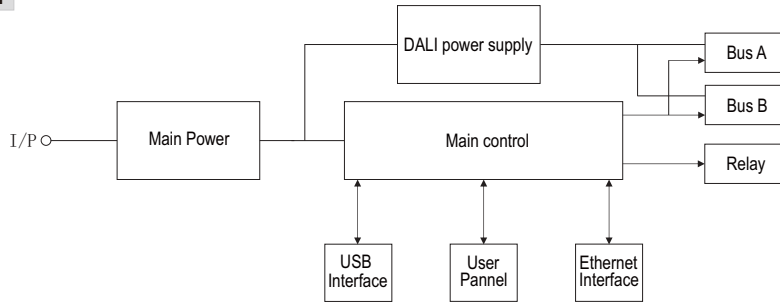
DLC - 02



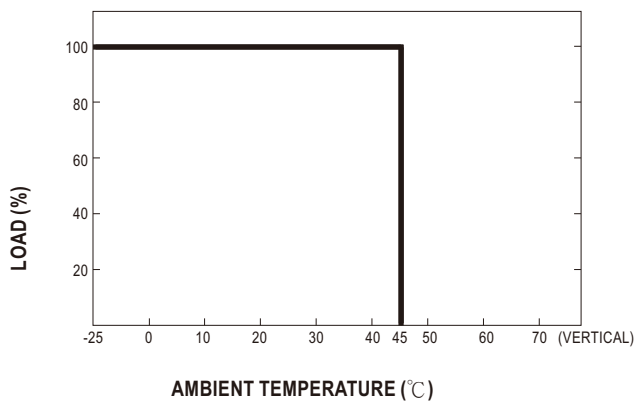
# SPECIFICATION

MODEL		DLC-02
OUTPUT	BUS VOLTAGE	Built-in DALI bus power supply; Voltage range : 2x16V
	GUARANTEED SUPPLY CURRENT	2x240mA
	MAXIMUM SUPPLY CURRENT	2x250mA
	RATED POWER	7.68W
	SETUP,RISE TIME	250ms/115VAC,50ms/230VAC
INPUT	VOLTAGE RANGE	100~305VAC, 140~430VDC,(class II )
	FREQUENCY RANGE	47~63Hz
	AC CURRENT(Typ.)	0.5A/115VAC 0.25A/230VAC
	INRUSH CURRENT(Typ.)	COLD START 45A/230VAC
PROTECTION	SHORT CIRCUIT	Short circuit delay 0.7S shutdown,Restart period 5S, Retry time 0.7S
FUNCTION	USB INTERFACE	1 USB slave connector , type-B
	DISPLAY	OLED display for easy operation
	INDICATOR	2*LED indicators for BUS voltage; 4*LED indicators for relay ;1*LED indicators for power on.
	GENERIC SETTING	Three buttons( MOVE, SET,ESC) on the front panel to set and view settings
	Ethernet	Control via Modbus TCP/IP protocol (RJ-45)
	Relay	10A/125VAC ,5A/250VAC
ENVIRONMENT	WORKING TEMP.	-25 ~ +45℃
	WORKING HUMIDITY	5 ~ 93% RH non-condensing; comply with climatic EN50090-2-2
	STORAGE TEMP., HUMIDITY	-25 ~ +70℃ , 10 ~ 95% RH non-condensing
	VIBRATION	5 ~ 150Hz, 2G 12min./1cycle, each along X, Y, Z axes according to EN50090-2-2
SAFETY & EMC	SAFETY STANDARDS	Compliance to BS EN/EN61347-1, BS EN/EN61347-2-11
	DALI STANDARDS	Compliance to BS EN/EN62368-101,BS EN/EN62386-103
	EMC EMISSION	Compliance to BS EN/EN55015,Harmonic current class A
	EMC IMMUNITY	Compliance to BS EN/EN61547
OTHERS	MTBF	618.9K hrs min. Telcordia SR-332 (Bellcore) ; 190.1K hrs min. MIL-HDBK-217F (25℃)
	DIMENSION	144*90*58.3mm (L*W*H)
	PACKING	0.43Kg; 30pcs/13.9Kg/ 1.30CUFT
	DIN RAIL MOUNTING	35 mm rail ; 8 units wide
	ENCLOSURE MATERIAL	ABS-V0
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input and 25℃ of ambient temperature.</p> <p>2. Maximum allowable DALI driver is 64 control gears per channel.</p> <p>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.</p> <p>4. The devices may be operated only up to 2000m(6500ft).</p> <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>	

