



Constant Voltage Driver

Model: XSV Series



Model	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)
XSV30W24 DALI	220-240VAC	≤36W	≤0.2A	≥0.95	0-30W	24V	1.25A	85%
XSV60W24 DALI		≤72W	≤0.35A		0-60W		2.5A	88%
XSV100W24 DALI		≤115W	≤0.6A		0-100W		4.17A	92%
XSV160W24 DALI		≤180W	≤0.9A		0-160W		6.67A	92%
XSV240W24 DALI		≤265W	≤1.5A		0-240W		10A	93%

* Test result @230V, 50Hz, Full Load.

1. Parameters

category	Item	Technical Norm						
Features	Output Type	Constant Voltage						
	Dimming Type	DALI-2						
	Output Features	Isolation SELV						
	IP Grade	IP67						
	Installation	Independent						
	Insulation Class	Class I						
Input	Rated Input Voltage	220-240VAC						
	Range of AC Input Voltage	176-264VAC						
	Range of DC Input Voltage	175-280VDC (EMI not evaluated)						
	Frequency	Rate:50/60Hz, Range:47~63Hz						
	Power Factor	≥0.95, 220-240VAC, Rated Load, see graphs						
	THD	≤10%, 230VAC, Rated Load, see graphs						
	Standby Power Consumption	≤0.5W, @230VAC, Dim to OFF						
	Inrush Current	Model	IP	IP (typ.)	Duration time	240Vac/50Hz, 90-degree phase, full load, cold start-up, duration time measure from 50%Ipk to 50%Ipk		
		30W	<30A	25A	160us			
		60W	<30A	26A	220us			
160W		<50A	45A	250us				
160W		<60A	56A	260us				
240W	<80A	76A	310us					
Connected quantity of 16A Breaker	30W	19pcs, 16A type B / 32pcs 16A type C						
	60W	16pcs, 16A type B / 26pcs 16A type C						

		100W	10pcs,16A type B / 16pcs 16A type C	
		160W	8pcs,16A type B / 13pcs 16A type C	
		240W	6pcs,16A type B / 8pcs 16A type C	
Output	Output Voltage	24VDC \pm 3%		
	Rated Load Range	30W	12-30W	
		60W	24-60W	
		100W	30-100W	
		160W	48-160W	
		240W	72-240W	
	Output Voltage Ripple	30W	<480mV _{PK-PK} (1%)	
		60W/100W/160W/240W	<240mV _{PK-PK} (0.5%)	
	Line Regulation	\pm 1%		
	Load Regulation	\pm 2%		
	Overshoot	<105%Vo (<110%Vo, only for 36W)		
	Start-up Time	0.6S(typ.) (220-240VAC)		
Efficiency	30W	\geq 84%	85% typ.	230VAC, Rated Load, at output terminals, see graphs
	60W	\geq 86%	88% typ.	
	100W	\geq 90%	92% typ.	
	160W	\geq 90%	92% typ.	
	240W	\geq 91%	93% typ.	
Protection	Short Circuit Protection	Auto Recovery		
	Over Current Protection	120%-200%Io, Auto Recovery		
	Over Voltage Protection	120%-150%Vo, Auto Recovery		
	Over Temperature Protection	90<Tc<110°C, Auto Recovery		
	Insulation voltage	I/P to O/P,3KVac/5mA/1min		
	Insulation resistance	>100M ohm @ 500VDC		
	Leakage current	I/P to O/P < 250 μ A		
Control Method	PUSH dimming	PUSH dimming (Max. lead wire length: 20m, same port of DALI)		
	PUSH Dimming Synchronization	The power connected to the same PUSH switch can be synchronized by pressing and holding the PUSH switch for longer than 10S.		
	DALI function	DALI dimming (Max. lead wire length: 300m) logarithm or linear dimming curve selectable		
	Dimming range	DALI dimming: 1%-100%, (1KHz)		
Environment	Ta/Operation Temperature	-25....+50°C		
	Ts/Storage Temperature	-40....+85°C		
	Tc/Enclosure Temperature For Safety	30W/60W/100W	80°C	
		160W/240W	85°C	
	Humidity	5%....85%RH		
Atmosphere	86-108KPa			
Standards	Certification	CE		
	Safety Standards	EN61347-1:2015,EN61347-2-13:2014/A1:2017,EN62493:2015,		

