



### Constant Current Dimmable Driver

Model: CC44W300-1050CG DALI-1



| Model                     | Output Current | Input Current | Input Power | Output Power Range | PF    | Efficiency (*Typical) | Output Voltage | No load Voltage |
|---------------------------|----------------|---------------|-------------|--------------------|-------|-----------------------|----------------|-----------------|
| CC44W300-1050CG<br>DALI-1 | 300mA          | 0.10A         | 17W         | 2.70-14.70W        | ≥0.89 | 88%                   | 9-49V          | 59V<br>Max.     |
|                           | 350mA          | 0.11A         | 20W         | 3.15-17.15W        | ≥0.89 | 88.5%                 |                |                 |
|                           | 400mA          | 0.12A         | 23W         | 3.60-19.60W        | ≥0.89 | 89.0%                 |                |                 |
|                           | 450mA          | 0.13A         | 25W         | 4.05-22.05W        | ≥0.90 | 89.5%                 |                |                 |
|                           | 500mA          | 0.14A         | 28W         | 4.50-24.50W        | ≥0.91 | 90.0%                 |                |                 |
|                           | 550mA          | 0.15A         | 30W         | 4.95-26.95W        | ≥0.92 | 90.0%                 |                |                 |
|                           | 600mA          | 0.16A         | 33W         | 5.40-29.40W        | ≥0.93 | 90.0%                 | 9-48V          |                 |
|                           | 650mA          | 0.17A         | 36W         | 5.85-31.85W        | ≥0.94 | 90.0%                 |                |                 |
|                           | 700mA          | 0.18A         | 39W         | 6.30-34.30W        | ≥0.95 | 90.0%                 | 9-45V          |                 |
|                           | 750mA          | 0.19A         | 41W         | 6.75-36.00w        | ≥0.95 | 90.0%                 |                |                 |
|                           | 800mA          | 0.19A         | 41W         | 7.20-36.00w        | ≥0.97 | 90.0%                 |                |                 |
|                           | 850mA          | 0.20A         | 43W         | 7.65-38.25W        | ≥0.97 | 90.0%                 |                |                 |
|                           | 900mA          | 0.21A         | 46W         | 8.10-40.50W        | ≥0.97 | 90.0%                 | 9-42V          |                 |
|                           | 950mA          | 0.21A         | 45W         | 8.55-39.90W        | ≥0.97 | 90.0%                 |                |                 |
|                           | 1000mA         | 0.22A         | 47W         | 9.00-42.00w        | ≥0.97 | 90.0%                 |                |                 |
|                           | 1050mA         | 0.23A         | 50W         | 9.45-44.10W        | ≥0.97 | 90.0%                 |                |                 |

\* Test result @230V, 50Hz, Full Load.

### 1. Parameters

| Category | Item                   | Technical Norm           |
|----------|------------------------|--------------------------|
| Features | Output Type            | Constant Current         |
|          | Dimming Type           | DALI-2                   |
|          | Output Features        | Isolation                |
|          | IP Grade               | IP20                     |
|          | Insulation Class       | Class II                 |
| Input    | Rated Input Voltage    | 220-240VAC               |
|          | Range of Input Voltage | 198-264VAC or 180-280VDC |

|                    |                           |   |
|--------------------|---------------------------|---|
|                    | Frequency                 | 0/50/60Hz   |
|                    | Input Current             | ≤0.23A (230VAC, full load)  |
|                    | Input Power               | ≤50W (230VAC, full load)  |
|                    | Power Factor              | ≥0.97 (230VAC, full load)   |
|                    | THD                       | ≤10% (230VAC, full load)  |
|                    | No-load Power Consumption | ≤0.5W Dim to off, 230VAC  |
|                    | Inrush Current            | ≤65A/200us (230VAC, full load)  |
| Output             | Output Voltage Range      | 9-49VDC@300-700mA   |
|                    |                           | 9-48VDC@750mA   |
|                    |                           | 9-45VDC@800-900mA   |
|                    |                           | 9-42VDC@950-1050mA  |
|                    | No Load Voltage           | 59VDC Max.  |
|                    | Output Current            | 300-1050mA(Max. output)   |
|                    | Max. Output Power         | 44.1W   |
|                    | Efficiency                | ≥90% (230VAC full load@max current)   |
|                    | Current Ripple(< 120 Hz)  | ±5% (Imax-Imin)/(Imax+Imin)   |
|                    | PstLM                     | ≤1  |
|                    | SVM                       | ≤0.4  |
|                    | Current Accuracy          | ±5%   |
|                    | Line Regulation           | ±5%   |
|                    | Load Regulation           | ±5%   |
| Started Delay Time | ≤1S(230VAC/DC, full load) |   |
| Control Method     | Secondary PUSH dimming    | Secondary PUSH dimming (Max. lead wire length : 20m,same port of DALI )   |
|                    | PUSH dimming terminal     | Max parallel connections qty for Push-dim 15 PCS  |
|                    | DALI function             | DALI dimming (Max. lead wire length: 300m )<br>Logarithmic or linear dimming curves are available<br>DALI-2 certified incl. Parts 251, 252, 253,CLO |
|                    | Dimming range             | DALI dimming: 1%-100%,Dim to off .  |
|                    | Dimming frequency         | /   |
| Protection         | Short Circuit Protection  | Auto Recovery   |
|                    | Overload Protection       | Auto Recovery   |
|                    | No-load Protection        | Auto Recovery   |
|                    | Insulation voltage        | 3000V 5mA 60S between P-S   |
|                    | Insulation resistance     | >100M ohm @ 500VDC  |
|                    | Leakage current           | I/P to O/P <0.7mA   |
| Environment        | Ta/Operation Temperature  | -25....+45°C @300-1000mA  |
|                    |                           | -25....+40°C @1050mA  |
|                    | Ts/Storage Temperature    | -25....+85°C  |
|                    | Tc/Enclosure Temperature  | 85°C  |
| Humidity           | 10%....90%RH              |   |

