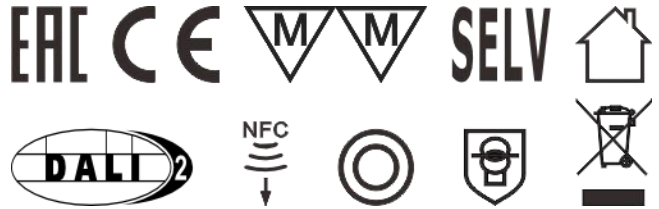




Constant Current Dimmable Driver

Model: CC53W500-1400 DALI NFC



Model	Output Current	Input Current	Input Power	Output Power Range	PF	Efficiency (*Typical)	Output Voltage	No load Voltage
CC53W500-1400 DALI NFC	500mA	0.10A	24.4W	1.25-21.7W	≥0.96	88.1%	2.5-44V	59V Max.
	550mA	0.11A	26.7W	1.41--24.0W	≥0.96	88.9%		
	600mA	0.12A	29.2W	1.56-26.3W	≥0.96	89.1%		
	650mA	0.13A	31.6W	1.69-28.5W	≥0.97	89.3%		
	700mA	0.14A	34.0W	1.83-30.7W	≥0.97	89.5%		
	750mA	0.15A	36.5W	1.97-33.0W	≥0.97	89.6%		
	800mA	0.16A	39.0W	2.11-35.3W	≥0.97	89.4%		
	850mA	0.18A	41.4W	2.26-37.6W	≥0.96	89.9%		
	900mA	0.19A	43.7W	2.37-39.7W	≥0.96	90.0%		
	950mA	0.19A	46.1W	2.51-41.9W	≥0.96	90.1%		
	1000mA	0.20A	48.4W	2.64-44.0W	≥0.96	90.1%		
	1050mA	0.21A	50.9W	2.79-46.5W	≥0.96	90.1%		
	1100mA	0.22A	53.4W	2.92-48.6W	≥0.96	90.1%		
	1150mA	0.23A	55.7W	3.06-50.7W	≥0.96	90.2%		
	1200mA	0.24A	58.1W	3.17-53.0W	≥0.97	90.2%		
	1250mA	0.24A	58.0W	3.33-52.6W	≥0.97	89.9%	2.5-42V	
	1300mA	0.24A	57.7W	3.43-52.2W	≥0.97	89.5%	2.5-40V	
1350mA	0.25A	58.6W	3.59-53.0W	≥0.97	89.2%	2.5-39V		
1400mA	0.25A	59.1W	3.69-53.3W	≥0.97	89.2%	2.5-38V		

* Test result @230V, 50Hz, Full Load. Current setting @ 1mA-steps (NFC)

1. Parameters

Category	Item	Technical Norm
Features	Output Type	Constant Current
	Dimming Type	DALI-2 / Push DIM
	Output current setting	Near field communication (NFC)
	Output Features	Isolation