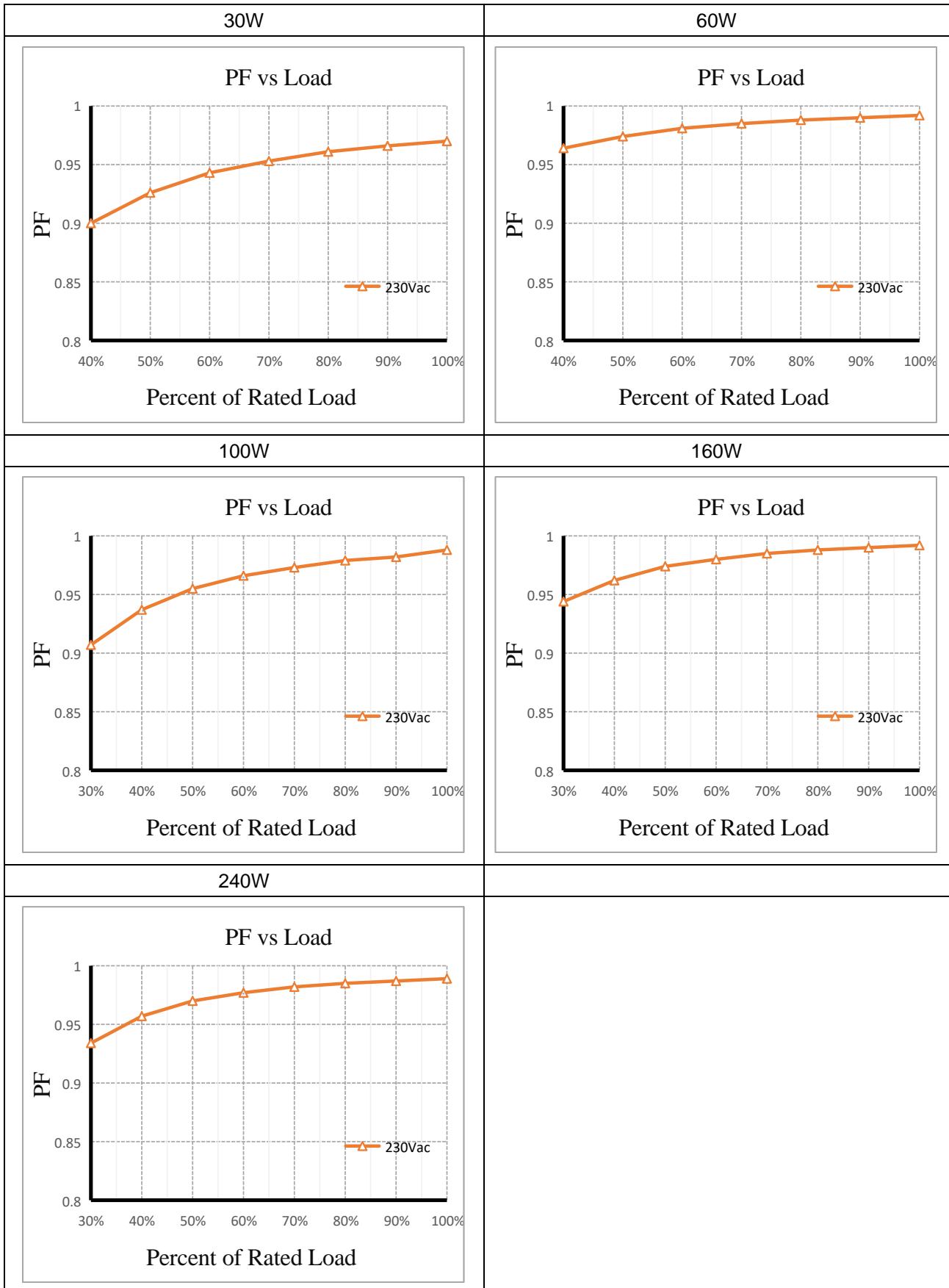
		AS61347.2.13:2018,AS/NZS 61347.1:2016 Inc A1		
	EMC Standards	EN55015:2013/A1:2015,EN61000-3-2:2014,EN61000-3-3:2013, EN61547:2009		
	Performance	EN62384;IEC 62386-101 Edition2.0 2014-11; BS EN 62386-102:2014 ; BS EN 62386-207:2009		
	Surge	L-N:4KV, L/N-PE:6KV		
Others	RoHS	2011/65/EU		
	MTBF	≥250KHours,Ta=25°C(MIL-HDBK-217F)		
	Audible Noise	<25dB @ 10cm distance, 20dB background		
	Life Time (@Ta max)	30W	≥50K Hrs	@230VAC , full load, End of Life: Failure Rate<10%
		60W	≥50K Hrs	
		100W	≥50K Hrs	
		160W	≥50K Hrs	
		240W	≥50K Hrs	
	Warranty	5years		
	Dimensions (L*W*H)	30W	235*30*21MM (body), 250*30*21MM (endcaps included)	
		60W	275*30*21MM (body), 290*30*21MM (endcaps included)	
		100W	305*30*21MM (body), 320*30*21MM (endcaps included)	
		160W	335*30*21MM (body), 350*30*21MM (endcaps included)	
240W		365*30*21MM (body), 380*30*21MM (endcaps included)		
Wiring	Input	H05RN-F/3X1.0mm, Brown/Blue/(Yellow/Green)		
	Output	H05RN-F/2X1.0mm, Brown/Blue		
	DALI	H05RN-F/2X1.0mm, Brown/Blue, Purple/Gray		
Output Cable Length	Max. 1M			

