

SPECIFICATION

Product Name: **DALI 2 Dimmable LED driver**

KL30C-PDiiV1; KL38C-PDiiV1;

Model No.: **KL50C-PDiiV3; KL50C-PDiiV4;**

KL60C-PDiiV1; KL70C-PDiiV1;

Issue Date: **January 6, 2025**

CUSTOMER APPROVED



Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	IOS Linear series		Design verification	
A1	IOS Linear series	Change wire diameter		2023-12-26
A2	IOS Linear series	Change the logo		2024-08-17
A3	IOS Linear series	Update Automatic circuit breaker		2025-01-06

Specification for DALI 2 Dimmable LED Driver Linear series C.C.



- Flicker-free for whole dimming range
- Stand-by power below 0.5W
- Primary dimming with push button
- Secondary dimming with 1-10V dimmer and potentiometer
- Built-in DALI interface DT6
- Supports 10V PWM dimming (3KHz-8KHz)
- Protection: short circuit / over temperature/ overvoltage

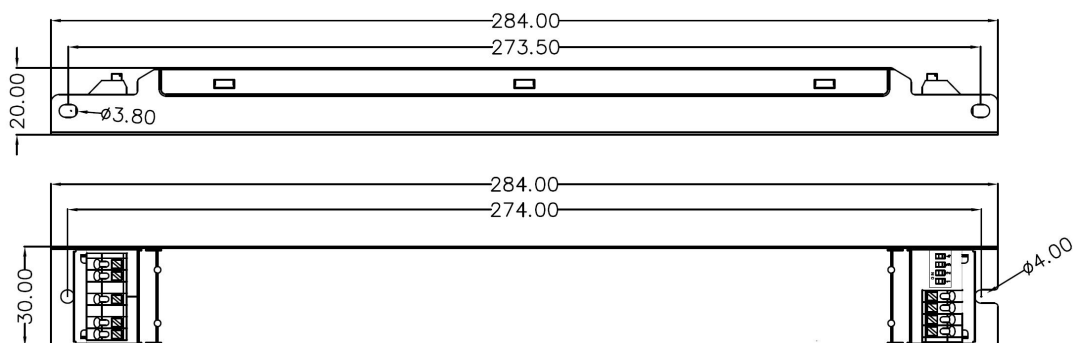
1. Parameter

Input	Operating Voltage	198-264Vac 50Hz /60Hz					
	Rated Input Voltage	220-240Vac 50Hz /60Hz					
	DC Input Voltage range	200-240Vdc					
	Input Current (Max.)	0.16A	0.22A	0.27A	0.27A	0.32A	0.36A
	Input Inrush Current	<15A (Half current pulse width100μs) @230Vac					
	Power factor	≥ 0.95 (@230Vac,100% load)					
	Total harmonic distortion	30C-1	38C-1	50C-3	50C-4	60C-1	70C-1
	Typical: (@230Vac, 100% load)	15%	13%	13%	13%	13%	13%
	Stand-by power	≤0.5W (@230Vac when PUSH or DALI turn off)					
	Efficiency	86%	87%	87%	87%	87%	87%
	Max (@230Vac,100% load)						
	Wiring Method	Push terminal, wire cross section:0.5-1.5mm ²					
	Automatic circuit breaker	KL30C-PDiiV1 (Calculate current in the wire)					
		type	B10	B13	B16	B20	B25 /
		Number	25	30	40	50	60 /
		type	C10	C13	C16	C20	C25 C32
		Number	45	60	70	95	120 150
		KL38C-PDiiV1 (Calculate current in the wire)					
		type	B10	B13	B16	B20	B25 /
		Number	20	25	35	45	55 /
		type	C10	C13	C16	C20	C25 C32
		Number	35	50	55	75	95 120
		KL50C-PDiiV3, KL50C-PDiiV4 (Calculate current in the wire)					
		type	B10	B13	B16	B20	B25 /
		Number	20	25	30	40	50 /
		type	C10	C13	C16	C20	C25 C32
		Number	28	40	45	55	70 90

