

SPECIFICATION

Product Name: DALI 2 Dimmable LED driver

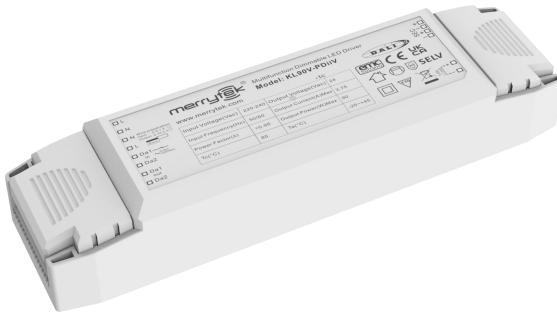
Model No.: KL90V-PDiV&1; KL120V-PDiV1

Issue Date: February 12, 2025

CUSTOMER APPROVED

Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	KL90V-PDiiV&1 KL120V-PDiiV1		Design verification	2022-01-18
A1	KL90V-PDiiV&1 KL120V-PDiiV1	Correct the error		2022-06-16
A2	KL90V-PDiiV&1 KL120V-PDiiV1	Correct the error		2023-03-31
A3	KL90V-PDiiV&1 KL120V-PDiiV1	Change the logo		2024-08-17
A4	KL90V-PDiiV&1 KL120V-PDiiV1	Update Automatic circuit breaker		2025-01-06
A5	KL90V-PDiiV&1 KL120V-PDiiV1	Correct the error		2025-02-12

Specification for DALI 2 Dimmable LED Driver C.V.



- Flicker-free for whole dimming range
- Stand-by power below 0.5W
- Primary dimming with push button
- Secondary dimming with 0-10V dimmer and potentiometer
- Built-in DALI interface DT6
- Supports 10V PWM dimming (3KHz-8KHz)
- Protection: short circuit / over temperature/ over voltage
- Derating current for over high ambient temperature
- Push dim with memory function
- 5 year warranty

1. Parameters

Series	Name	KL90V-PDiIV				KL90V-PDiIV1				KL120V-PDiIV1			
Input	Voltage range	198~264Vac 50Hz /60Hz											
	Rated supply voltage	220~240Vac 50Hz /60Hz											
	DC voltage range	200~240Vdc											
	Input current （@230Vac）	0.46A Max				0.45A Max				0.6A Max			
	Inrush Current	30A (Half current pulse width 100US) @230VAC											
	Power factor	≥ 0.95 （@230Vac,100% load）											
	Total harmonic distortion	Typical: 6% （@230Vac, 100% load）											
	Stand-by power	≤0.3W											
	Efficiency （230Vac,100% load）	91%Max				92%Max				92%Max			
	Wiring method	Push terminal, wire cross section:0.5-1.5mm ²											
	Loop-in&Loop-out quantity	16PCS （@230Vac）				16PCS （@230Vac）				12PCS （@230Vac）			
	Automatic circuit breaker type (Calculate current in the wire)	B10	7	C10	12	B10	7	C10	12	B10	6	C10	10
		B13	9	C13	16	B13	9	C13	16	B13	7	C13	13
B16		11	C16	20	B16	11	C16	20	B16	9	C16	16	
B20		14	C20	25	B20	14	C20	25	B20	11	C20	20	
B25		17	C25	35	B25	17	C25	35	B25	14	C25	25	
/		/	C32	35	/	/	C32	35	/	/	C32	30	
Output	Operating mode	Constant voltage											
	Load type	LED											
	Flickering / Flickering-Free	Flickering-Free											
	Start up time	<1s (@230Vac)											
	Forward voltage	12V				24V				24V			
	Output current	7.5A				3.75A				5A			
	Max. output voltage (no-load)	20V				30V				30V			
	Full load output power	90W Max.				90W Max.				120W Max.			
	Minimum load	9W				9W				12W			