|              |                       |   |
|--------------|-----------------------|---|
|              | Atmosphere            | 86-108KPa   |
| Construction | Connection Method     | Push-in Terminal  |
|              | Installation          | Built in & Independent  |
|              | PRI Wire preparation  | 0.75-1.5 <sup>□</sup> / 8-9mm   |
|              | SEC Wire preparation  | 0.5-1.5 <sup>□</sup> / 8-9mm  |
|              | DALI Wire preparation | 0.75-1.5 <sup>□</sup> /8-9mm  |
|              | Dimension             | Built in:97.5*44*23mm (L*W*H)<br>Independent-Small side cover :137.6*44*23mm (L*W*H)<br>Independent-Large side cover :191.6*44*23mm (L*W*H) |
| Standards    | Certification         | CE ENEC SAA EAC   |
|              | Safety Standards      | EN 61347-1:2015/A1:2021<br>EN 61347-2-13:2014/A1:2017<br>EN IEC 62384:2020<br>EN 62493:2015/A1:2022   |
|              | EMC Standards         | EN IEC 55015:2019<br>EN IEC 55015:2019/A11:2020<br>EN IEC 61000-3-2:2019/A1:2021<br>EN 61000-3-3:2013/A2:2021<br>EN IEC 61547:2023          |
|              | Performance           | EN 62384  |
|              | Surge                 | L-N:2KV   |
| Others       | RoHS                  | complied to 2011/65/EU  |
|              | REACH                 | EU Regulation (EC) No 1907/2006   |
|              | Life Time             | 50000h @Ta  |
|              | Warranty              | 5years ,F.R. < 10000ppm   |
|              | Noise                 | <22dB @ 20cm distance, 15dB background  |

**Remark:**

1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.
2. LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
3. During the PUSH DIM test, the number of parallel connections must be less than 15 PCS
4. Do not install upside down.


**2. Output Current Setting**

| Output Current | 1  | 2  | 3  | 4  |
|----------------|----|----|----|----|
| 300mA          | -  | -  | -  | -  |
| 350mA          | -  | -  | -  | ON |
| 400mA          | -  | -  | ON | -  |
| 450mA          | -  | -  | ON | ON |
| 500mA          | -  | ON | -  | -  |
| 550mA          | -  | ON | -  | ON |
| 600mA          | -  | ON | ON | -  |
| 650mA          | -  | ON | ON | ON |
| 700mA          | ON | -  | -  | -  |
| 750mA          | ON | -  | -  | ON |
| 800mA          | ON | -  | ON | -  |
| 850mA          | ON | -  | ON | ON |
| 900mA          | ON | ON | -  | -  |
| 950mA          | ON | ON | -  | ON |
| 1000mA         | ON | ON | ON | -  |
| 1050mA         | ON | ON | ON | ON |

**3. Connected quantities of different current Breaker**

| TYPE   | Connected quantities of different current Breaker |                    |                    |                    |                  |                  | Input Voltage (V) | Inrush Current(A) | Time (µs) |
|--------|---|--------------------|--------------------|--------------------|------------------|------------------|-------------------|-------------------|-----------|
|        | current (A)                                       | 10                 | 13                 | 16                 | 20               | 25               |                   |                   |           |
|        | Installation wire diameter                        | 1.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 4mm <sup>2</sup> | 4mm <sup>2</sup> |                   |                   |           |
| TYPE B | 9   | 12                 | 15                 | 18                 | 23               | @230VAC          | 65                | 200               |           |
| TYPE C | 15  | 19                 | 24                 | 30                 | 37               |                  |                   |                   |           |
| TYPE D | 24  | 31                 | 38                 | 47                 | 59               |                  |                   |                   |           |

