

SPECIFICATION

Product Name: DALI 2 Dimmable LED driver

Model No.: KL12C-PDii1; KL20C-PDii1; KL30C-PDii

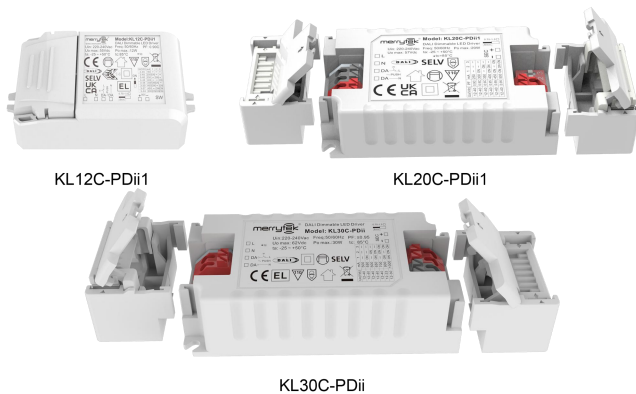
Issue Date: January 6, 2025

CUSTOMER APPROVED



Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	DALI LED driver		Design verification	2023-01-29
A1	DALI LED driver	Change the logo	Mass production	2024-07-23
A2	DALI LED driver	Change product description	Mass production	2024-11-20
A3	DALI LED driver	Update Automatic circuit breaker		2025-01-06

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



- Flicker-free for whole dimming range
- Stand-by power below 0.5W
- Primary dimming with push button
- Built-in DALI interface DT6
- Centrally-supplied DC emergency operation DT19
- CLO compensation
- Protection: short circuit / over temperature/ over voltage
- Derating current for over high ambient temperature
- Push dim with memory function
- 5 year warranty