Remark:

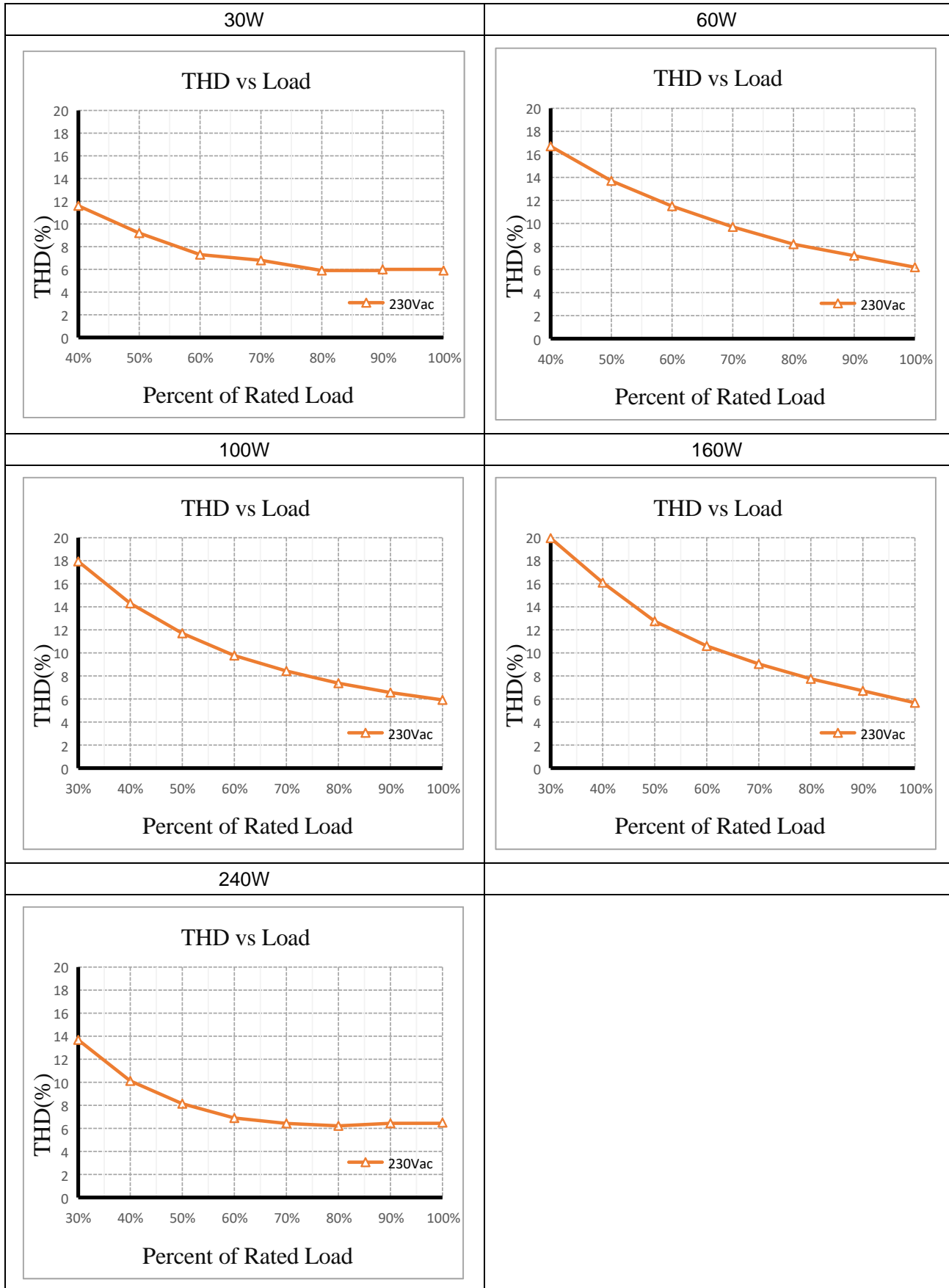
1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.
2. LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
3. Output ripple should be measured at the output end which has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