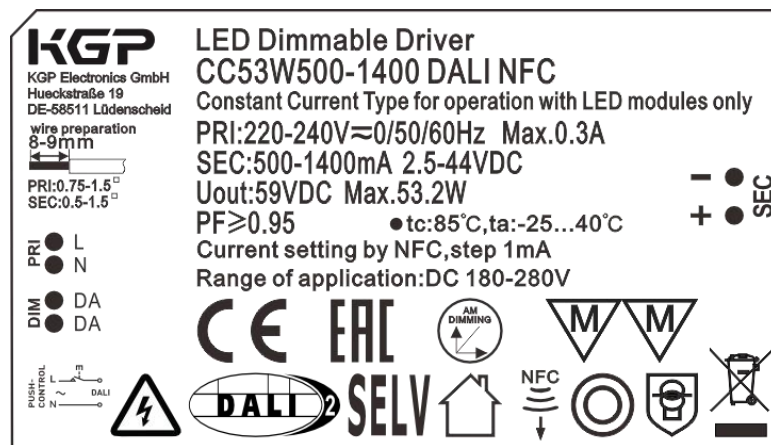
	IP Grade	IP20
	Insulation Class	Class II
Input	Rated Input Voltage	220-240VAC
	Range of Input Voltage	198-264VAC or 180-280VDC
	Frequency	50/60Hz
	Input Current	≤0.3A(230VAC,full load)
	Input Power	≤62W (230VAC,full load)
	Power Factor	≥0.97 (230VAC,full load)
	THD	≤10% (230VAC,full load)
	Standby Power(dim to off)	≤0.5W @ 230VAC
Output	Output Voltage Range	2.5-44VDC@500-1200mA 2.5-42VDC@1250mA 2.5-40VDC@1300mA 2.5-39VDC@1350mA 2.5-38VDC@1400mA
	No Load Voltage	≤59VDC Max.
	Output Current	500-1400mA (by NFC setting ,Factory set current of 500mA)
	Max. Output Power	53.2W
	Efficiency	≥89% (230VAC,full load@max current)
	Current Ripple(≤120HZ)	±5% (Imax-Imin)/(Imax+Imin)
	PSTLM	≤1
	SVM	≤0.4
	Current Accuracy	±5%
	Starting Time(AC mode)	≤1S (230VAC,full load)
	Starting Time(DC mode)	≤1S
	Control Method	PUSH dimming
PUSH-button		Max parallel connections qty for Push-dim 15 PCS
DALI function		DALI dimming (Max. lead wire length:300m)Logarithm or linear dimming curve selectable 251,252,253 EL(EMI not evaluated),CLO,Corridor mode.
Dimming range		DALI dimming: 1%-100%,Dim to off
Protection	NFC current setting	The output current can be set within the total value range in 1-mA-steps. Output current is mean value. Setting is by KGP's software APP/APK/PC with FEIG equipment or mobile phone.
	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□
	SEC Wire preparation	0.5-1.5□
	Dimension	Built in:97.5*44*30mm (L*W*H) Independent-Small side cover :137.6*44*30mm (L*W*H) Independent-Large side cover :191.6*58.4*30mm (L*W*H)
Standards	Certification	EAC CE
	Safety Standards	EN 61347-1:2015/A1:2021 EN 61347-2-13:2014/A1:2017 EN IEC 62384:2020 EN 62493:2015/A1:2022
	EMC Standards	EN IEC 55015:2019 EN IEC 55015:2019/A11:2020 EN IEC 61000-3-2:2019/A1:2021 EN 61000-3-3:2013/A2:2021 EN IEC 61547:2023
	NFC	EN 300 330 V2.1.1:2017 EN 301 489-1 V2.2.3:2019 EN 301 489-3 V2.3.2:2023 EN 62479:2010 EN 50663:2017
	Performance	EN62384:2020
	Surge	L-N:2KV
	Others	RoHS
	Life Time	50000h @Ta
	Warranty	5years ,F.R. < 10000ppm
	Audible Noise	<22dB @ 20cm distance, 15dB background
<p>Remark:</p> <ol style="list-style-type: none"> All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature. LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again. Please make sure Tc under Lifetime condition when long term operate under DC input. Light output level in DC operation: (factory default = 100 %, EOFi = 15%). During the PUSH DIM test, the number of parallel connections must be less than 15PCS. 		