Input	Automatic circuit breaker	KL60C-PDiiV1 (Calculate current in the wire)					
		type	B10	B13	B16	B20	B25 /
		Number	15	20	25	28	30 /
		type	C10	C13	C16	C20	C25 C32
		Number	23	32	38	48	60 75
		KL70C-PDiiV1 (Calculate current in the wire)					
		type	B10	B13	B16	B20	B25 /
		Number	15	20	25	28	30 /
		type	C10	C13	C16	C20	C25 C32
		Number	20	28	32	40	52 65
Output	Operating mode	Constant Current					
	Load type	LED					
	Ripple requirement (Flickering or Flickering-Free)	Flicker value: less than 2% for whole dimming range					
	Start up time	<1s (@230Vac,)					
	No-load output voltage:DC Max.	100V	72V	70V	80V	70V	80V
	Load output voltage range	18-90	9-60	9-58	12-73	9-58	9-66
	Full load output power	30W	40W	50W	50W	60W	70W
	Load output current	Query dial setting table					
	Constant current/voltage Precision	Constant Current Precision $\pm 5\%$					
	Wiring method	Push terminal, wire cross section:0.5-1.5mm ²					
Control Method	Primary PUSH Dimming	Primary PUSH dimming (Max.lead length: 20M)					
	1-10V (0-10V) Dimming	1-10V dimming (Port current<1MA) no turn off function (Max.lead length: 20M)					
	Dimming Range	Primary PUSH & DALI dimming: 0%-100% 1-10V dimming: 2%-100%					
	Primary PWM Dimming	1-10V port PWM dimming (3KHZ-8KHZ)					
	Potentiometer	Yes, 100k Ω					
	DALI Dimming	DALI dimming (Max.lead length: 300M)					
Exception Protection Requirements	Output over temperature protection	Yes, without self recovery function (Can be inquired)					
	Output short circuit protection	Yes, without self recovery function (Can be inquired)					
Operating Environment	Operating temperature/ humidity	-25℃~50℃ Humidity:85% (Non-condensing)					
	Storage temperature/ humidity	-40℃~80℃, Humidity:10%~95%					
	Max. case temp (Tc)	75℃					
Safety & EMC	EMC standard	EN55015 EN61547 EN61000-3-2 EN61000-3-3					
	DALI protocol standard	IEC62386-102, IEC62386-207 DT6					

Safety & EMC	Safety standard	EN61347-1 EN61347-2-13					
	Certification	CE RoHS					
	Withstand voltage	3750Vac, 5mA, 60s (Input “L N”- Output “SEC”)					
Others	Degrees of protection	IP20					
	Type of protection	Class I					
	Installation type	Independent installation					
	Installation dimension	284*30*20mm					
	Blackout memory function	Yes, PUSH blackout memory					
	PUSH dimming synchronization	15 units Max.					
	Packaging requirement	Instruction+clapboard+outer carton （K=A）					
	Weight	200g	210g	225g	225g	225g	225g
	Life	5 years guarantee @Ta full load					
Note: All parameters are tested at the input voltage of 230Vac and 25 degree environment unless specified.							