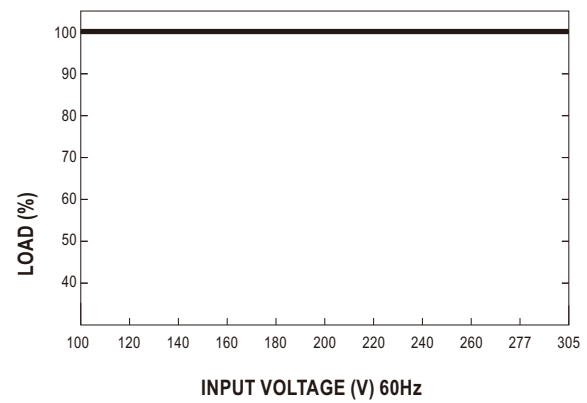
## ■ Block Diagram



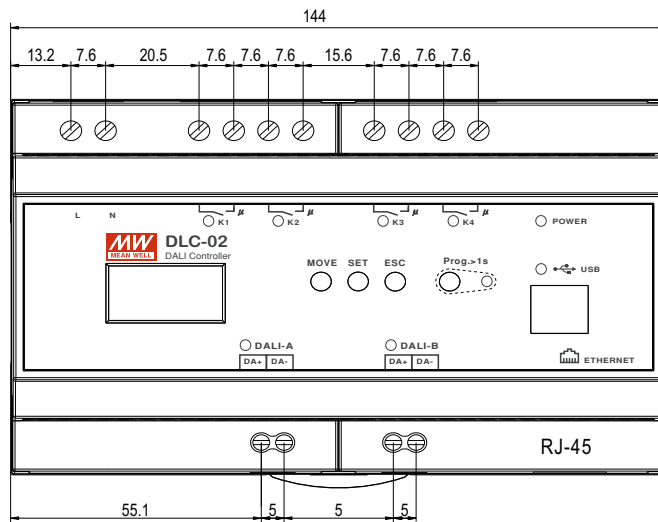
## ■ Derating Curve



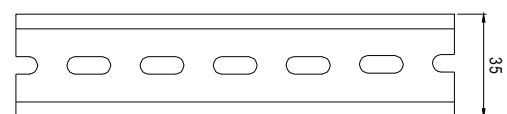
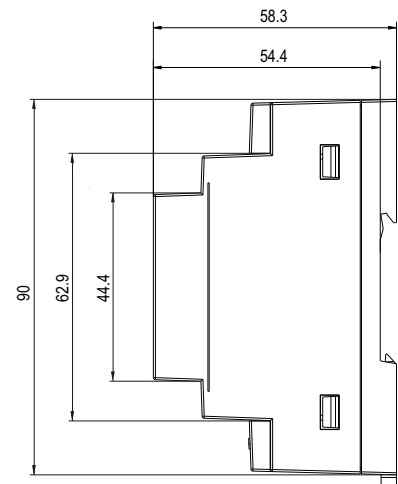
## ■ Static Characteristics