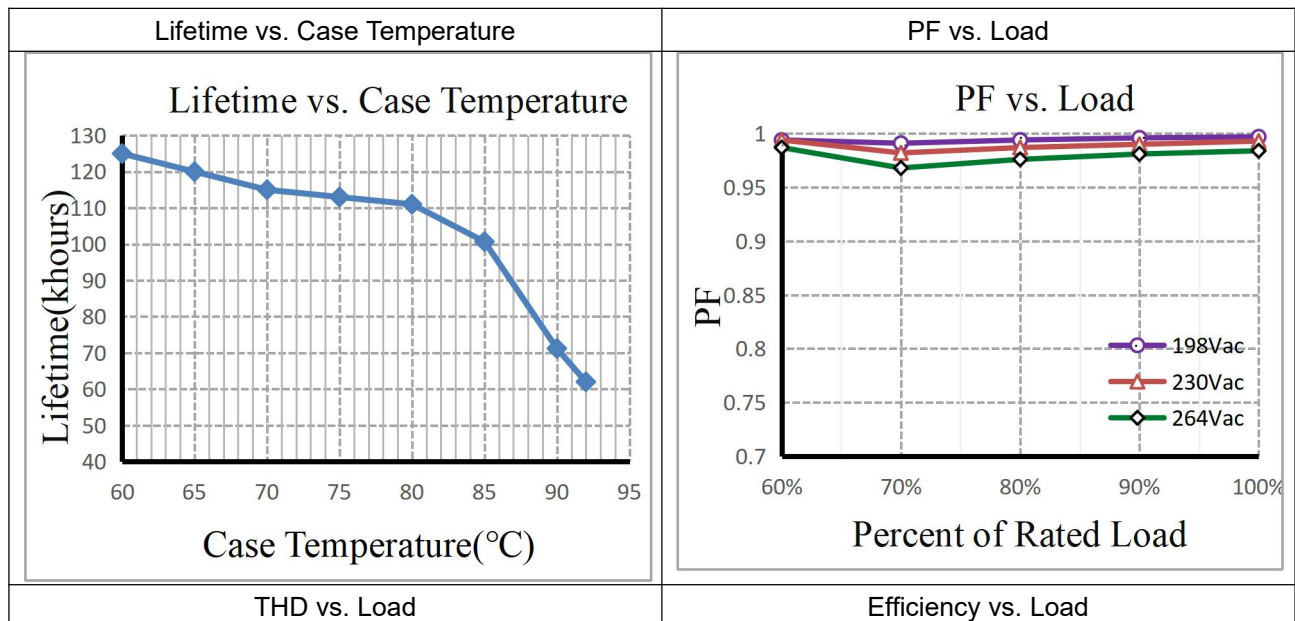
2. Connected quantities of different current Breaker

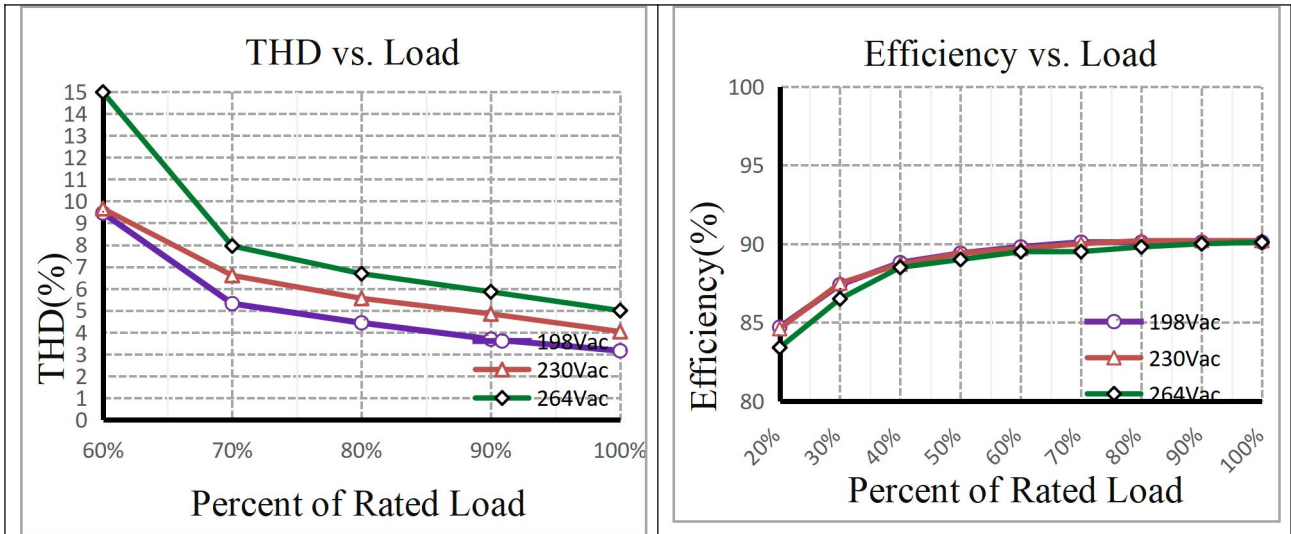
TYPE	Connected quantities of different current Breaker						Input Voltage	Inrush Current(A)	Time(μ s)
	current (A)	10	13	16	20	25			
	Installation wire diameter	1.5mm ²	2.5mm ²	2.5mm ²	4mm ²	4mm ²			
TYPE B		9	12	15	18	23	@230VAC	65	200
TYPE C		15	19	24	30	37			
TYPE D		24	31	38	47	59			