2. Graph

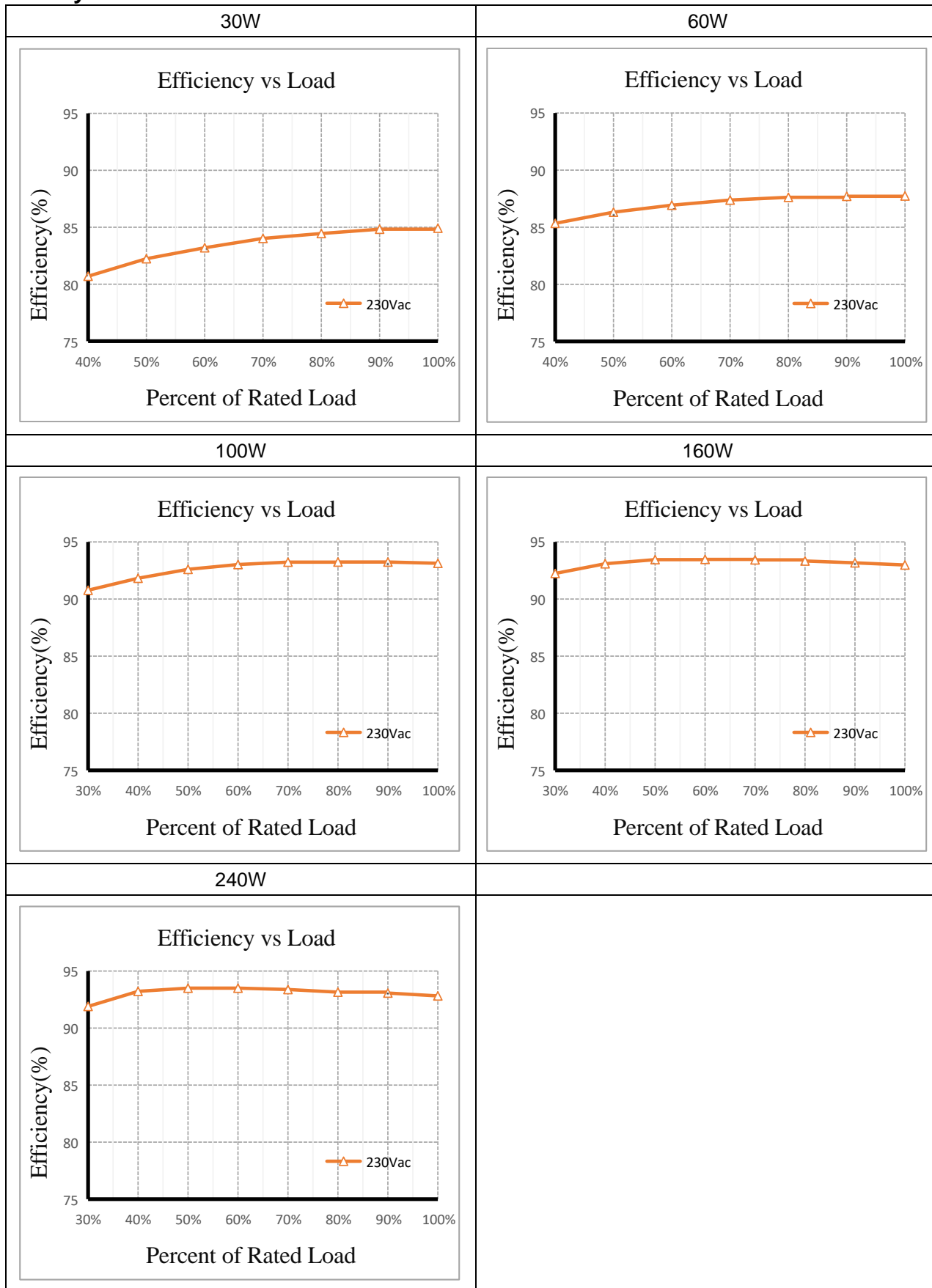
PF VS LOAD Curve



THD VS LOAD Curve



Efficiency VS LOAD Curve



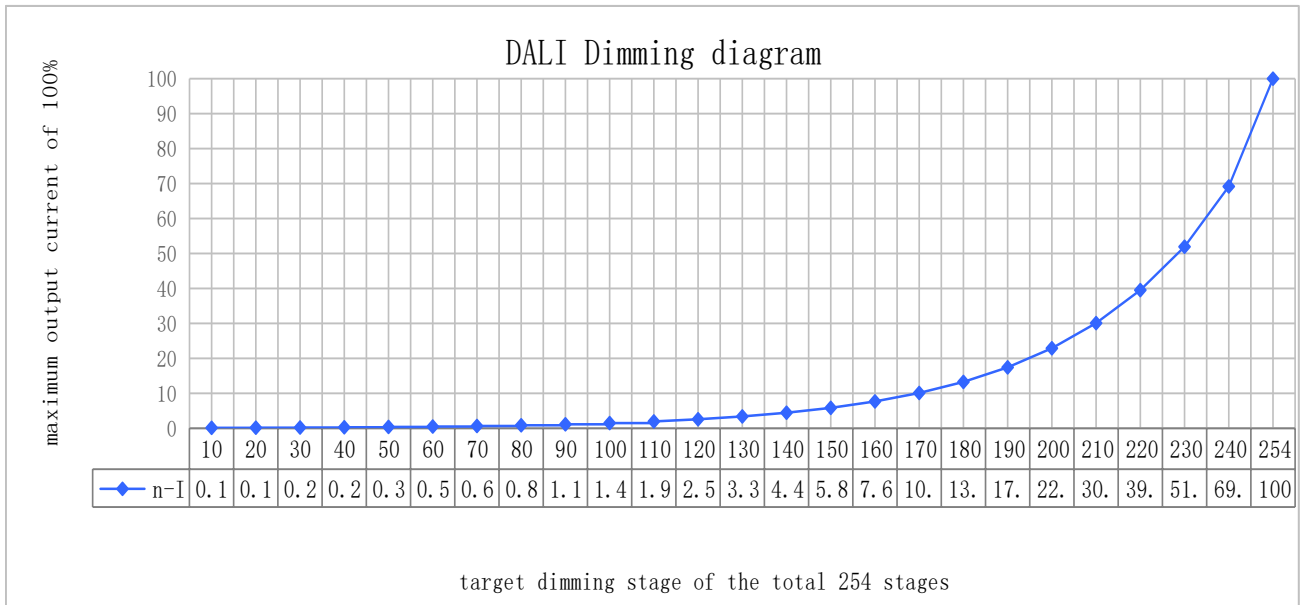
3. DALI dimming curve

4.1 formula for DALI dimming.

$$X(n) = 10^{\left\{ \frac{(n-1)}{253/3} - 1 \right\}}$$

Here, n means the target dimming stage of the total 254 stages.