### 4. Label



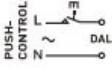
**KGP Electronics GmbH**  
Hueckstraße 19  
DE-58511 Lüdenscheid

wire preparation  
8-9mm

PRI: 0.75-1.5<sup>□</sup>  
DALI: 0.75-1.5<sup>□</sup>  
SEC: 0.5-1.5<sup>□</sup>

PRI ● L  
● N

DIM ● DA  
● DA




**CC44W300-1050CG DALI-1 LED Dimmable Driver** Constant Current Type for LED only

PRI: 220-240V ≈ 0/50/60Hz 0.23A Max. ta: -25...45°C tc: 85°C  
SEC: 300-700mA 9-49VDC 800-900mA 9-45VDC ta: -25...40°C for 44.1W



750mA 9-48VDC 950-1050mA 9-42VDC Uout: Max. 59VDC


| Pout [W] | Iout [mA] | λ     | 1 | 2  | 3  | 4  | Pout [W] | Iout [mA] | λ    | 1  | 2  | 3  | 4  |
|----------|-----------|-------|---|----|----|----|----------|-----------|------|----|----|----|----|
| 14.7     | 300       | 0.89C | - | -  | -  | -  | 34.3     | 700       | 0.95 | ON | -  | -  | -  |
| 17.2     | 350       | 0.89C | - | -  | -  | ON | 36.0     | 750       | 0.95 | ON | -  | -  | ON |
| 19.6     | 400       | 0.89C | - | -  | ON | -  | 36.0     | 800       | 0.95 | ON | -  | ON | -  |
| 22.1     | 450       | 0.90C | - | -  | ON | ON | 38.3     | 850       | 0.95 | ON | -  | ON | ON |
| 24.5     | 500       | 0.91C | - | ON | -  | -  | 40.5     | 900       | 0.97 | ON | ON | -  | -  |
| 27.0     | 550       | 0.92C | - | ON | -  | ON | 39.9     | 950       | 0.97 | ON | ON | -  | ON |
| 29.4     | 600       | 0.93C | - | ON | ON | -  | 42.0     | 1000      | 0.97 | ON | ON | ON | -  |
| 31.9     | 650       | 0.94C | - | ON | ON | ON | 44.1     | 1050      | 0.97 | ON | ON | ON | ON |

ON ↑  
OFF ↓



+ ●  
- ● SEC



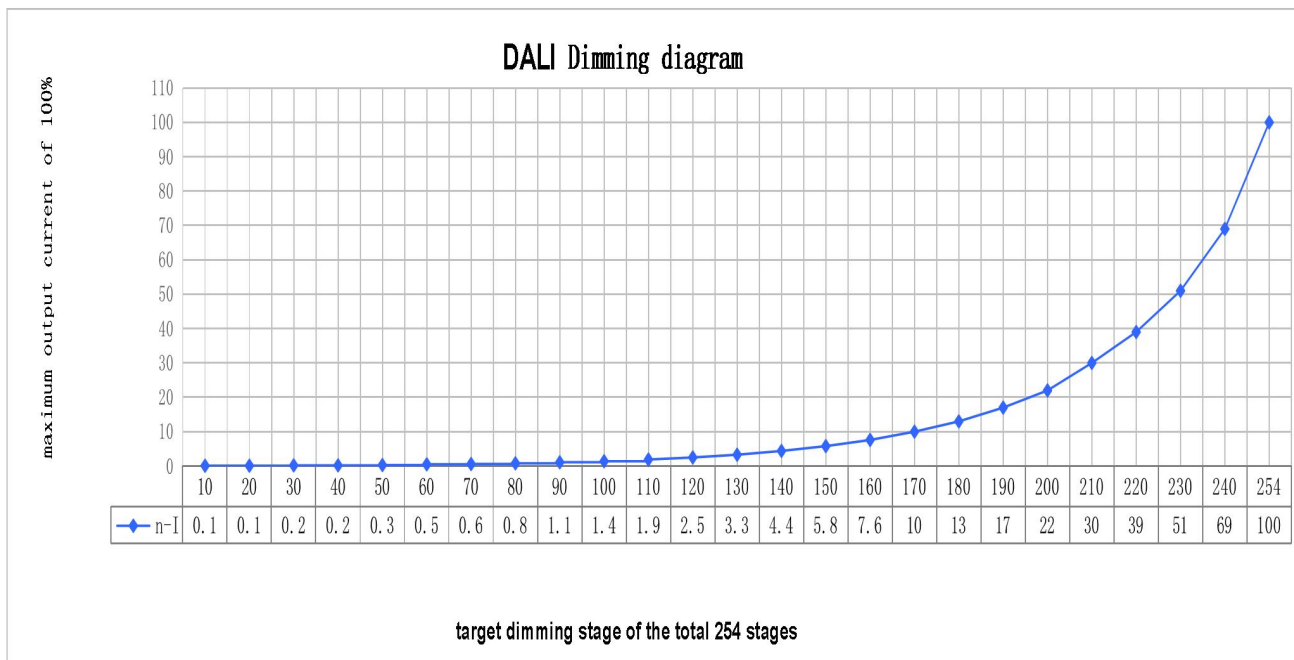
### 5. Dimming curve

formula for DALI dimming.