## ■ Mechanical Specification



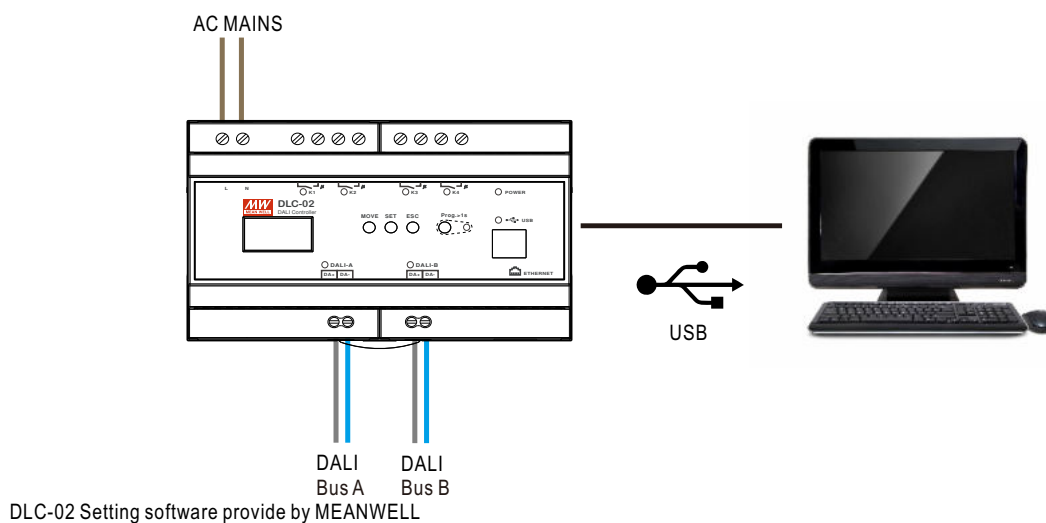
Case No. Unit:mm



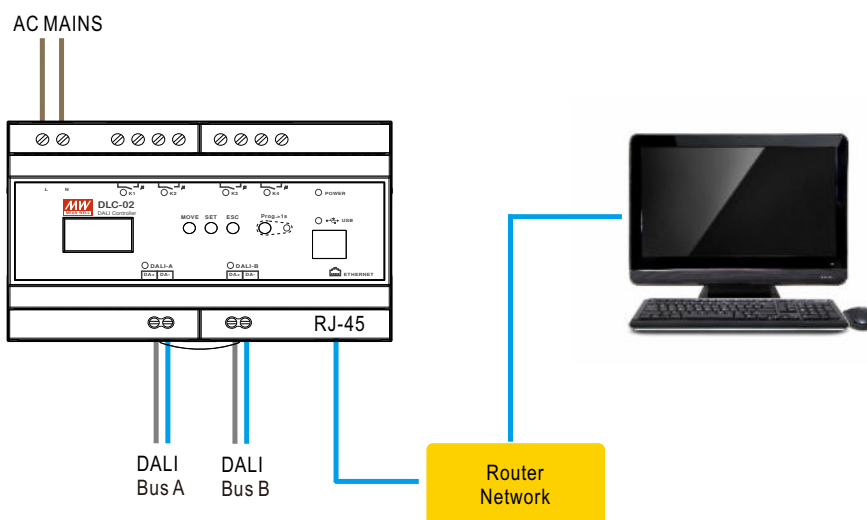
ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