3. Label



4. Electrical values





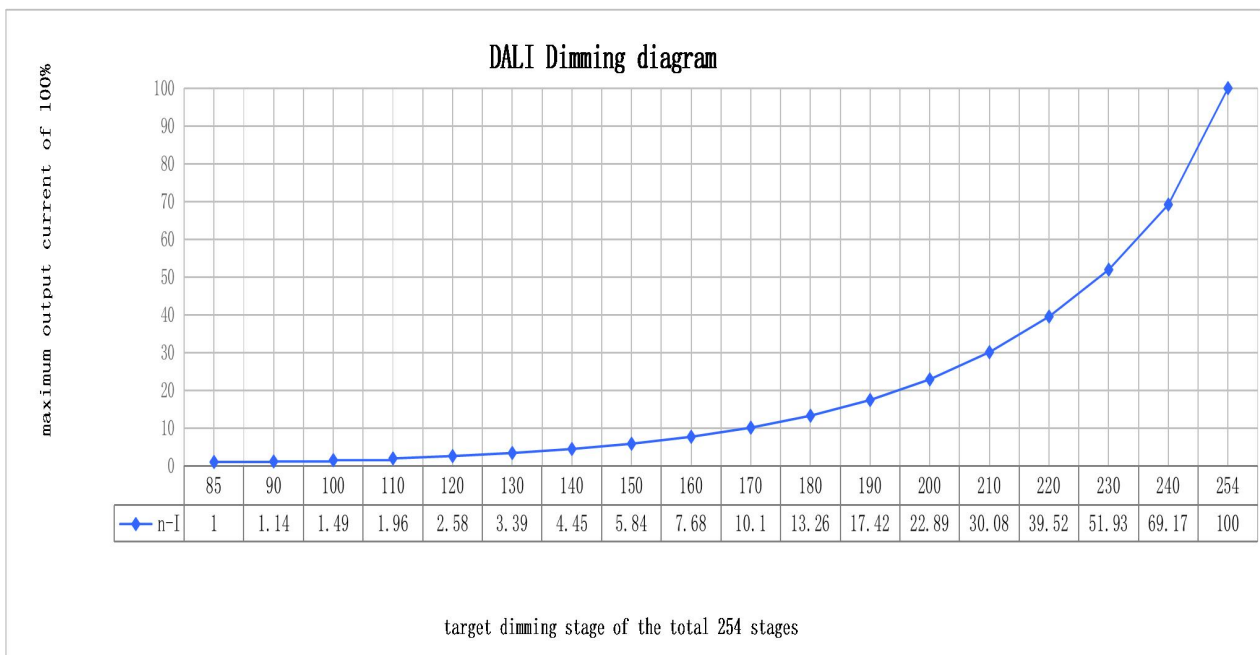
5. DALI dimming curve

formula for DALI dimming.