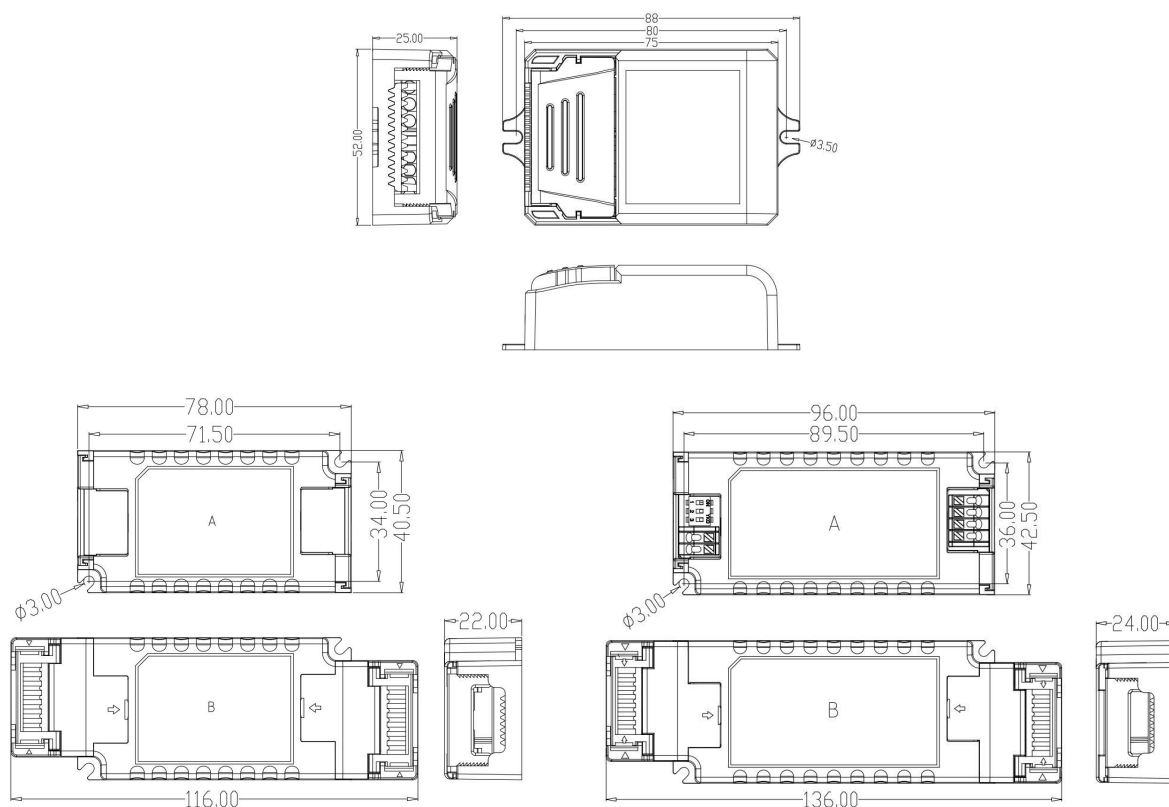
1. Parameters

	Micro series	KL12C-PDii1	KL20C-PDii1	KL30C-PDii				
Input	Operating Voltage	198-264Vac 50Hz/60Hz						
	Rated Input Voltage	220-240Vac 50Hz/60Hz						
	DC Input Voltage range	200-240Vdc						
	Input Current	0.07A Max.	0.11A Max.		0.16A Max.			
	Input Inrush Current	<15A (Half current pulse width100μs) @230Vac						
	Power factor(@230V100% load)	≥ 0.90	≥ 0.90		≥ 0.95			
	Total harmonic distortion (@230Vac, 100% load)	Typical:15%	Typical:20%					
	Stand-by power	≤0.5W (@230Vac when PUSH or DALI turn off)						
	Efficiency(@230Vac,100% load)	83%	88%		88%			
	Wiring Method	0.75-1.5mm ²						
	Automatic circuit breaker	KL12C-PDii1 (Calculate current in the wire)						
		type	B10	B13	B16	B20	B25	/
		Number	35	40	55	70	80	/
		type	C10	C13	C16	C20	C25	C32
		Number	65	80	95	125	150	190
		KL20C-PDii1 (Calculate current in the wire)						
		type	B10	B13	B16	B20	B25	/
		Number	25	35	45	55	65	/
		type	C10	C13	C16	C20	C25	C32
		Number	60	70	80	110	130	160
		KL30C-PDii (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	

Output	Operating mode	Constant Current		
	Load type	LED		
	Ripple requirement (Flickering or Flickering-Free)	Flicker value: less than 5% for whole dimming range		
	Start up time	<1s (@230Vac)		
	No-load output voltage	55V DC Max.	57V DC Max.	62V DC Max.
	Load output voltage range	3-40V DC	12-40V DC	12-40V DC
	Full load output power	12W	20W	30W
	Load output current: For details<Current gear setting>	150-500mA	250-500mA	500-1000mA
	Constant current/voltage Precision	Constant Current Precision $\pm 5\%$		
	Wiring method	Push terminal, wire cross section:0.75-1.5mm ²		
Control Method	Primary PUSH Dimming	Primary PUSH dimming (Max.lead length: 20M)		
	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)	85℃		
Safety & EMC	EMC standard	EN55015 EN61547 EN61000-3-2 EN61000-3-3		
	DALI protocol standard	IEC62386-102, IEC62386-207 DT6 251 252 253 DT19		
	Safety standard	EN61347-1 EN61347-2-13		
	Certification	CE		
	Withstand voltage	3750Vac, 5mA, 60s (Input "L N"- Output "SEC")		
Others	Degrees of protection	IP20		
	Type of protection	Class II		
	Installation type	Independent installation		
	With crimping	88*52*25.5mm	116*40.5*22mm	136*42.5*24mm
	Without crimping	/	78*40.5*22mm	96*42.5*24mm
	Blackout memory function	Yes, PUSH blackout memory		
	PUSH dimming synchronization	15 units Max.		
	Packaging requirement	PE bag+Instruction+clapboard+outer carton (K=A)		
	Weight	69.8g	80.2g	103.9g
	Life	5 year @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

