Constant Voltage Driver

Model:L160V24-X L160V24-2X
L160V48-X L160V48-2X

Model	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)	Cementing product
L160V24-X L160V24-2X	220-240VAC	≤178W	≤0.9A	≥0.9	8-160W	24V	0.33-6.67A	92%	Y
L160V48-X L160V48-2X		≤178W	≤0.9A		8-160W	48V	0.166-3.34A	92%	Y

*** Test result @230V, 50Hz, Full Load. * Recommended minimum power is 5% load.**

1. Parameters

Category	Item	Technical Norm				
Features	Output Type	Constant Voltage				
	Dimmable Type	Casambi / matter / tuya				
	Output Features	Isolation SELV				
	IP Grade	IP20				
	Insulation Class	Class II(It can meet the requirements of Class I lamps)				
Input	Rated Input Voltage	220-240VAC				
	Range of AC Input Voltage	198-264VAC				
	Range of DC Input Voltage	198-280VDC（EMI not evaluated）				
	Frequency	Rate:50/60Hz, Range:47~63Hz				
	Power Factor	≥0.9, 220-240VAC, Rated Load, see graphs				
	THD	≤10%	230VAC，Rated Load, see graphs			
	Standby Power Consumption	≤1W, @230VAC,Dim to OFF				
	Inrush Current	Model	I_{peak}	I_{peak} (typ.)	Duration time	240Vac/50Hz, 90-degree phase, full load, cold start-up, duration time measure from 50%Ipk to 50%Ipk
		160W	<60A	55A	680us	
Output	Output Voltage	23.3-24.7VDC				
		46.5-49.5VDC				
	No load Voltage	24-25VDC				
		48-50VDC				
	Output Voltage Ripple	±5%				
	Line Regulation	±5%				
	Load Regulation	±5%				
	filcker	SVM ≤0.4，PstLM ≤1.0				
	Start-up Time	≤1S (220-240VAC)				

	Hold-up time & Turn off time (Typical)	Model	Hold-up time(mS)	Turn-off time(mS)	230VAC, LED Rated Load, Hold-up time measure from AC input turn-off to output voltage drop to 90%, turn-off time measure from AC input turn-off to output voltage drop to 10%
		160W	46	296	
	Efficiency	160W	≥92%	92% typ.	230VAC, Rated Load, at output terminals, see graphs
Protection	Short Circuit Protection	Auto Recovery			
	Over Current Protection	Auto Recovery			
	Over Voltage Protection	Auto Recovery			
	Insulation voltage	I/P to O/P,3KVac/5mA/1min			
	Insulation resistance	>100M ohm @ 500VDC			
	Leakage current	I/P to O/P < 250μA			
Environment	Ta/Operation Temperature	-25….+45℃			
	Ts/Storage Temperature	-40….+85℃			
	Tc/Enclosure Temperature For Safety	90℃			
	Humidity	5%....85%RH			
	Atmosphere	86-108KPa			
Construction	Connection Method	Push-in Terminal			
	Cable Terminals	PRI		1 terminal block	
		SEC		3 terminals block	
	Installation	Independent			
	PRI Wire Cross Section	0.75mm²-2 mm²			
	SEC Wire Cross Section	0.75mm²-2 mm²			
	SEC Cable Length	Max. 3M			
	Cable diameters range	PRI		1.5-3mm	
		SEC		1.5-3mm	
	Dimension	160W		310.6*42.5*22.5mm (L*W*H)	
Standards	Certification	CE			
	Safety Standards	EN61347-2-13:2014/A1:2017,EN62384:2006/A1:2009, EN61347-1:2015,AS61347.2.13:2018, AS/NZS 61347.1:2016 Inc A1			
	EMC Standards	EN IEC 55015:2019,EN IEC 55015:2019/A11:2019 EN IEC 61000-3-2:2019,EN61547:2009, EN 61000-3-3:2013/A1:2019			
	Performance	EN62384			
	Surge	L-N:2KV			
Others	RoHS	2011/65/EU			
	Audible Noise	<22dB @ 20cm distance, 15dB background			
	Life Time	160W	≥50K Hrs	@230VAC , full load, see graphs. End of Life: Failure Rate<10%.	
	Warranty	5years			