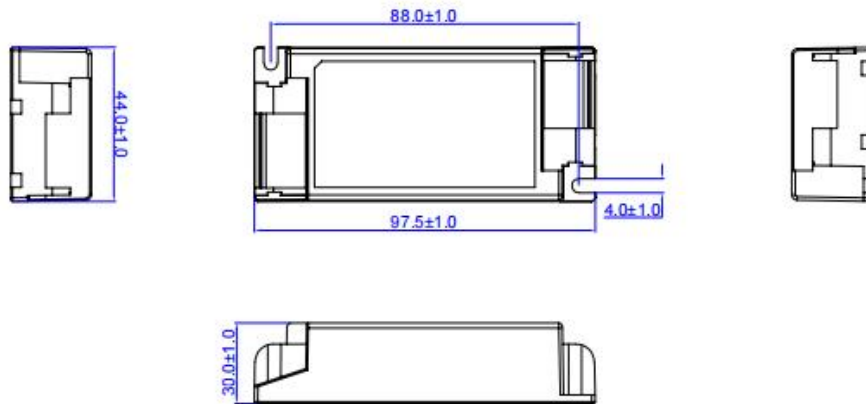
$$X(n) = 10^{\left[\frac{(n-1)}{(253/3)}\right] - 1}$$

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

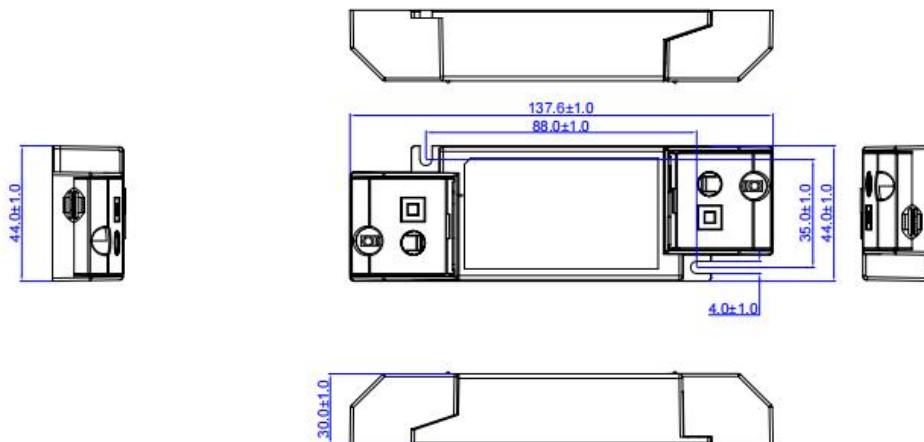
X(n) means the percent of the maximum output current



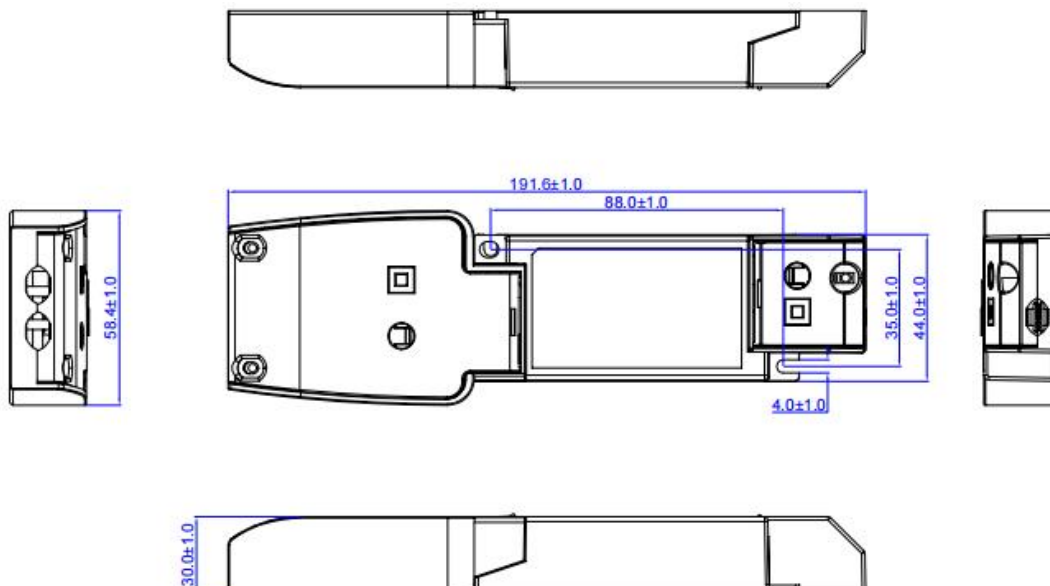
6. Dimension SC(A):