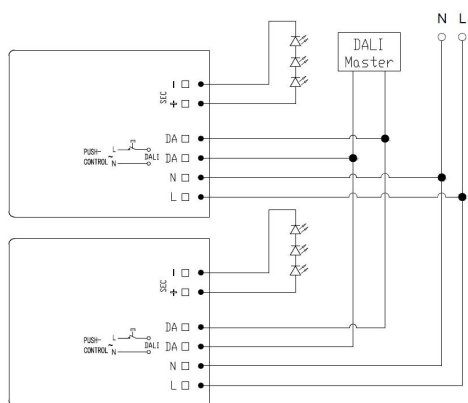


Fig.A DALI Dimming

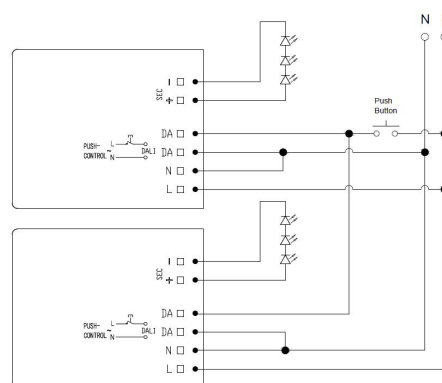
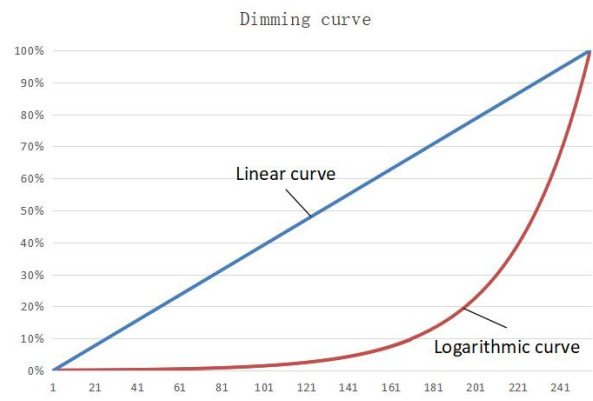
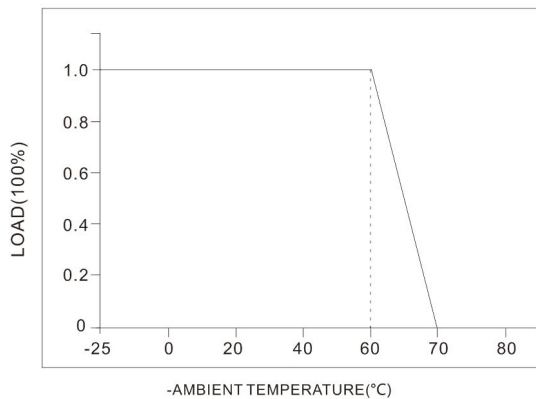


Fig.B Push Dimming

4. Derating & Dimming curve



5. Current gear setting:

KL12C-PDii1 Current gear setting	1	2	3
150mA (3-40V)	-	-	-
200mA (3-40V)	ON	-	-
250mA (3-40V)	-	ON	-
300mA (3-40V)	-	-	ON
350mA (3-36V)	ON	ON	-
400mA (3-30V)	ON	-	ON
450mA (3-27V)	-	ON	ON
500mA (3-24V)	ON	ON	ON

KL30C-PDii Current gear setting	1	2	3
500mA (12-40V)	-	-	-
550mA (12-40V)	ON	-	-
600mA (12-40V)	-	ON	-
650mA (12-40V)	ON	ON	-
700mA (12-40V)	-	ON	ON
900mA (12-33V)	ON	-	ON
1000mA (12-30V)	ON	ON	ON

KL20C-PDii1 Current gear setting	1	2	3
250mA (12-40V)	-	-	-
300mA (12-40V)	ON	-	-
350mA (12-40V)	-	ON	-
400mA (12-40V)	ON	ON	-
450mA (12-40V)	ON	-	ON
500mA (12-40V)	ON	ON	ON

6. ON/OFF & Description of Dimming Operation

- Short press the PUSH switch (short press time 0.1s-1s), the LED driver will turn on or off.
- Dimming: Press and hold the PUSH switch (1s-8s), the LED driver can achieve dimming, brightening or dimming, the dimming range is 2-100%.
- 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%.

7. 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.