



# SPECIFICATION

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

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**Model No.:** KL12C-PDii;KL20C-PDii;KL35C-PDii

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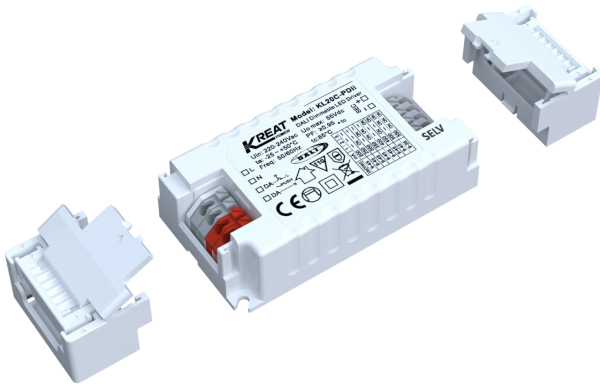
**Issue Date:** June 15, 2023

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CUSTOMER APPROVED

Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	Micro series		Design verification	2020-12-22
A1	Micro series			2023-3-29
A2			fix bug	2023-06-15

## Specification for DALI 2 Dimmable LED Driver Micro 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
- Protection: short circuit / over temperature/ over voltage
- Derating current for over high ambient temperature
- Push dim with memory function
- 5 year warranty