2. Dimension (Unit: mm)



3. Wiring Diagram

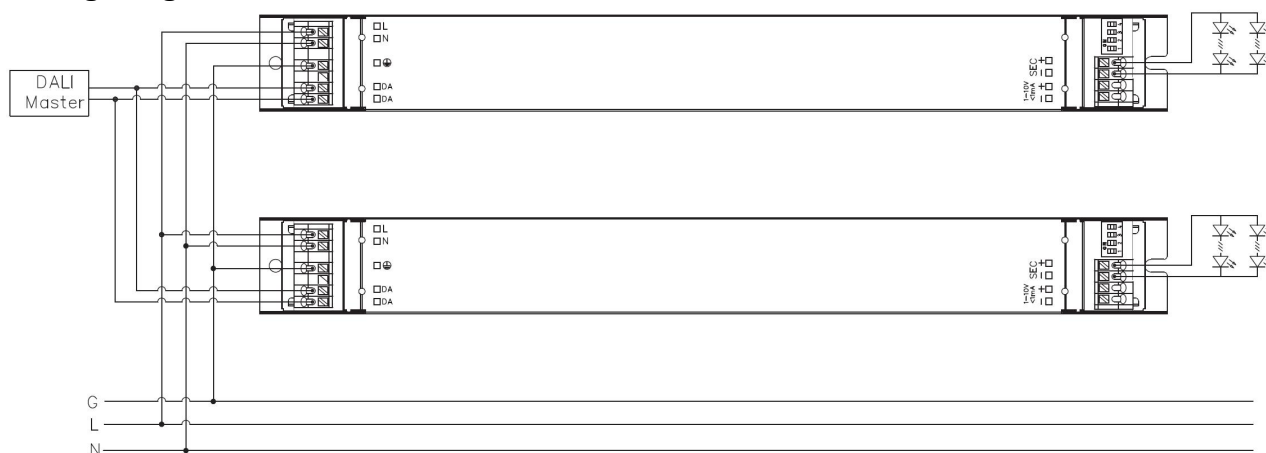


Fig. A DALI Dimming

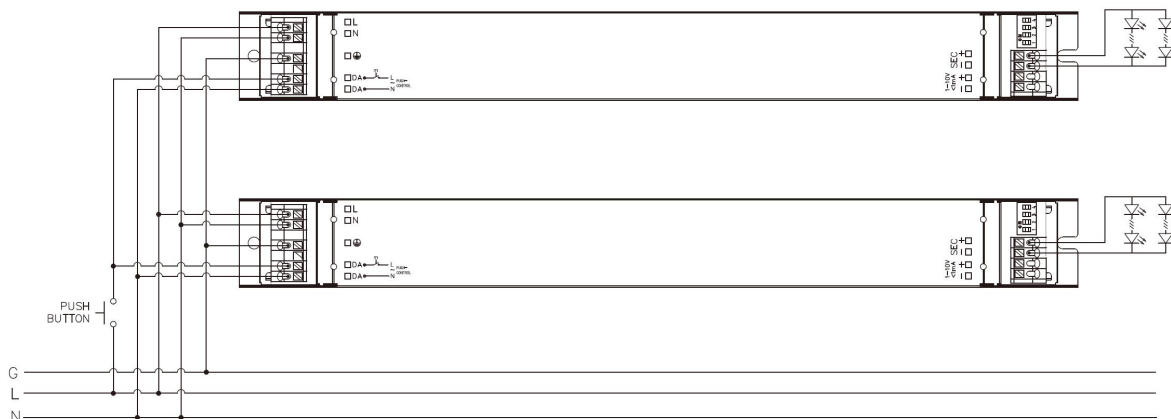


Fig. B Push Dimming

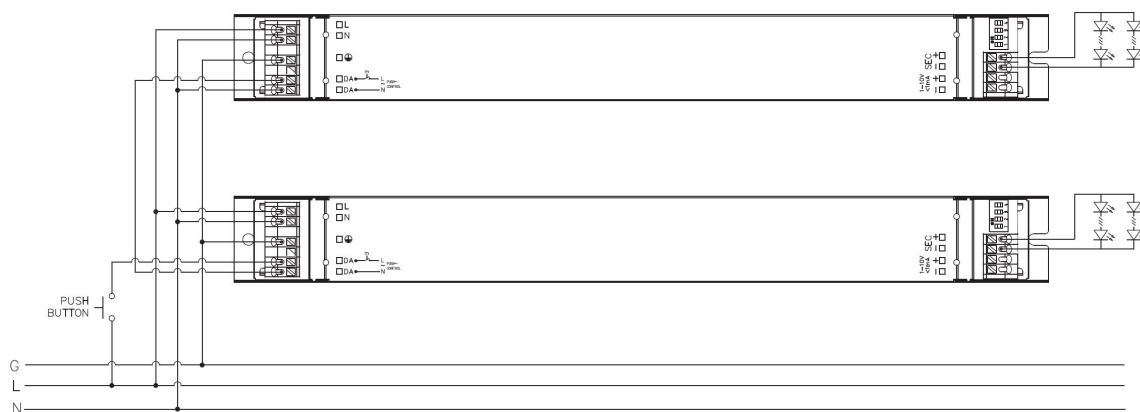


Fig. C Push Dimming

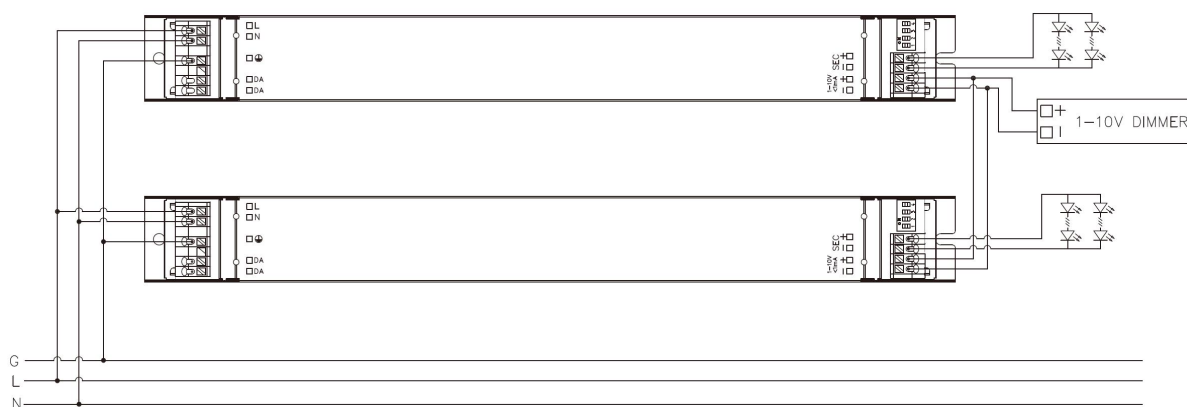
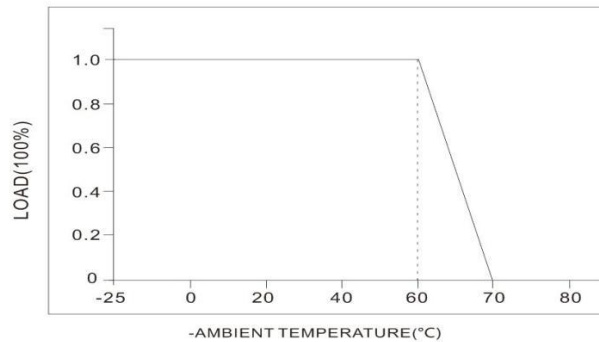
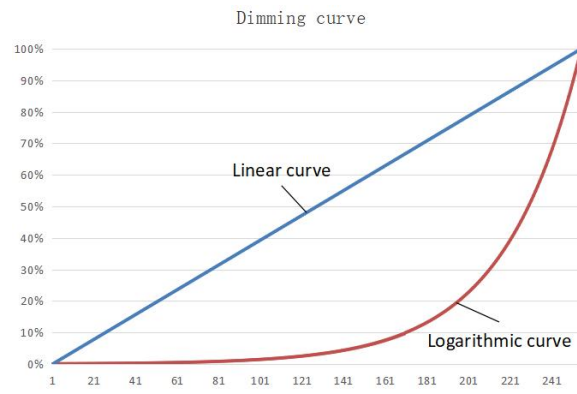


Fig. D 1-10V Dimming

4. Derating



5. Dimming curve



6. Current gear setting ON: ON -: OFF (SEC1 SEC2)

KL30C-PDiV1 Current gear setting	1	2	3
200mA (18-90V)	-	-	-
250mA (18-90V)	ON	-	-
300mA (18-90V)	-	ON	-
350mA (18-85V)	ON	ON	-
400mA (18-75V)	-	-	ON
450mA (18-67V)	ON	-	ON
500mA (18-60V)	-	ON	ON
550mA (18-55V)	ON	ON	ON

