



Constant Voltage Driver

Model: XSV DALI 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	86%
XSV60W24 DALI		≤72W	≤0.4A		0-60W		2.5A	88%
XSV100W24 DALI		≤115W	≤0.6A		0-100W		4.17A	90%
XSV160W24 DALI		≤180W	≤0.9A		0-160W		6.67A	92%
XSV240W24 DALI		≤265W	≤1.5A		0-240W		10A	92%
XSV400W24 DALI		≤435W	≤2.3A		0-400W		16.67A	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		
30W		<30A	IP (typ.)	Duration time	240Vac/50Hz, 90-degree phase, full load, cold start-up, duration time measure from 50%Ipk to 50%Ipk
60W		<30A	25A	200us	
100W		<50A	26A	220us	
160W		<60A	45A	250us	
240W		<80A	56A	250us	
400W		<100A	76A	320us	
		88A	430us		

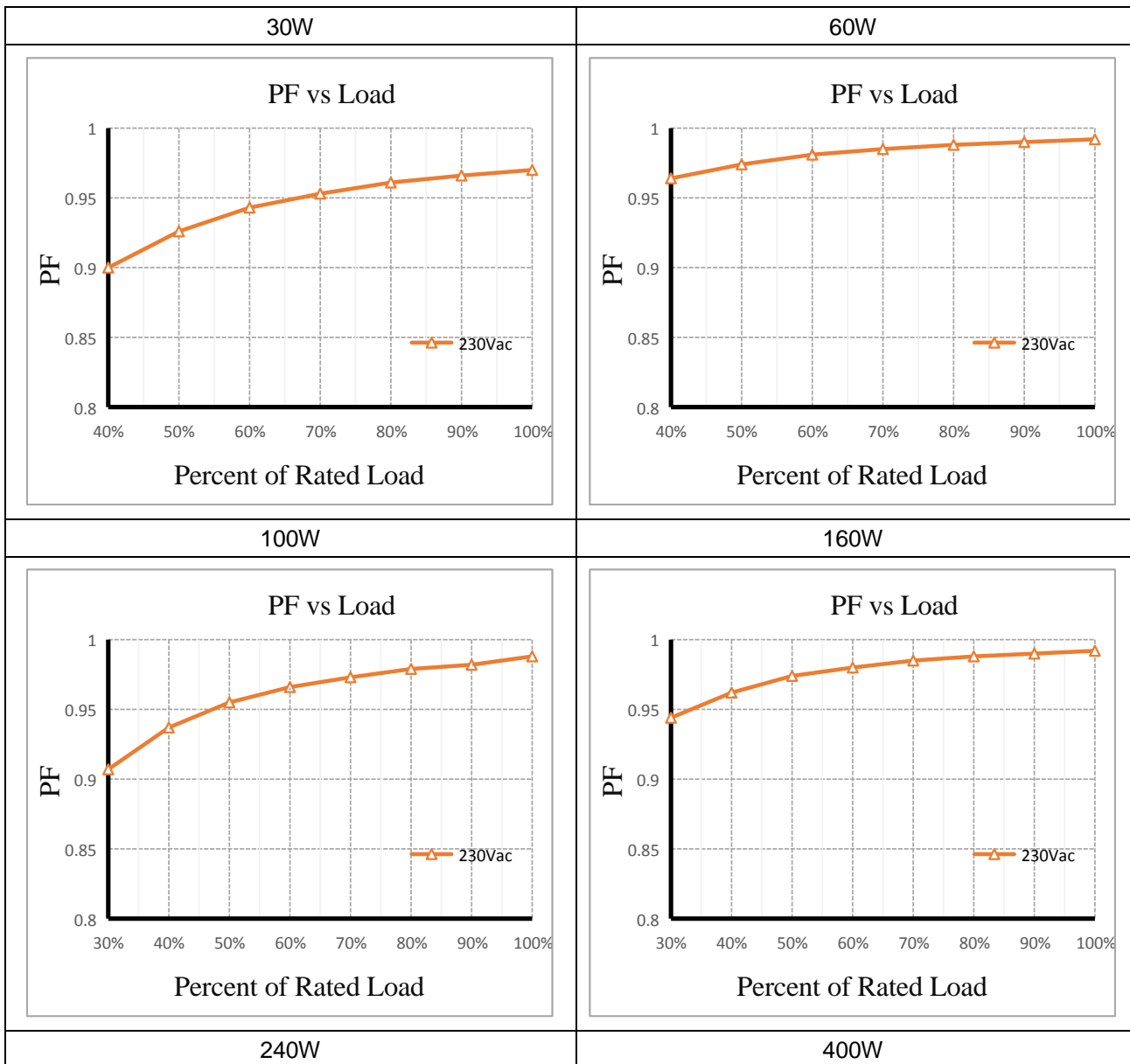
	Connected quantity of 16A Breaker	30W	16pcs,16A type B / 26pcs 16A type C		
		60W	16pcs,16A type B / 26pcs 16A type C		
		100W	10pcs,16A type B / 16pcs 16A type C		
		160W	8pcs,16A type B / 13pcs 16A type C		
		240W	6pcs,16A type B / 8pcs 16A type C		
		400W	4pcs,16A type B / 5pcs 16A type C		
Output	Output Voltage	24VDC±3%			
	Rated Load Range	30W	12-30W		
		60W	24-60W		
		100W	30-100W		
		160W	48-160W		
		240W	72-240W		
		400W	120-400W		
	Output Voltage Ripple	<240mV _{PK-PK} (0.5%)			
	Line Regulation	±1%			
	Load Regulation	±2%			
	Overshoot	<105%Vo (<110%Vo, only for 30W)			
	Start-up Time	0.6S(typ.) (220-240VAC)			
	Efficiency	30W	≥84%	86% typ.	230VAC, Rated Load, at output terminals, see graphs
		60W	≥86%	88% typ.	
100W		≥98%	90% typ.		
160W		≥90%	92% typ.		
240W		≥90%	92% typ.		
400W		≥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 < 250µA			
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	75°C		
		160W	85°C		