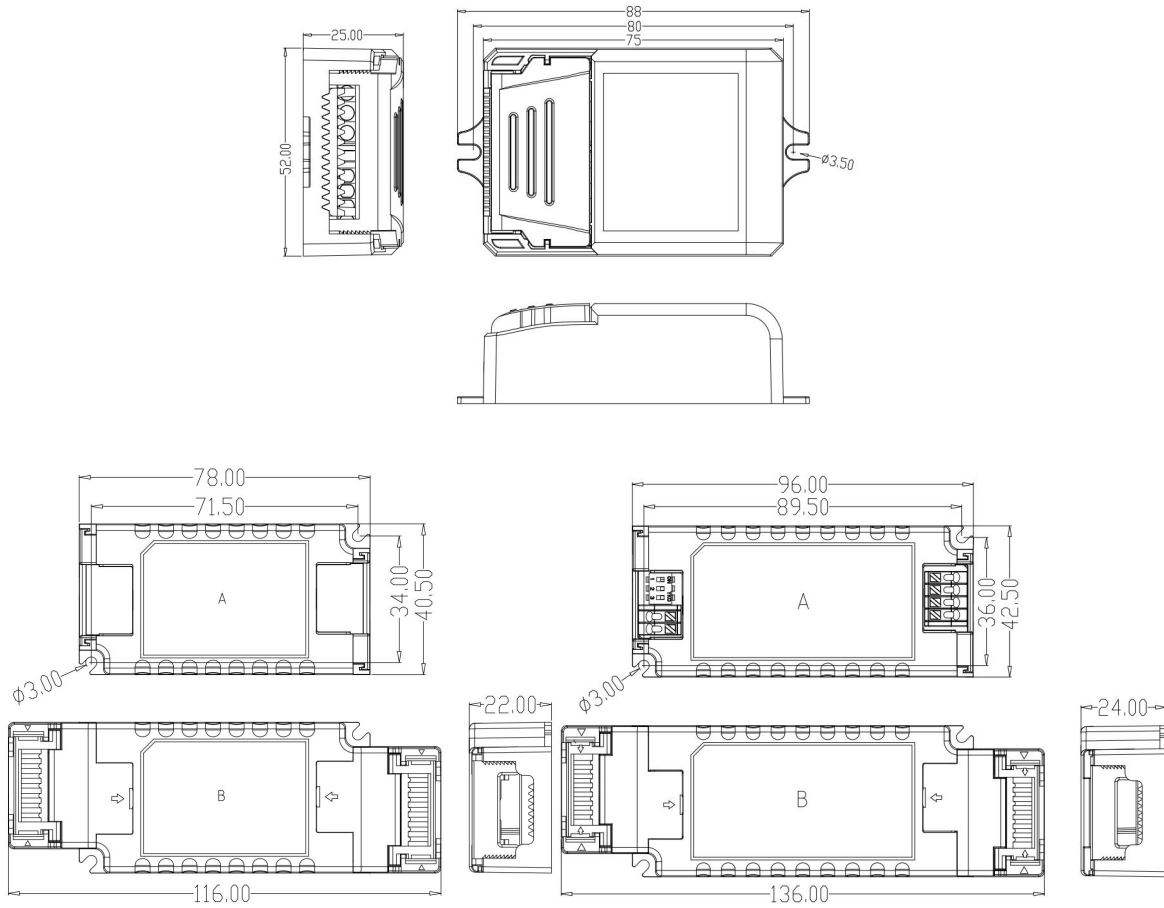
### 1. Parameters

	Micro series	KL12C-PDii	KL20C-PDii	KL35C-PDii		
Input	Operating Voltage	198-264Vac 50Hz /60Hz				
	Rated Input Voltage	220-240Vac 50Hz /60Hz				
	DC Input Voltage range	200-240Vdc				
	Input Current	0.08A Max.	0.12 Max.	0.2 Max.		
	Input Inrush Current	<15A (Half current pulse width100µs) @230Vac				
	Power factor(@230V100% load)	≥ 0.93C	≥ 0.94	≥ 0.95		
	Total harmonic distortion	Typical: 18% (@230Vac, 100% load)				
	Stand-by power	≤0.5W (@230Vac when PUSH or DALI turn off)				
	Efficiency(@230Vac,100% load)	83%	88%	87%		
	Wiring Method	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>		
	Automatic circuit breaker	KL12C-PDii (Calculate current in the wire)				
type		C10	C13	C16	C20	C25
Number		70	80	105	130	160
type		B10	B13	B16	B20	B25
Number		40	50	65	85	100
KL20C-PDii (Calculate current in the wire)						
type		C10	C13	C16	C20	C25
Number		45	50	70	95	110
type		B10	B13	B16	B20	B25
Number		25	35	45	55	65
KL35C-PDii (Calculate current in the wire)						
type		C10	C13	C16	C20	C25
Number		40	55	65	75	90
type		B10	B13	B16	B20	B25
Number		25	30	40	50	60
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	30V DC Max.	55V DC Max.	55V DC Max.	
	Load output voltage range	3-24V DC	3-45V DC	3-40V DC	
	Full load output power	12W	20W	35W	
	Load output current			200mA(3-45)	700mA(3-40)
				250mA(3-45)	750mA(3-40)
			350mA(3-24)	300mA(3-45)	800mA(3-40)
		500mA(3-24)	350mA(3-45)	850mA(3-40)	
		550mA(3-22)	400mA(3-45)	900mA(3-38)	
		700mA(3-17)	450mA(3-45)	950mA(3-36)	
		500mA(3-40)	1000mA(3-35)		
		550mA(3-36)	1050mA(3-33)		
Constant current/voltage Precision	Constant Current Precision $\pm 5\%$				
Wiring method	Push terminal, wire cross section:0.75-1.5mm <sup>2</sup>				
<b>Control Method</b>	Primary PUSH Dimming	Primary PUSH dimming (Max.lead length: 20M)			
	DALI Dimming	DALI dimming (Max.lead length: 300M)			
<b>Exception Protection Requirements</b>	Output over temperature protection	Yes, without self recovery function (Can be inquired)			
	Output short circuit protection	Yes, without self recovery function (Can be inquired)			
<b>Operating Environment</b>	Operating temperature/ humidity	-25℃~50℃ Humidity:85% (Non-condensing)			
	Storage temperature/ humidity	-40℃~80℃, Humidity:10% - 95%			
	Max. case temp (Tc)	85℃			
<b>Safety &amp; EMC</b>	EMC standard	EN55015 EN61547 EN61000-3-2 EN61000-3-3			
	DALI protocol standard	IEC62386-102, IEC62386-207 DT6			
	Safety standard	EN61347-1 EN61347-2-13			
	Certification	ENEC CB CE			
	Withstand voltage	3750Vac, 5mA, 60s (Input "L N"- Output "SEC")			
<b>Others</b>	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	20 units Max.			
	Packaging requirement	Instruction+clapboard+outer carton (K=A)			
	Weight	105g	159g	209g	

	Design life	10 years ( @ Ta - 15 °C )
	Warranty	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