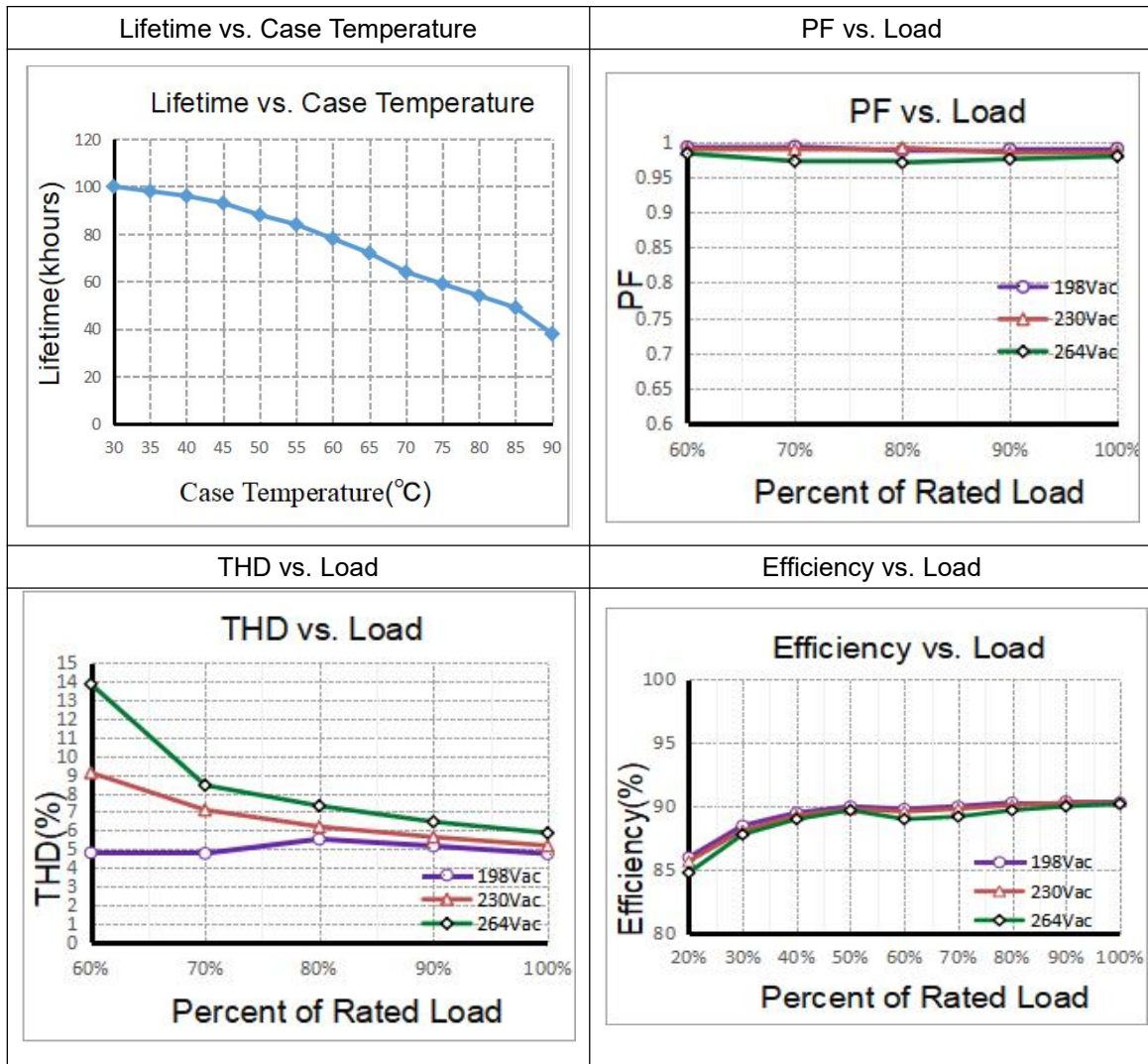
$$X(n) = 10^{\left\{ \left[ \frac{(n-1)}{(253/3)} \right] - 1 \right\}}$$

Here, n means the target dimming stage of the total 254 stages.