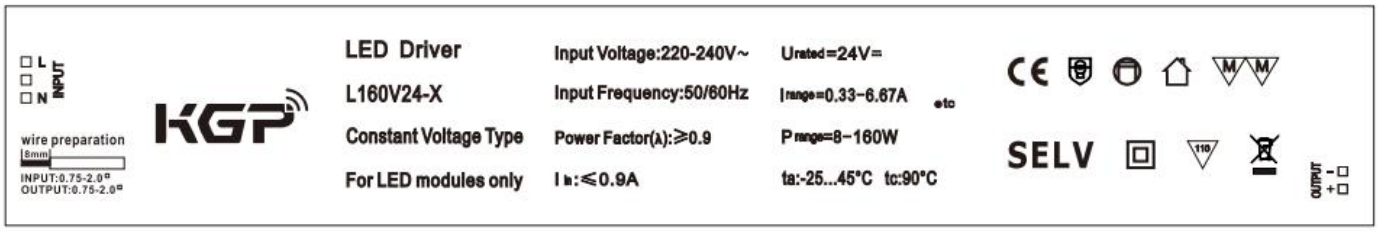
Remark: 1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25℃ ambient temperature.
2. LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
3.Output ripple should be measured at the output end which has with 0.1uF/50V ceramic capacitance and 47uF/50V Aluminum capacitance connected in parallel. Measured using oscilloscope with bandwidth limited to 20MHz.

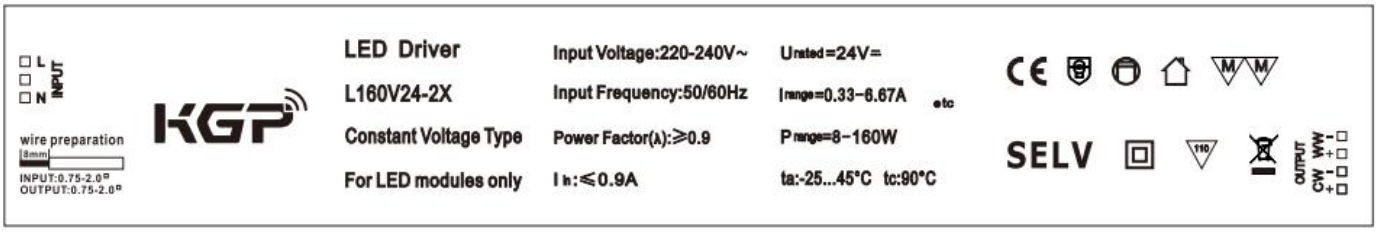
2. Connected quantities of different current Breaker

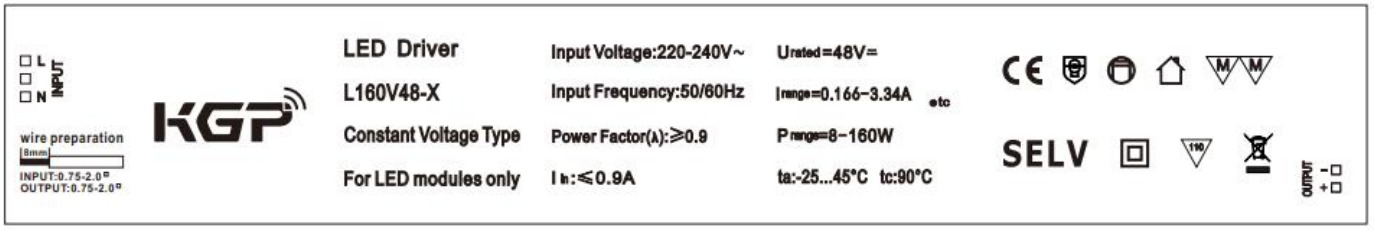
TYPE	L160V24-X -2X Connected quantities of different current Breaker						Input Voltage	Inrush Current <55A	Time
	Current(A)	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		13	17	21	26	33	@230Vac	46	296us
TYPE C		21	27	33	42	52			
TYPE D		33	43	53	67	83			