X(n) means the percent of the maximum output current



4. Label

<ul style="list-style-type: none"> ○ L (Brown) ○ N (Blue) ⊕ (Yellow-green) 	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	Dimmable LED Driver XSV30W24 DALI Constant Voltage Type For LED modules only	Input Voltage: 220-240V~ Input Frequency: 50/60Hz Power Factor(λ): ≥ 0.95 I _{in} ≤ 0.2A	U _{rated} = 24V= I _{rated} = 1.25A P _{rated} = 30W Ta: -25to+50°C Tc: 80°C	CE, IP67 SELV, DALI, etc.	(Blue) I (Brown) + O (Purple) DA (Gray) DA
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<ul style="list-style-type: none"> ○ L (Brown) ○ N (Blue) ⊕ (Yellow-green) 	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	Dimmable LED Driver XSV60W24 DALI Constant Voltage Type For LED modules only	Input Voltage: 220-240V~ Input Frequency: 50/60Hz Power Factor(λ): ≥ 0.95 I _{in} ≤ 0.35A	U _{rated} = 24V= I _{rated} = 2.5A P _{rated} = 60W Ta: -25to+50°C Tc: 80°C	CE, IP67 SELV, DALI, etc.	(Blue) I (Brown) + O (Purple) DA (Gray) DA
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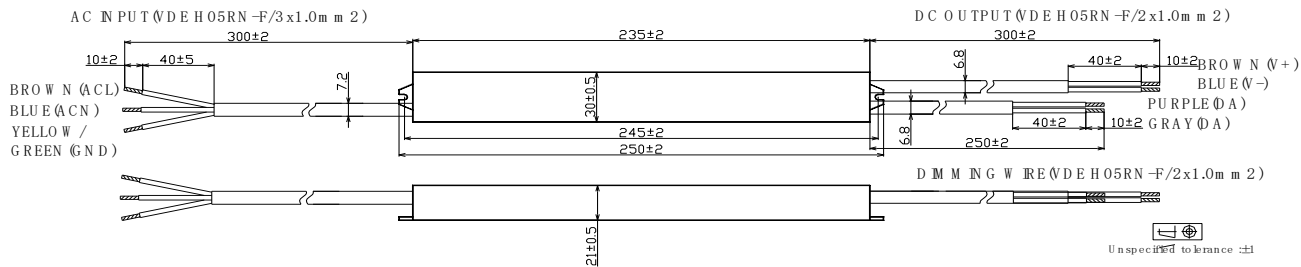
<ul style="list-style-type: none"> ○ L (Brown) ○ N (Blue) ⊕ (Yellow-green) 	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	Dimmable LED Driver XSV100W24 DALI Constant Voltage Type For LED modules only	Input Voltage: 220-240V~ Input Frequency: 50/60Hz Power Factor(λ): ≥ 0.95 I _{in} ≤ 0.6A	U _{rated} = 24V= I _{rated} = 4.17A P _{rated} = 100W Ta: -25to+50°C Tc: 80°C	CE, IP67 SELV, DALI, etc.	(Blue) I (Brown) + O (Purple) DA (Gray) DA
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<ul style="list-style-type: none"> ○ L (Brown) ○ N (Blue) ⊕ (Yellow-green) 	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	Dimmable LED Driver XSV160W24 DALI Constant Voltage Type For LED modules only	Input Voltage: 220-240V~ Input Frequency: 50/60Hz Power Factor(λ): ≥ 0.95 I _{in} ≤ 1.0A	U _{rated} = 24V= I _{rated} = 6.67A P _{rated} = 160W Ta: -25to+50°C Tc: 85°C	CE, IP67 SELV, DALI, etc.	(Blue) I (Brown) + O (Purple) DA (Gray) DA
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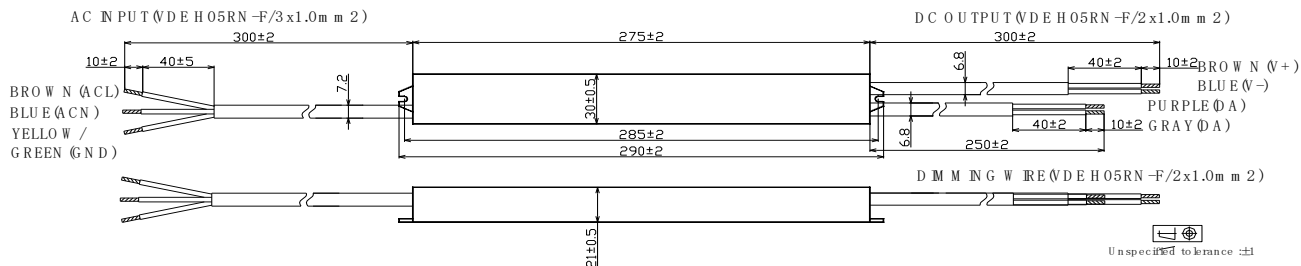
<ul style="list-style-type: none"> ○ L (Brown) ○ N (Blue) ⊕ (Yellow-green) 	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	Dimmable LED Driver XSV240W24 DALI Constant Voltage Type For LED modules only	Input Voltage: 220-240V~ Input Frequency: 50/60Hz Power Factor(λ): ≥ 0.95 I _{in} ≤ 1.5A	U _{rated} = 24V= I _{rated} = 10A P _{rated} = 240W Ta: -25to+50°C Tc: 85°C	CE, IP67 SELV, DALI, etc.	(Blue) I (Brown) + O (Purple) DA (Gray) DA
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5. Dimension (Unit: mm)