Shenzhen Merrytek Technology Co.,Ltd

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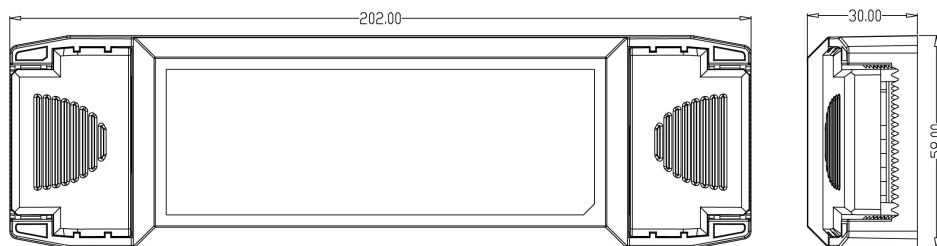
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Website: www.merrytek.com

Output	Output current/voltage tolerance	±5%		
	Wiring method	Screw terminal, wire cross section:2*0.5-2.5mm ²		
Control Method	Primary PUSH Dimming	Primary PUSH dimming (Max. lead wire length: 20m)		
	1-10V (0-10V) Dimming	0-10V dimming (Port current<1mA), (Max. lead wire length: 20m)		
	Dimming Range	0%-100%		
	Secondary PWM dimming	0-10V port PWM dimming (3KHz-8KHz)		
	Potentiometer	Yes, 100kΩ		
	DALI function	DALI dimming (Max. lead wire length: 300m)		
Exception Protection Requirements	Output over temperature protection	Yes, reset power on to recover		
	Output short circuit protection	Yes, reset power on to recover		
Operating Environment	Storage temperature/ humidity	-40℃~80℃, Humidity:10% – 95%		
	Operating temperature/ humidity	-25~50℃	-25~50℃	-25~40℃
	Max. case temp (Tc)	85℃	85℃	90℃
Safety & EMC	EMC standard	EN55015, EN61547, EN61000-3-2, EN61000-3-3		
	DALI standard	IEC62386-102, IEC62386-207		
	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		
	Installation dimension	202*58*30mm		
	Memory function	Yes, (PUSH with memory function)		
	PUSH dimming synchronization	Parallel: 15 units Max. Series: 25 units Max.		
	Packaging requirements	Instruction+clapboard+outer carton (K=A)		
	Weight	400g		
	Life	5 years @Ta 100% load		
Note: All parameters are tested at the input voltage of 230Vac and 25 degree environment unless specified.				

2. Dimension (Unit: mm)



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3. Wiring Diagram

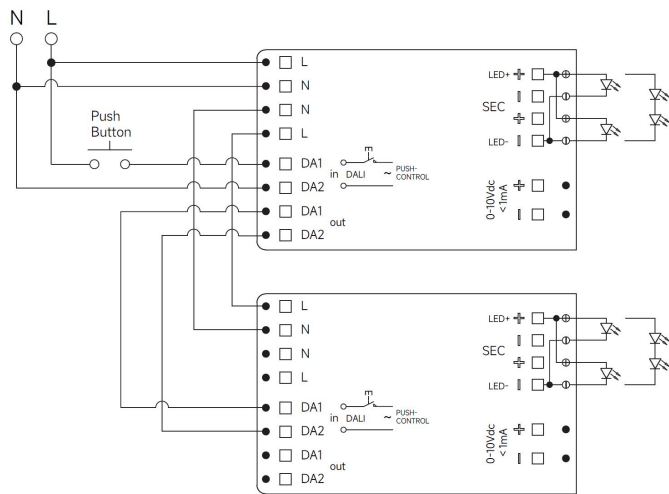


Fig. A: Push Dimming (Parallel)

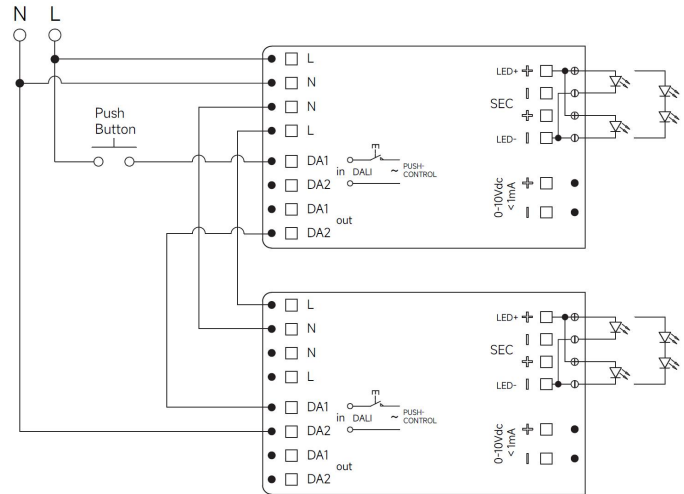


Fig. B: Push Dimming (series)