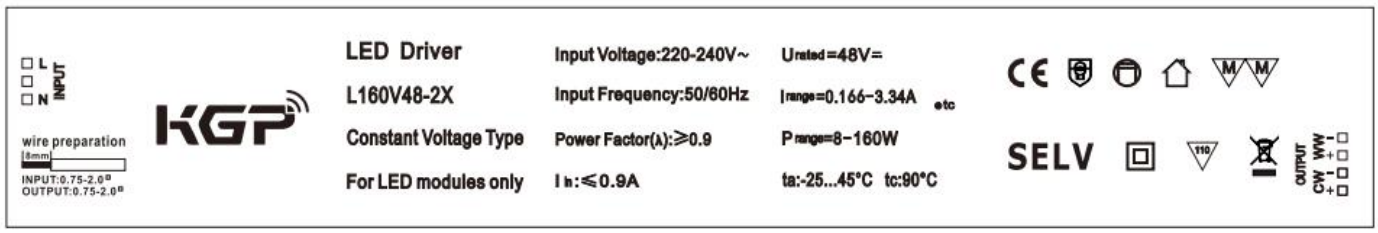
TYPE	L160V48-X -2X Connected quantities of different current Breaker						Input Voltage	Inrush Current <55A	Time
	Current(A)	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		13	17	21	26	33	@230Vac	46	296us
TYPE C		21	27	33	42	52			
TYPE D		33	43	53	67	83			