## ■ Program Setting

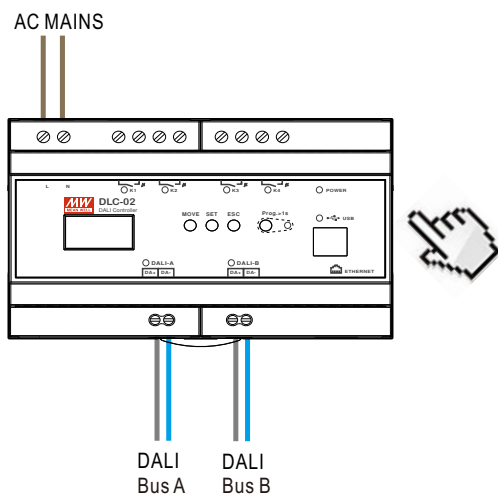
### ◎ Comission through DLC-02 software



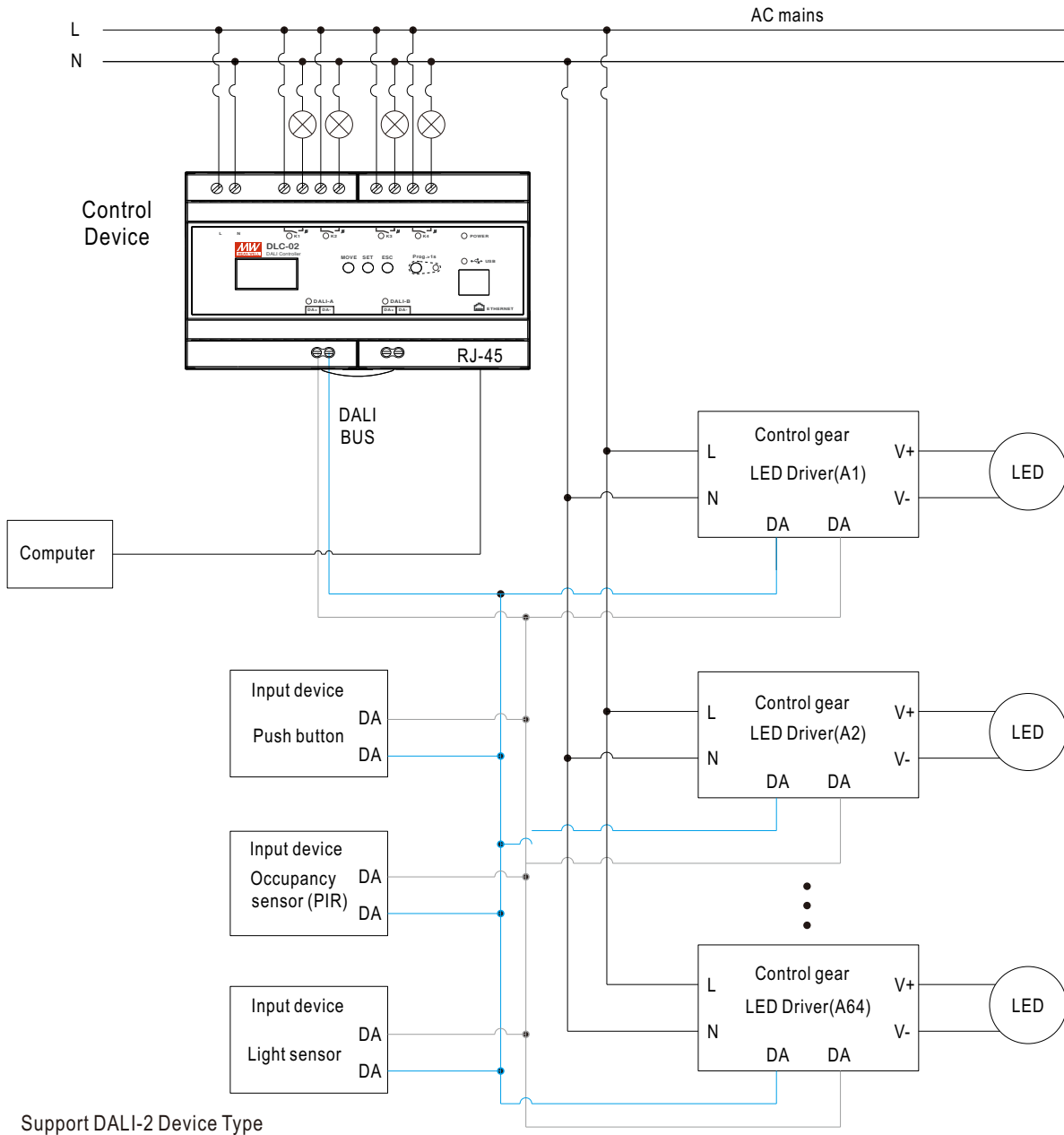
### ◎ Controlling DALI devices via Modbus TCP/IP protocol