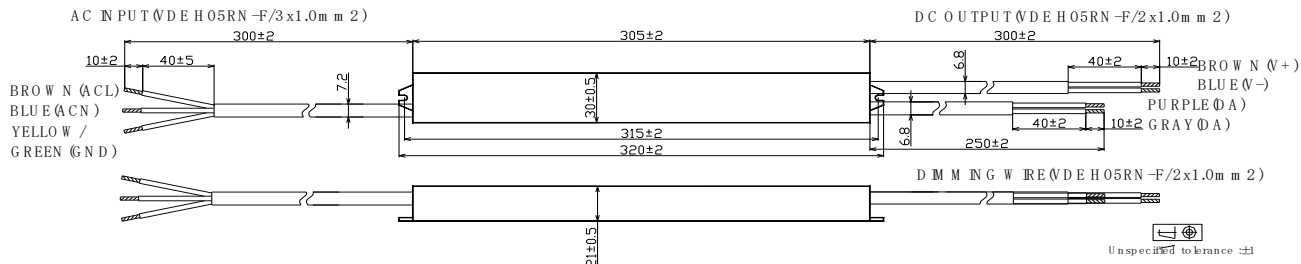
XSV30W24 DALI



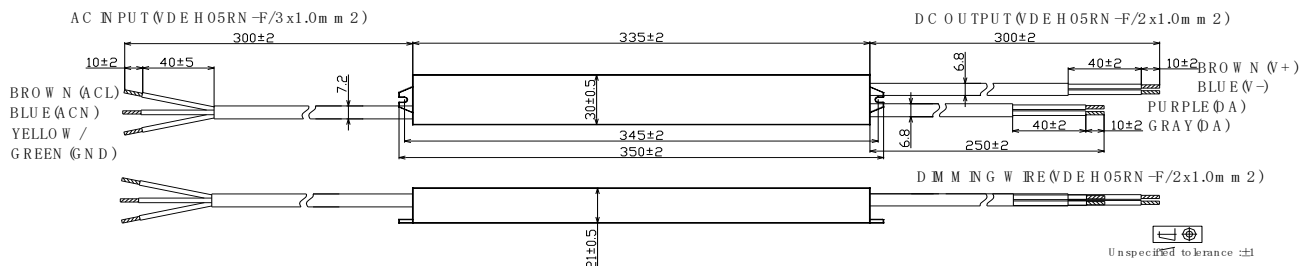
XSV60W24 DALI



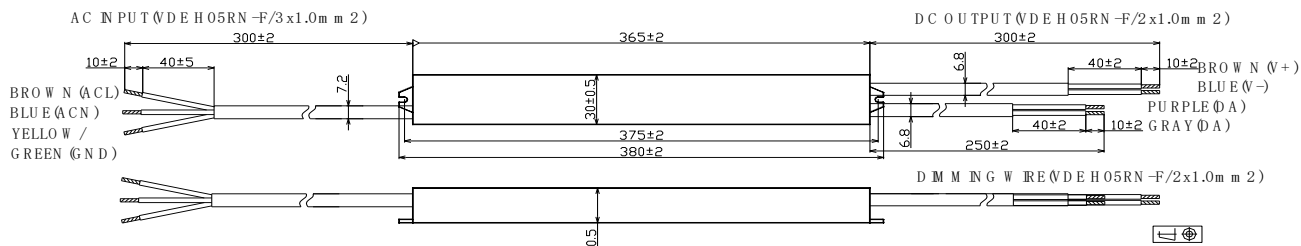
XSV100W24 DALI



XSV160W24 DALI



XSV240W24 DALI



6. Packing information

Model	Carton L*W*H(cm)	Pcs/ Carton	Net weight/ Pcs(g)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
XSV30W24 DALI	43*28*34	40	T.B.A.	T.B.A.	T.B.A.
XSV60W24 DALI	43*28*34	40	T.B.A.	T.B.A.	T.B.A.
XSV100W24 DALI	43*28*34	40	T.B.A.	T.B.A.	T.B.A.
XSV160W24 DALI	43*28*34	32	T.B.A.	T.B.A.	T.B.A.
XSV240W24 DALI	43*28*34	28	T.B.A.	T.B.A.	T.B.A.

7. REVISION HISTORY

Date	Revision	Remark
2021-01-21	A	Preliminary Edition