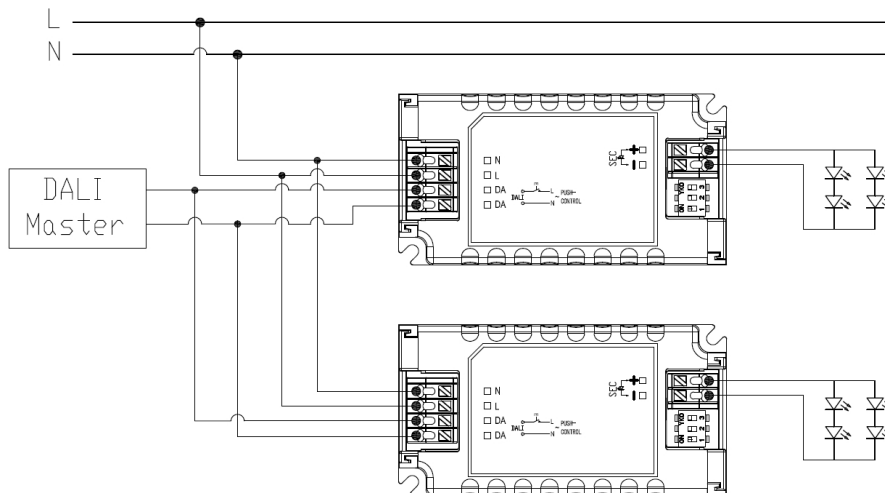
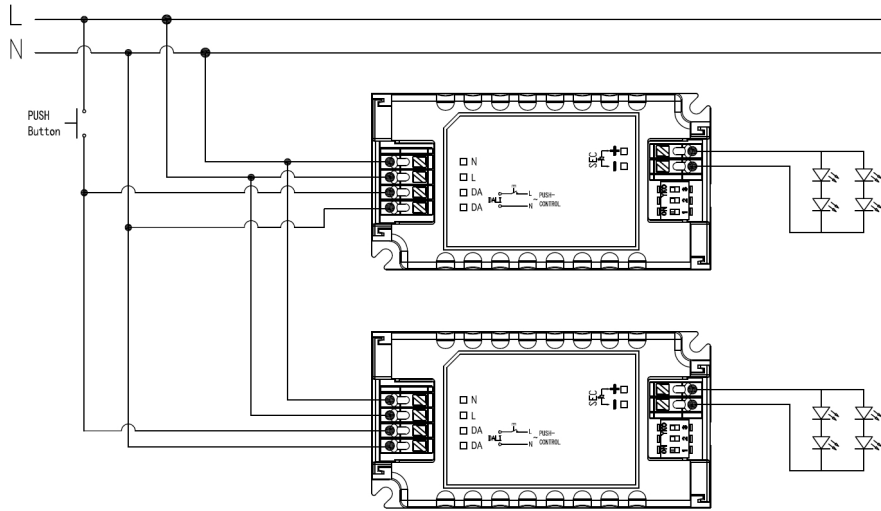
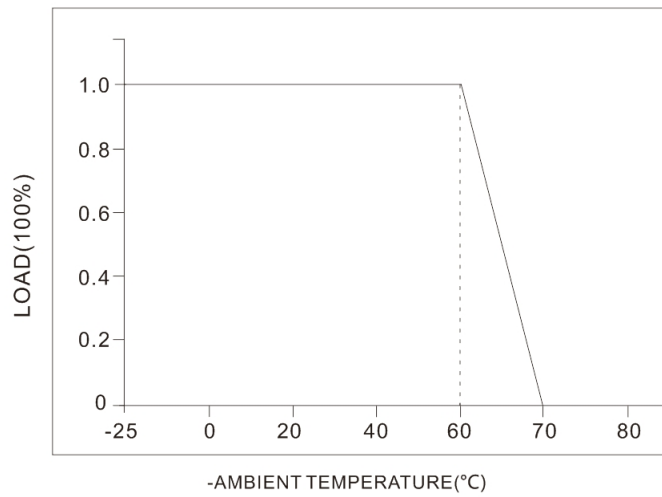


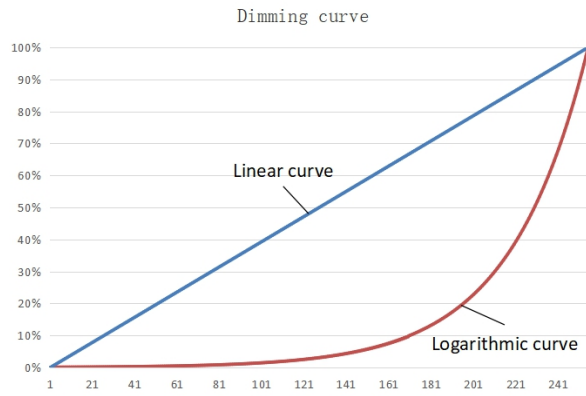
Fig.B Push Dimming



#### 4. Derating



#### 5. Dimming curve



## 6. Current gear setting:

KL12C-PDii Current gear setting	1	2
350mA (3-40V)	☐	☐
500mA (3-40V)	■	☐
550mA (3-38V)	☐	■
700mA (3-36V)	■	■

KL20C-PDii Current gear setting	1	2	3	KL35C-PDii Current gear setting
200mA (3-45V)	-	-	-	700mA (3-40V)
250mA (3-45V)	ON	-	-	750mA (3-40V)
300mA (3-45V)	-	ON	-	800mA (3-40V)
350mA (3-45V)	ON	ON		850mA (3-40V)
400mA (3-45V)	-	-	ON	900mA (3-38V)
450mA (3-45V)	ON	-	ON	950mA (3-36V)
500mA (3-40V)	-	ON	ON	1000mA (3-35V)
550mA (3-36V)	ON	ON	ON	1050mA (3-33V)

## 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.