### ◎ Local setting



## ■ Installation Diagram



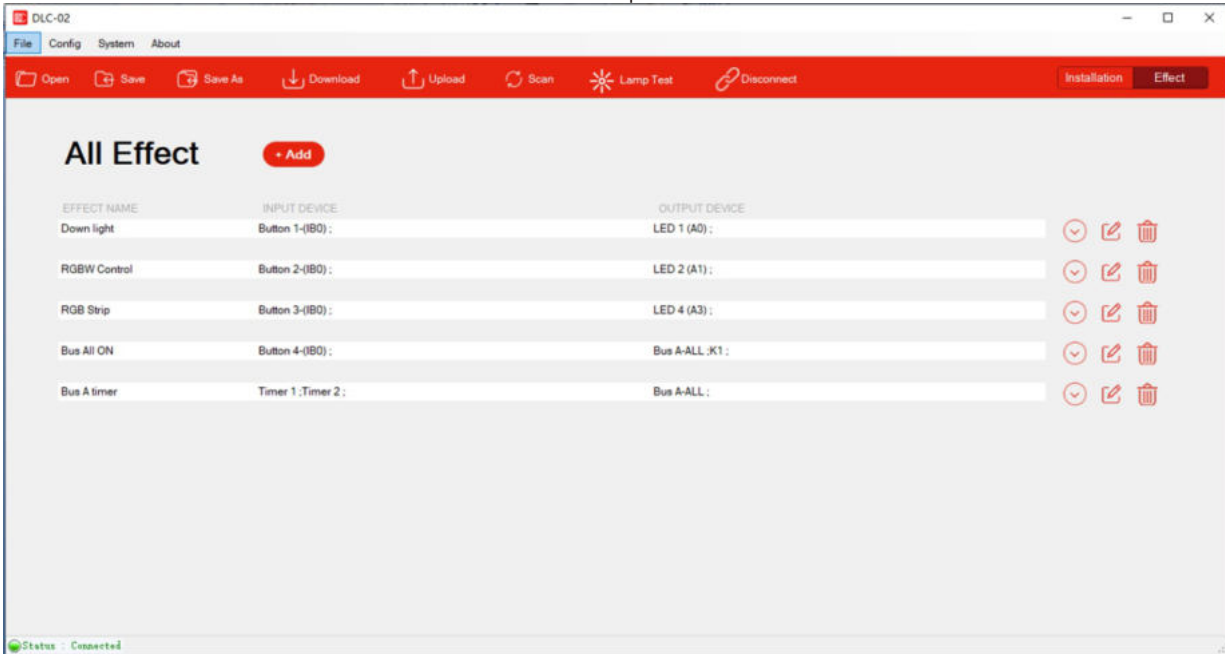
Support DALI-2 Device Type

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

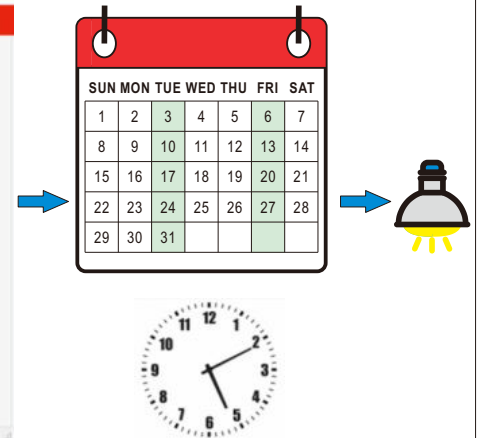