3. Label



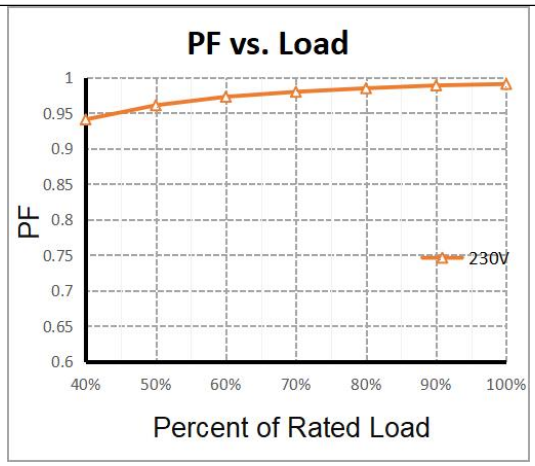


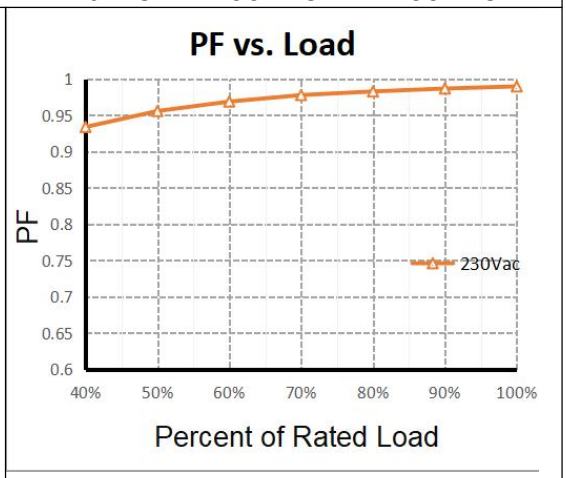




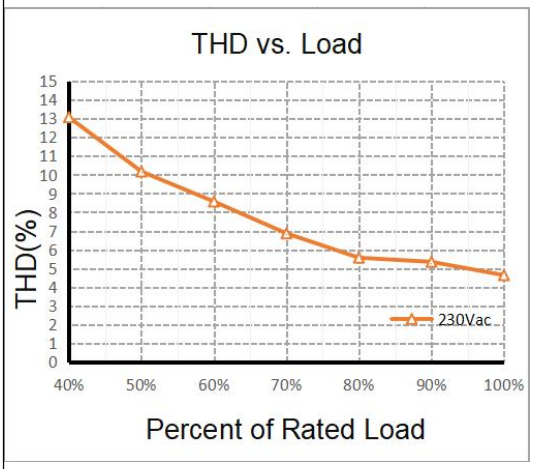
4. Graph

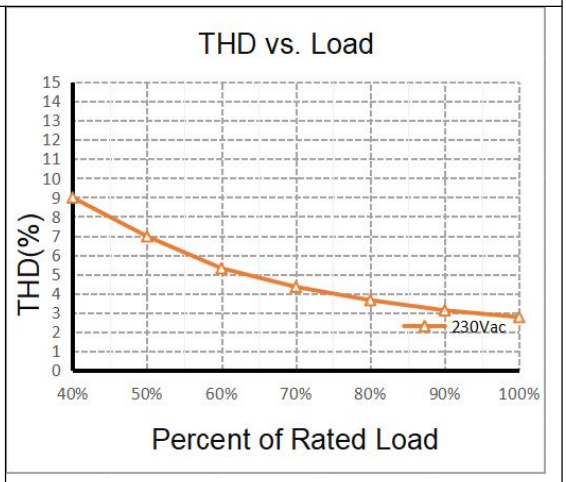
L160V24-X L160V24-2X PF VS LOAD Curve L160V48-X L160V48-2X



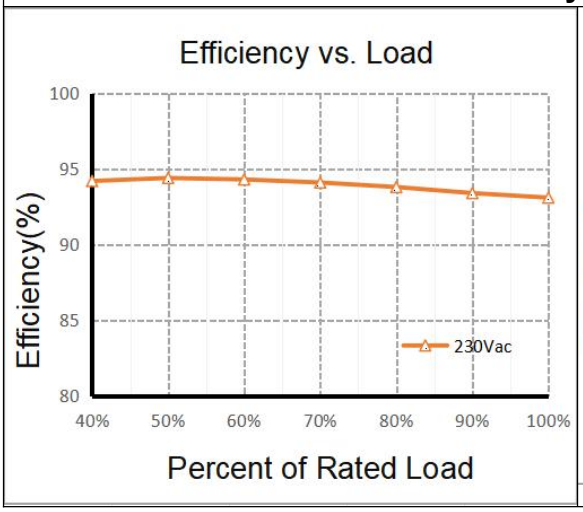


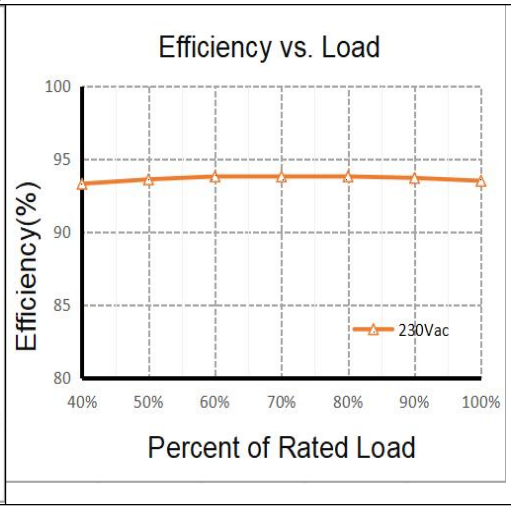
L160V24-X L160V24-2X THD vs. Load L160V48-X L160V48-2X