X(n) means the percent of the maximum output current

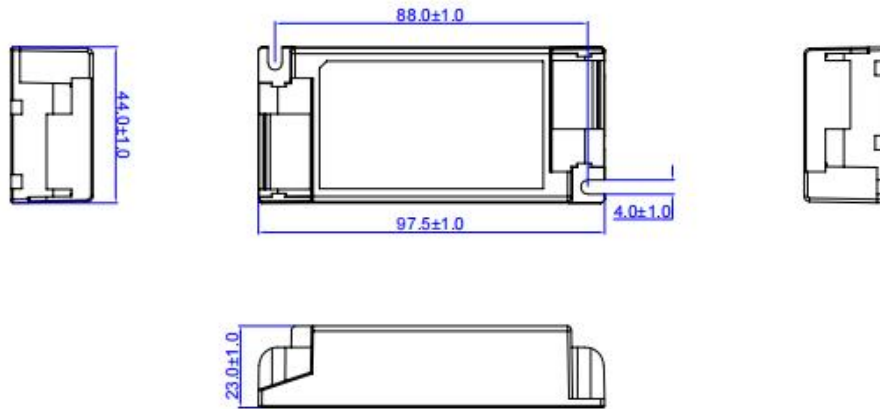


### 6. Electrical values

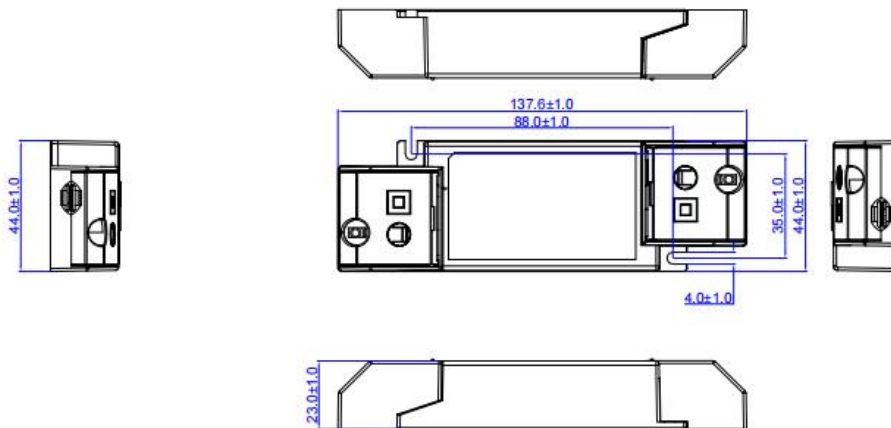


### 7. Dimension

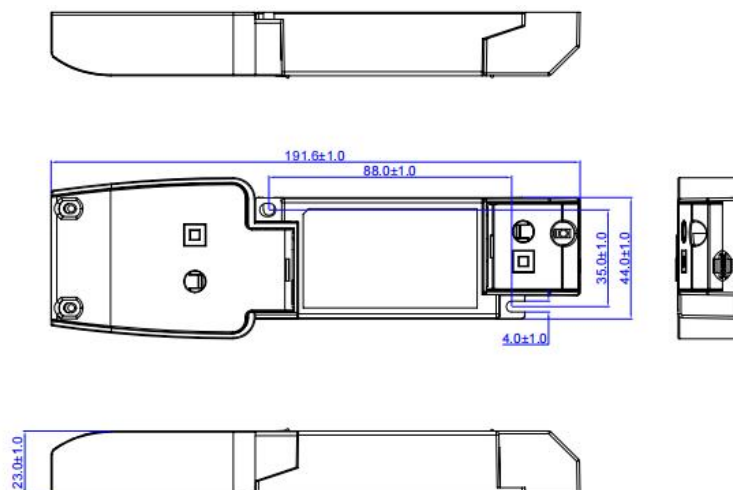
SC (A) :



Small side cover(B) :



Large side cover(C):