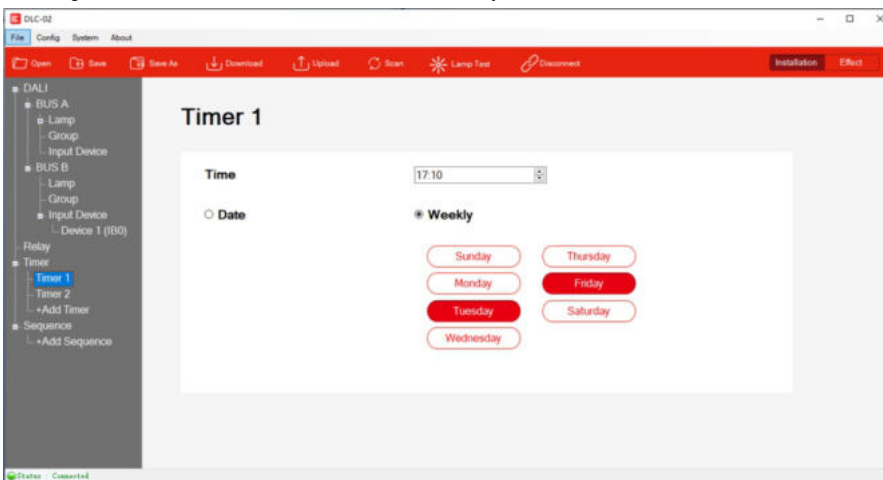
## Effect

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



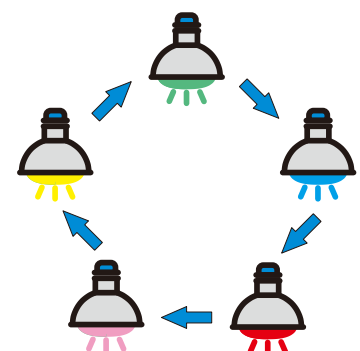
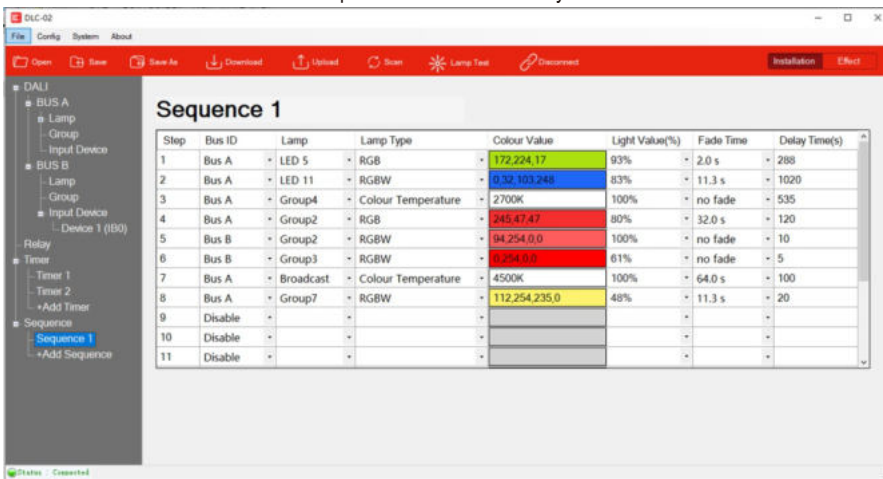
## Timer