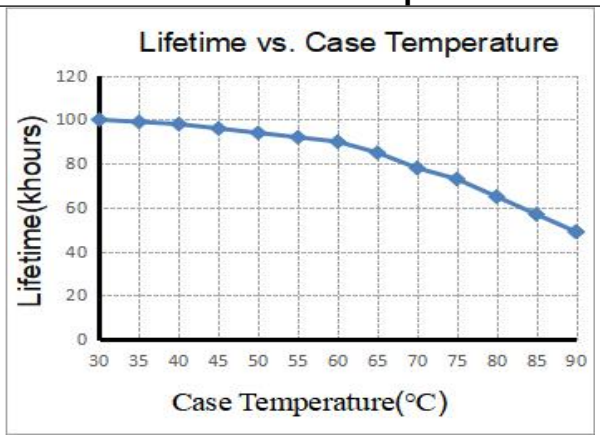


L160V24-X L160V24-2X Efficiency vs. Load L160V48-X L160V48-2X

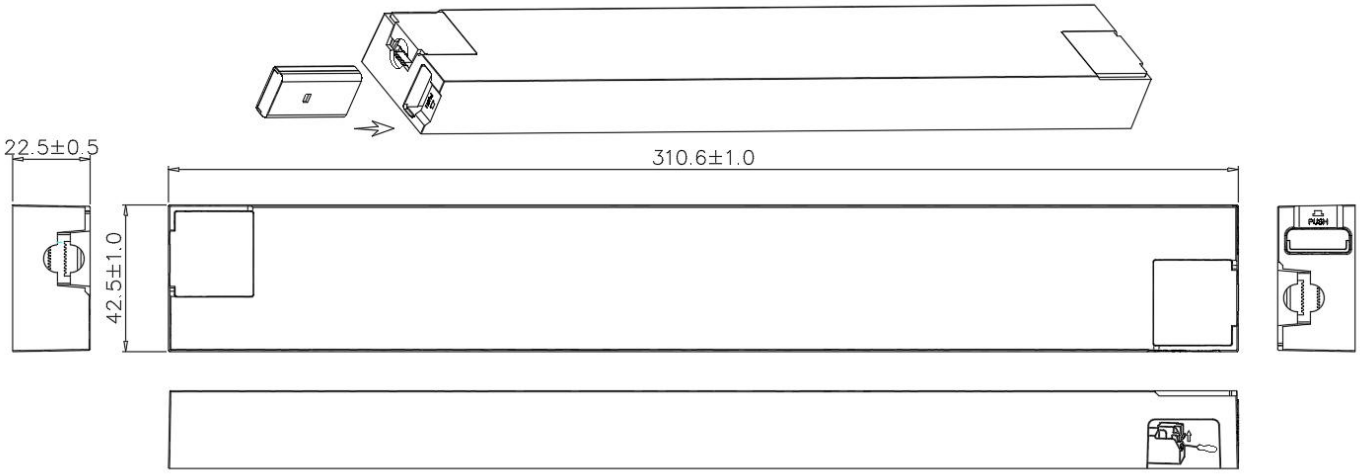




Lifetime vs. Case Temperature



5. Dimension （Unit：mm）



6. Packing information

Packing way	Model	Carton L*W*H(mm)	Pcs/ Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight /Carton(kg)
With white box and manual	L160V24-X/ -2X Casambi/matter/tuya	345*310*158	35	0.4	14	15.2
	L160V48-X/ -2X Casambi/matter/tuya		35	0.4	14	15.2
Without white box and manual	L160V24-X/ -2X Casambi/matter/tuya		35	0.4	14	14.8
	L160V48-X/ -2X Casambi/matter/tuya		35	0.4	14	14.8