### 8. Wiring Diagram

Fig. A: Dali Dimming

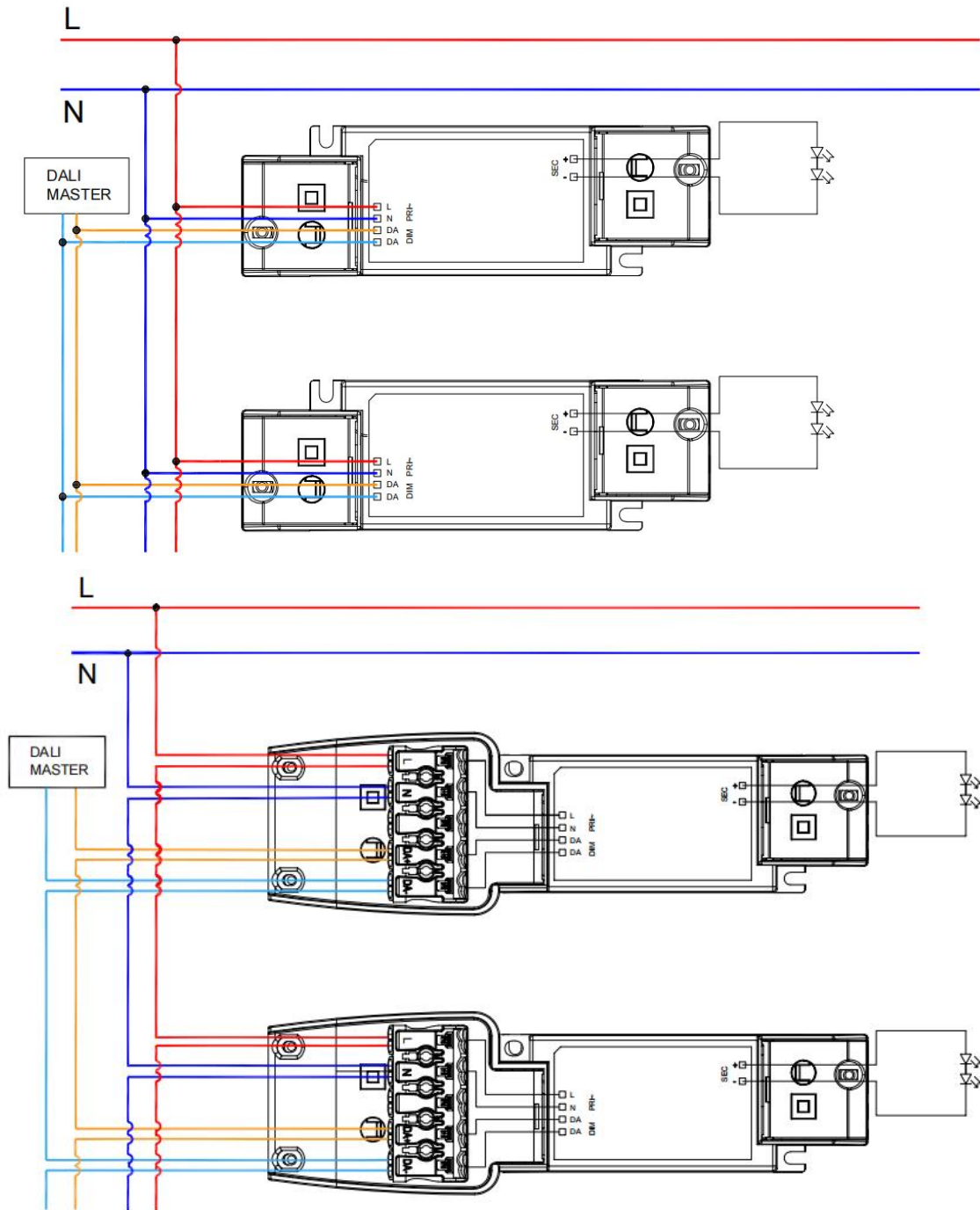
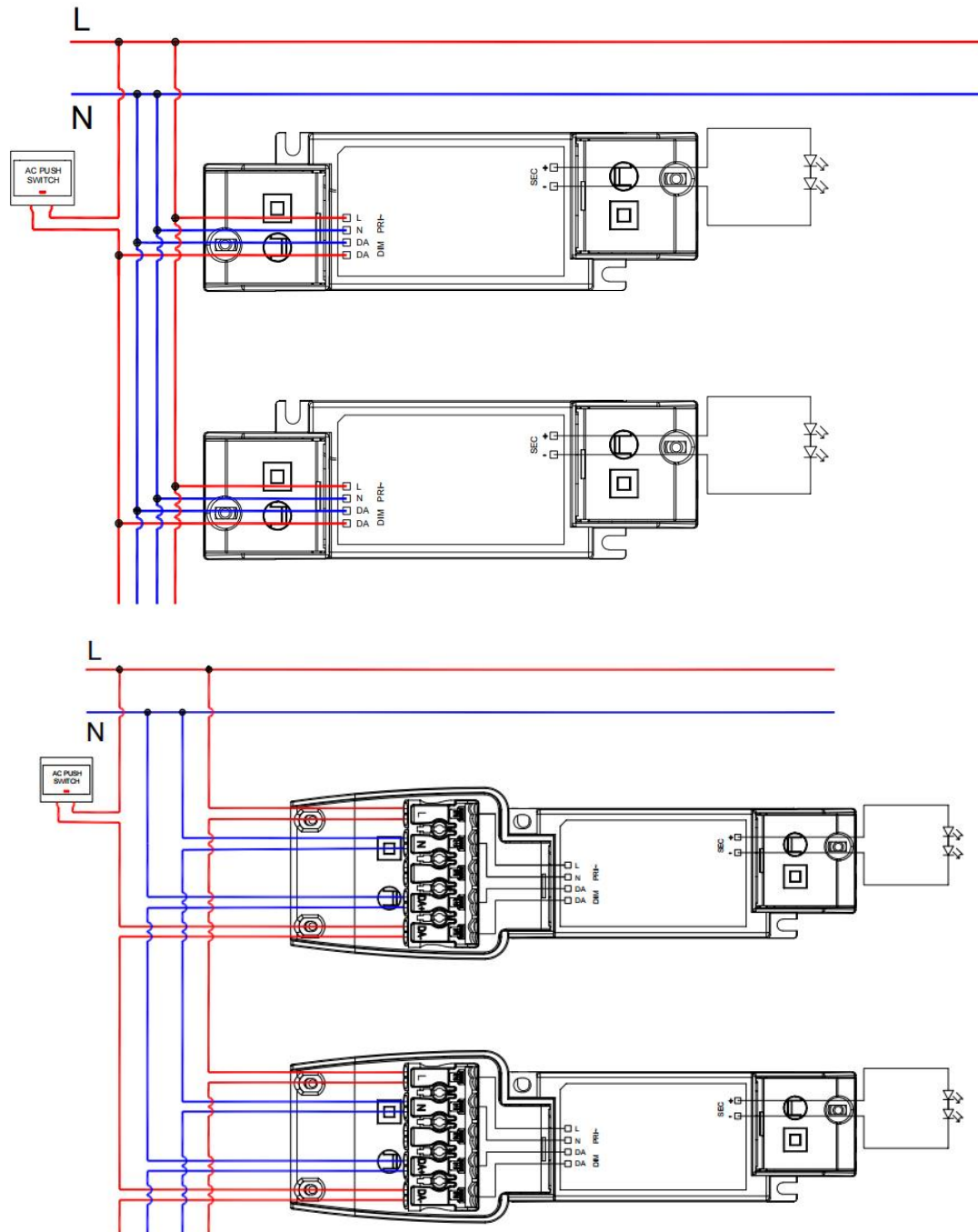