KL38C-PDiV1 Current gear setting	1	2	3	4
300mA (9-60V)	-	-	-	-
350mA (9-60V)	ON	-	-	-
400mA (9-60V)	-	ON	-	-
450mA (9-60V)	ON	ON	-	-
500mA (9-60V)	-	-	ON	-
550mA (9-60V)	ON	-	ON	-
600mA (9-60V)	-	ON	ON	-
650mA (9-58V)	ON	ON	ON	-
700mA (9-54V)	ON	ON	-	ON
750mA (9-51V)	-	-	ON	ON
800mA (9-47V)	ON	-	ON	ON
850mA (9-45V)	-	ON	ON	ON
900mA (9-42V)	ON	ON	ON	ON

KL50C-PDiiV3 Current gear setting	1	2	3	4
700mA (9-58V)	-	-	-	-
800mA (9-58V)	ON	-	-	-
850mA (9-58V)	-	ON	-	-
900mA (9-55V)	-	-	ON	-
950mA (9-52V)	ON	ON	-	-
1000mA (9-50V)	ON	-	ON	-
1050mA (9-48V)	-	ON	ON	-
1100mA (9-45V)	-	ON	-	ON
1150mA (9-44V)	ON	ON	ON	-
1200mA (9-42V)	ON	ON	-	ON
1250mA (9-40V)	ON	-	ON	ON
1300mA (9-39V)	-	ON	ON	ON
1400mA (9-36V)	ON	ON	ON	ON

KL50C-PDiiV4 Current gear setting	1	2	3	4
600 (12-73V)	-	-	-	-
650 (12-73V)	ON	-	-	-
700 (12-72V)	-	ON	-	-
750 (12-66V)	ON	ON	-	-
800 (12-62V)	-	-	ON	-
850 (12-59V)	ON	-	ON	-
900 (12-56V)	-	ON	ON	-
950 (12-53V)	ON	ON	ON	-
1000 (12-50V)	ON	ON	-	ON
1050 (12-48V)	-	-	ON	ON
1100 (12-45V)	ON	-	ON	ON
1150 (12-43V)	-	ON	ON	ON
1200 (12-41V)	ON	ON	ON	ON

KL60C-PDiiV1 Current gear setting	1	2	3	4
700 (9-58V)	-	-	-	-
800 (9-58V)	ON	-	-	-
850 (9-58V)	-	ON	-	-
900 (9-58V)	-	-	ON	-
950 (9-58V)	ON	ON	-	-
1000 (9-58V)	ON	-	ON	-
1050 (9-57V)	-	ON	ON	-
1100 (9-55V)	-	ON	-	ON
1150 (9-52V)	ON	ON	ON	-
1200 (9-50V)	ON	ON	-	ON
1250 (9-48V)	ON	-	ON	ON
1300 (9-46V)	-	ON	ON	ON
1400 (9-43V)	ON	ON	ON	ON

KL70C-PDiiV1 Current gear setting	1	2	3	4
700 (9-66V)	-	-	-	-
800 (9-66V)	ON	-	-	-
850 (9-66V)	-	ON	-	-
900 (9-66V)	-	-	ON	-
950 (9-66V)	ON	ON	-	-
1000 (9-66V)	ON	-	ON	-
1050 (9-66V)	-	ON	ON	-
1100 (9-63V)	-	ON	-	ON
1150 (9-61V)	ON	ON	ON	-
1200 (9-58V)	ON	ON	-	ON
1250 (9-56V)	ON	-	ON	ON
1300 (9-54V)	-	ON	ON	ON
1400 (9-50V)	ON	ON	ON	ON

7. ON/OFF & Description of Dimming Operation

A. Short press the PUSH switch (short press time 0.1S-1S), the LED driver will turn on or off.

B. Dimming:

Press and hold the PUSH switch (1S-8S), the LED driver can achieve dimming, brightening or dimming, the dimming range is 2-100%.

C. Memory:

PUSH dimming has dimming memory function.

D. Dimming synchronization:

The power connected to the same PUSH switch can be synchronized by pressing and holding the PUSH switch for longer than 15S

E. DALI dimming mode:

Connect the power supply to the DALI system, and it can be dimmed by the DALI host. The dimming range is 0-100%.

8. matters needing Attention

- 1) The LED string must be connected to the load before turning on the input power, otherwise the LED string may be damaged.
- 2) After the LED drive input is powered off, there will be a residual voltage at the output, which can be maintained for about 3 minutes.