Small side cover(B) :



Large side cover(C):



7. Wiring Diagram

Fig. A: Push Dimming

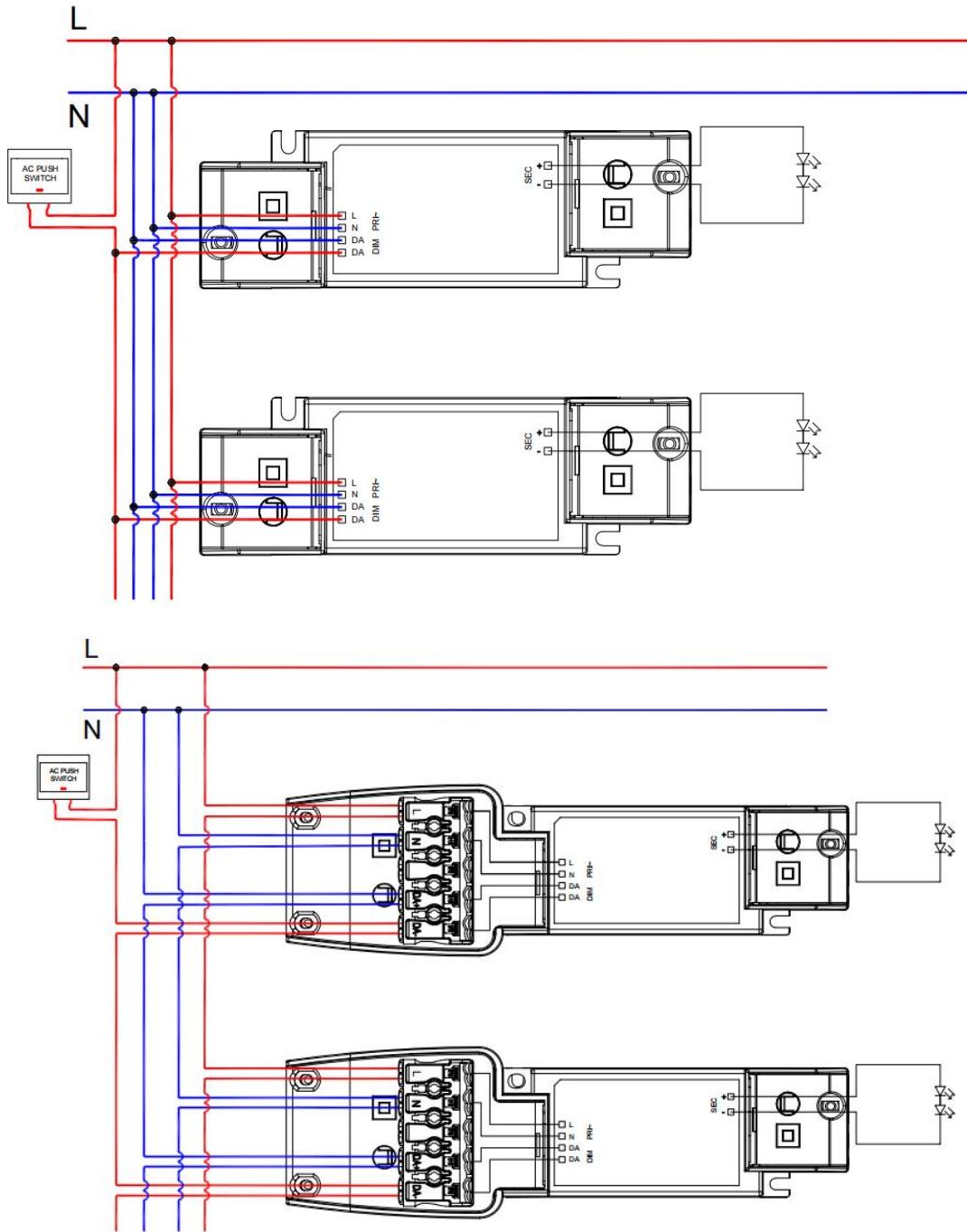
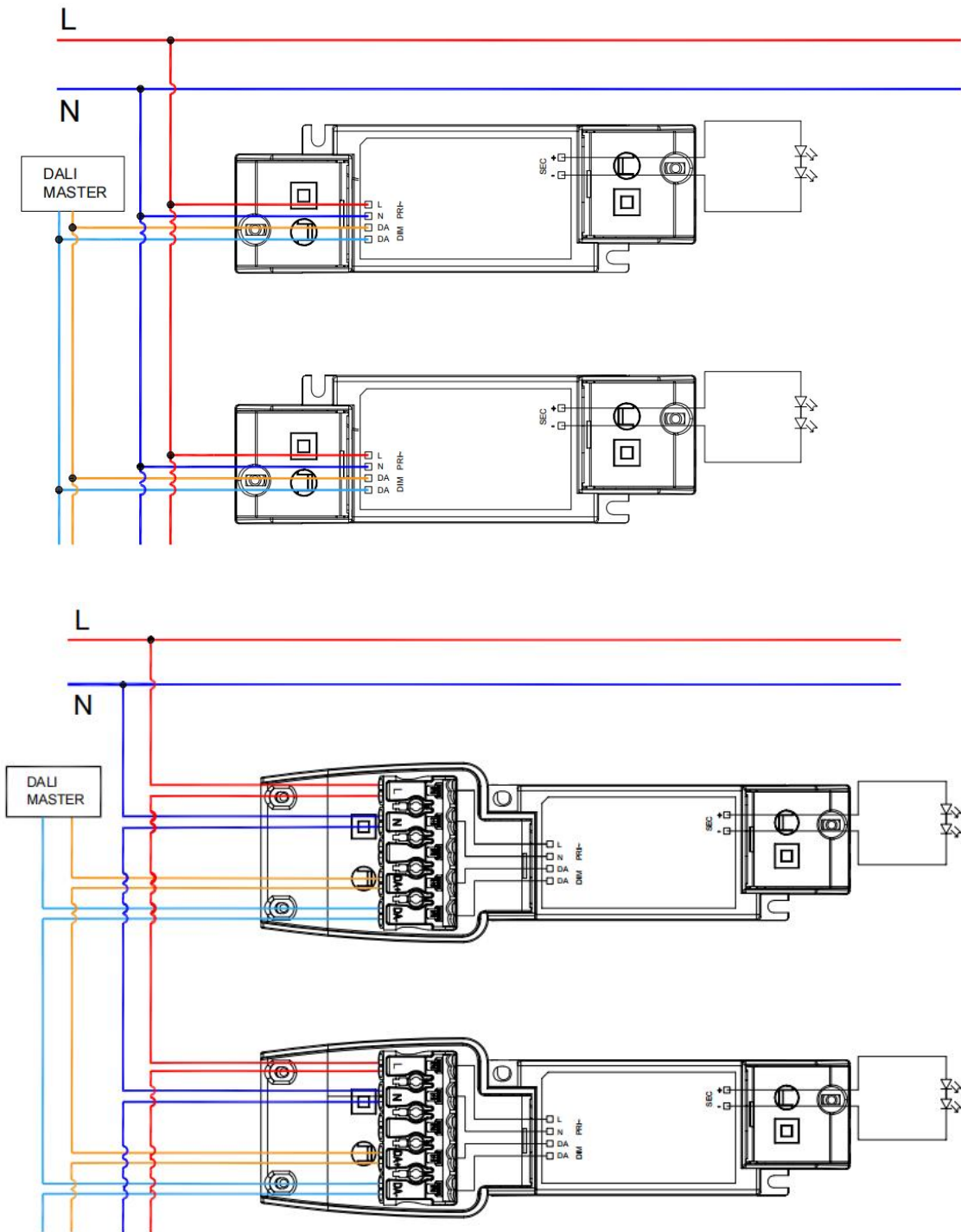