Fig. B: Push Dimming



1. The factory default brightness is at 100%.
2. Up to 15 drivers can perform the PUSH dimming at the same time when utilizing one common push button
3. The maximum length of the cable from the push button to the last driver is 200 meters

**9. Packing information****SC(A)**

| Packing way | Model                  | Colour | Carton L*W*H(mm) | Pcs/ Carton | Net weight/ Pcs(kg) | Net weight/ Carton(kg) | Gross weight/ Carton(kg) |
|-------------|------------------------|--------|------------------|-------------|---------------------|------------------------|--------------------------|
| Industrial  | CC44W300-1050CG DALI-1 | White  | 447*240*200      | 110         | 0.126               | 13.86                  | 14.56                    |

**Small side cover(B)**

| Packing way | Model                  | Colour | Carton L*W*H(mm) | Pcs/ Carton | Net weight/ Pcs(kg) | Net weight/ Carton(kg) | Gross weight/ Carton(kg) |
|-------------|------------------------|--------|------------------|-------------|---------------------|------------------------|--------------------------|
| Industrial  | CC44W300-1050CG DALI-1 | White  | 447*240*200      | 80          | 0.144               | 11.52                  | 12.22                    |

**Large side cover(C)**

| Packing way | Model                  | Colour | Carton L*W*H(mm) | Pcs/ Carton | Net weight/ Pcs(kg) | Net weight/ Carton(kg) | Gross weight/ Carton(kg) |
|-------------|------------------------|--------|------------------|-------------|---------------------|------------------------|--------------------------|
| Industrial  | CC44W300-1050CG DALI-1 | White  | 447*240*200      | 80          | 0.1905              | 15.24                  | 15.94                    |

**10. Wiring instructions**

- All connections must be kept as short as possible to ensure good EMI behaviour
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Advice the maximum length of output wires is 0.5 m
- Secondary switching is not permitted (Except for constant voltage)
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)
- Hot plug-in is not supported due to residual output voltage of > 0 V up to mains voltage. Danger to life.
- When connecting an LED load, restart the device to activate the LED output.
- This can be done via mains reset or via interface (DALI, DSI, switch DIM).

**11. Replace LED module**

- Mains off
- Remove LED module
- Wait for 30 seconds
- Connect LED module again

Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs

### 12. Functions

#### 12.1 OEM Identification

The OEM (Original Equipment Manufacturer) can set his own identification number.

DALI Part 251: Memory bank 1 extension.

#### 12.2 OEM GTIN

The Original Equipment Manufacturer (OEM) can set his own Global Trade Item Number (GTIN).

DALI Part 251: Memory bank 1 extension.

#### 12.3 Luminaire data

This function provides the asset management with accurate data about the luminaire.

DALI Part 251: Memory bank 1 extension.

DALI Part 253: Luminaire maintenance data.

#### 12.4 LED current

The LED output current must be adapted to the connected LED module.