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

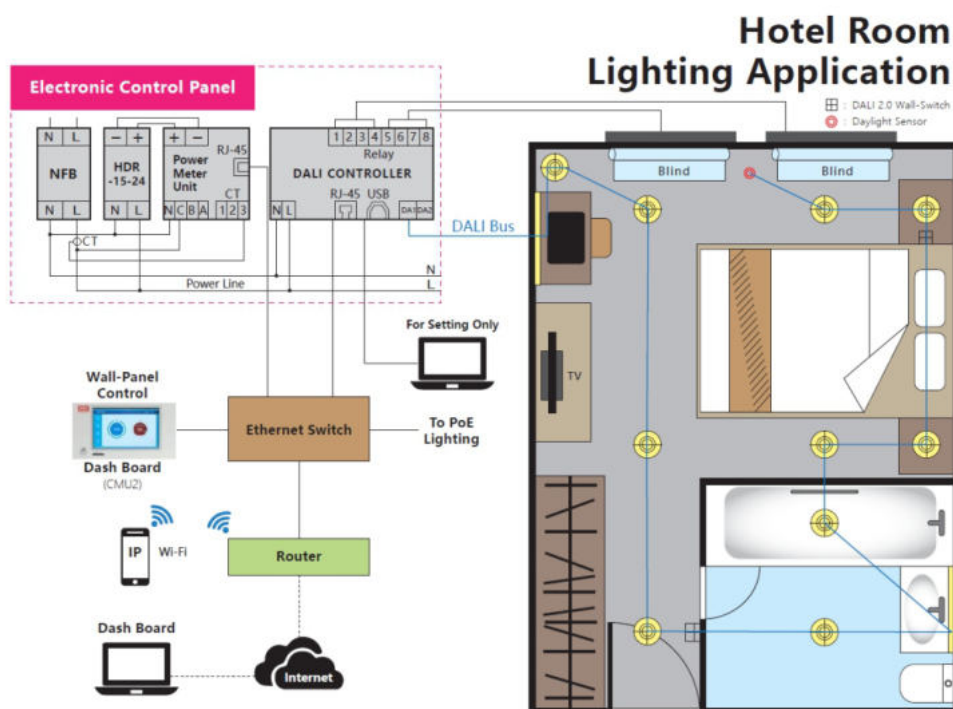
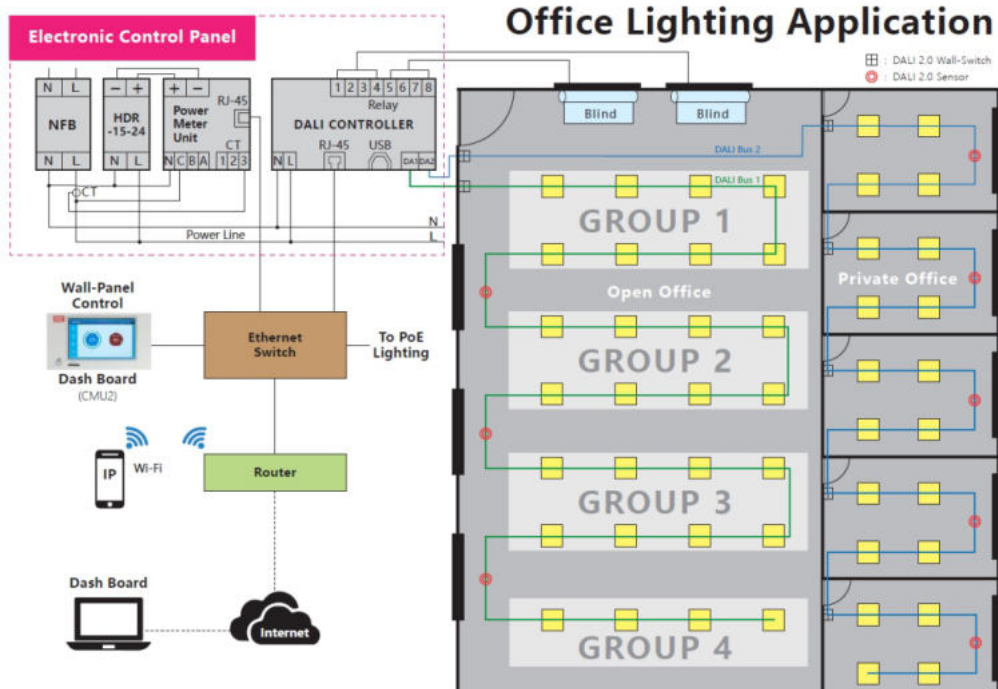


## Sequence

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



## Digital Light 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>