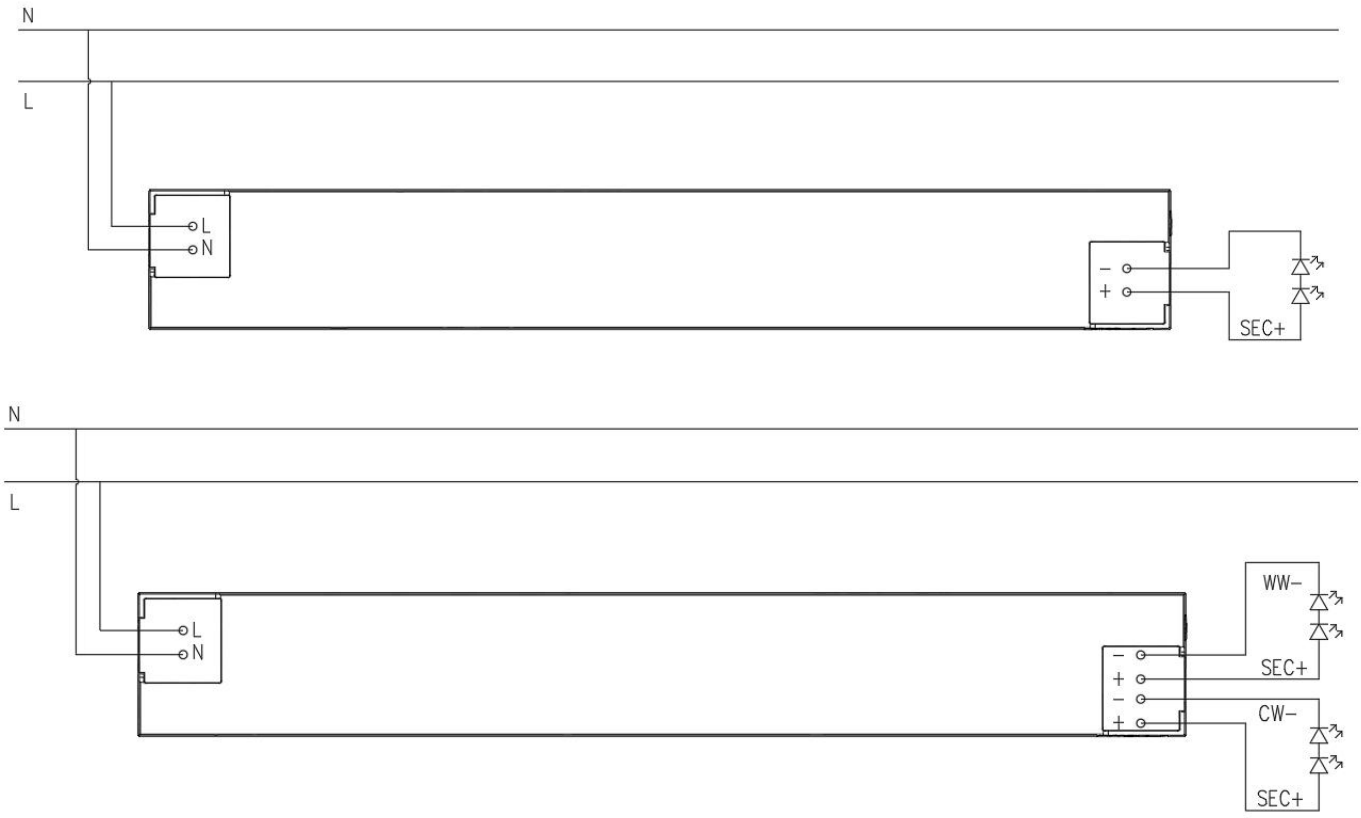
7. IOT module list approved by KGP

1CH	2CH
CASAMBI	CASAMBI
Matter WiFi	Matter WiFi
Matter Thread	Matter Thread
WiFi+BLE	WiFi+BLE
BLE	BLE
Zigbee	Zigbee

8. 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 3 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.)

9. Wiring Diagram



10. REVISION HISTORY

DATE	REV.	REMARK
2024-4-15	V1.0	Initial release.