Fig. B: DALI Dimming



8. Packing information

SC(A)

Packing way	Model	Carton L*W*H(mm)	Pcs/ Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
industrial	CC53W500-1400 DALI NFC	457*250*220	80	0.178	14.24	14.94

Small side cover(B)

Packing way	Model	Carton L*W*H(mm)	Pcs/ Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
industrial	CC53W500-1400 DALI NFC	457*250*220	60	0.196	11.76	12.36

Large side cover(C)

Packing way	Model	Carton L*W*H(mm)	Pcs/ Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
industrial	CC53W500-1400 DALI NFC	457*250*220	45	0.202	9.09	9.59

9. 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).

10. 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

11. Functions

11.1 OEM Identification

The OEM (Original Equipment Manufacturer) can set his own identification number.
DALI Part 251: Memory bank 1 extension.

11.2 OEM GTIN

The Original Equipment Manufacturer (OEM) can set his own Global Trade Item Number (GTIN).
DALI Part 251: Memory bank 1 extension.

11.3 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.

11.4 Switch DIM

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.
Adjustment is done by KGP Configurator via NFC.

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.

11.5 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.

More functions:

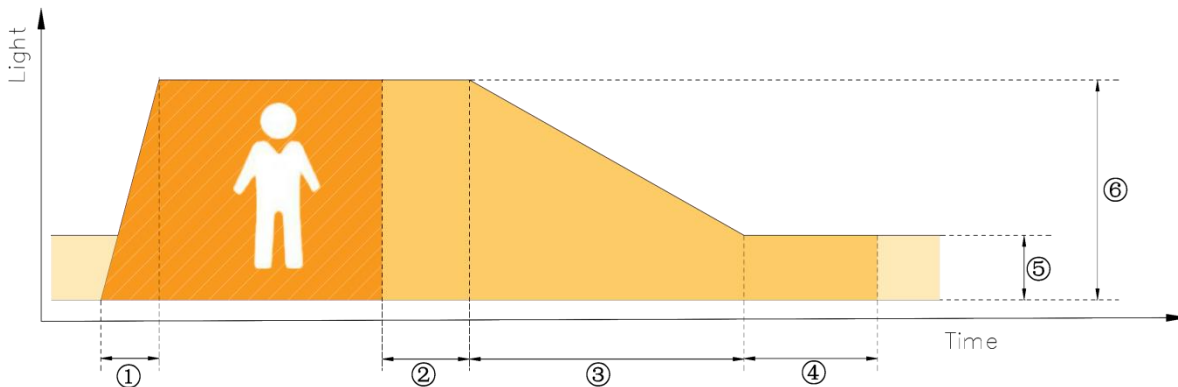
11.6 Corridor FUNCTION

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.

11.7 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.

11.8 Dimming curve

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

The default setting of the dimming behaviour is logarithmic.

12. Revision History

DATE	REV	Modification details
2025-01-07	V1.0	Initial release
2025-8-22	V1.1	Update the layout and safety standards.