The value is limited by the current range of the respective device.

The output current of the LED driver can be adjusted in a certain range.

More functions:

| Action                | Action duration | Function  |
|-----------------------|-----------------|---|
| Short push            | <0.6s           | Turn on/off   |
| Short push five Times | <3s             | Quit Corridor mode  |
| Long push             | 0.6-3s          | Dimming up or down  |
| Long push             | 10s             | Sync all LEDs to be 50% brightness, and the dimming rate is changed to 3S |
| Long push             | 20s             | Dimming rate is changed to 6S   |
| Long push             | >2mins          | Enter Corridor mode - LED keep 100% brightness for 2mins.                 |

#### 12.5 Switch DIM

Integrated Switch DIM function allows a direct connection of a push button for dimming and switching.

Brief push (< 0.6 s) switches LED driver ON and OFF. The dim level is saved at power-down and restored at power-up.

When the push button is held, LED modules are dimmed. After repush the LED modules are dimmed in the opposite direction.

In installations with LED drivers with different dimming levels or opposite dimming directions (e.g. after a system extension), all LED drivers can be synchronized to 50 % dimming level by a 10 s push.

Use of push button with indicator lamp is not permitted.

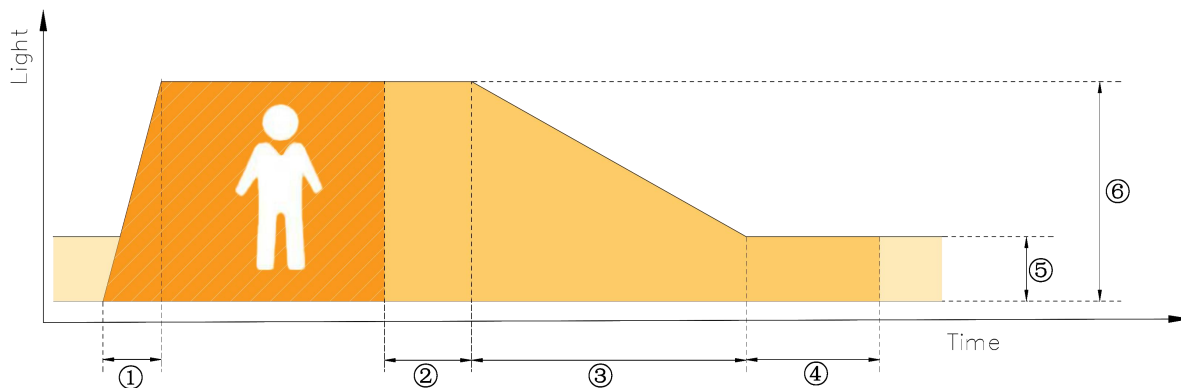
### 12.6 Corridor FUNCTION

With the Corridor FUNCTION and a commercially available motion detector, it is easy to adapt the lighting in one area to its use.

That is, when the area is entered by a person, the lighting dims instantly to the desired brightness and is available in full strength.

After the area is left by the person, the brightness dims slowly to a smaller value or switches off completely.

The individual parameters of the desired profile, such as brightness values or delay times, can be adjusted flexibly and individually.



- ① Fade-in time(1s): the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.
- ② Run-on time(120s): the time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the run-on time the run-on time is restarted from zero. If no presence is detected during the run-on time the fade time is started as soon as the run-on time expires.
- ③ Fade time(32s): the time during which the luminous intensity is faded from the presence value to the absence value.
- ④ Switch-off delay (Never Off): the time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined.
- ⑤ Absence value(default: 10 %): the luminous intensity when there is no person present.
- ⑥ Presence value (default: 100 %): the luminous intensity when persons are present.

### 12.7 Constant Light Output (CLO)

With this function the light output of the LED module can be kept equal over the lifetime.

The light output of an LED module reduces over the course of its lifetime.

The Constant Light Output (CLO) function compensates for this natural decline by constantly increasing the output current of the LED driver throughout its lifetime.

CLO shall be achieved by limitation of the LED current at the commissioning of the LED driver and providing a linear interpolation of the current over the time, depending on the data points given by the user.

The user has to insert up to eight pairs of data (time, level).

The output curve is the result of connecting the user data points linear.

Detailed description for CLO see product manual.

The minimal CLO starting point is limited by the smallest output current of the LED driver.

### 12.8 Dimming curve

DALI: The desired dimming behaviour is selected via two different dimming curves (logarithmic or linear).

The default setting of the dimming behaviour is logarithmic.

## 13. REVISION HISTORY

| <b>DATE</b> | <b>REV</b> | <b>Modification details</b>       |
|-------------|------------|-----------------------------------|
| 2024-08-27  | V1.0       | Initial release.                  |
| 2025-01-09  | V1.1       | Update the format and parameters. |
|             |            |                                   |
|             |            |                                   |