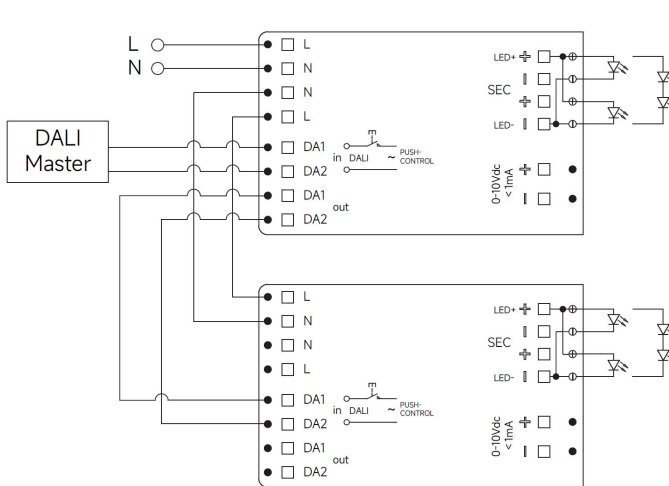


Fig. C: DALI Dimming

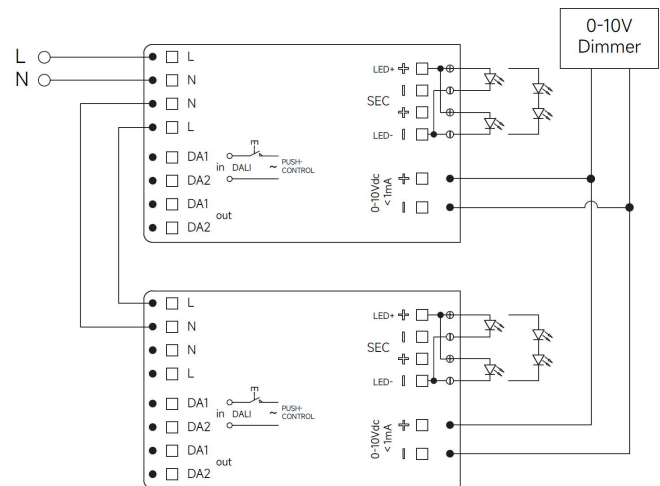
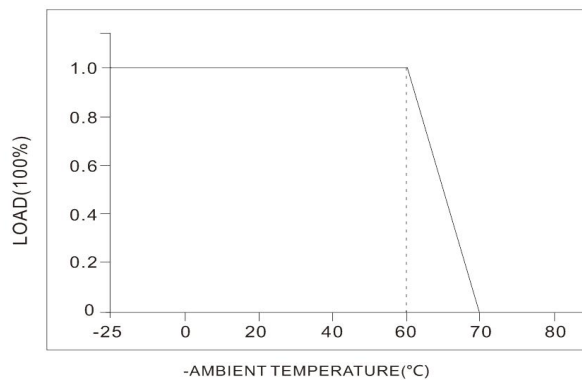
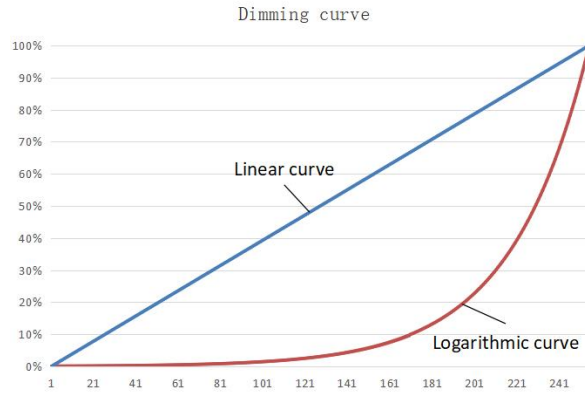


Fig. D: 0-10V Dimming

4. Derating



5. Dimming curve



6. 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%.

F. Constant voltage dimming drivers cannot be used in lamps with constant current circuits.