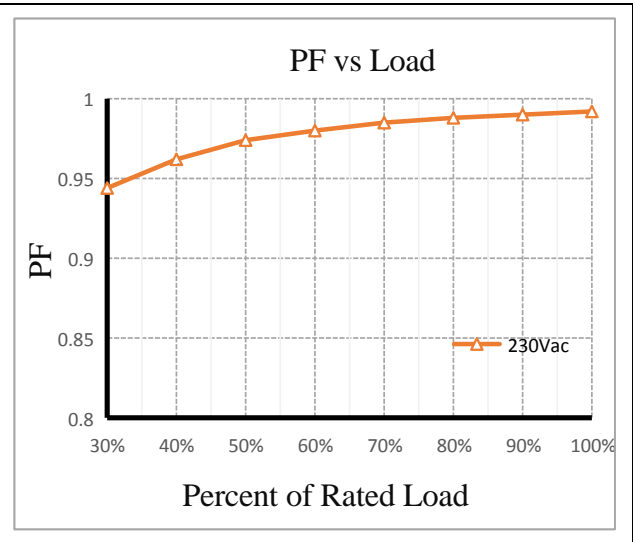
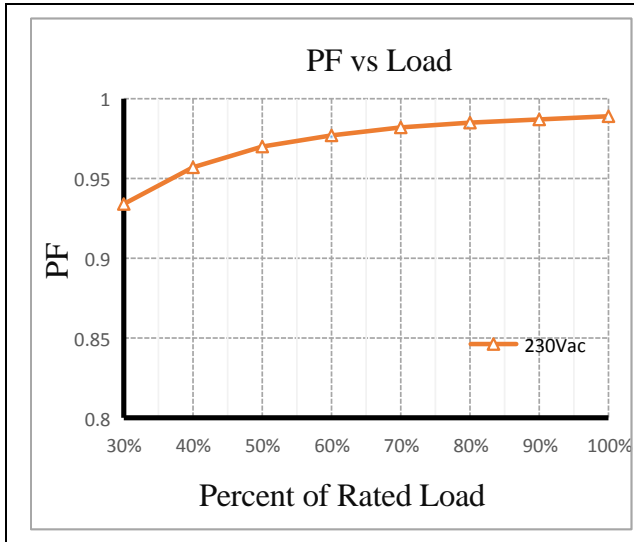
		240W/400W	90°C	
	Humidity	5%....85%RH		
	Atmosphere	86-108KPa		
Standards	Certification	CE		
	Safety Standards	EN61347-1:2015, EN61347-2-13:2014/A1:2017, EN62493:2015, AS61347.2.13:2018, AS/NZS 61347.1:2016 Inc A1		
	EMC Standards	EN55015:2013/A1:2015, EN61000-3-2:2014, EN61000-3-3:2013, EN61547:2009		
	Performance	EN62384; IEC 62386-101 Edition 2.0 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/60W/100W/160W	≥50K Hrs @230VAC, full load, End of Life: Failure Rate<10%	
		240W/400W	≥50K Hrs @230VAC, 90%load, End of Life: Failure Rate<10%	
	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		385*30*21MM (body), 400*30*21MM (endcaps included)		
400W		385*60*22MM (body), 400*60*22MM (endcaps included)		
Wiring	Input	H05RN-F/3X1.0mm ² , Brown/Blue/(Yellow/Green)		
	Output	H05RN-F/2X1.0mm ² , Brown/Blue (Two cables are connected in parallel for 400W)		
	DALI	H05RN-F/2X0.75mm ² , Purple/Gray		
Output Cable Length	Max. 1M			

Remark:

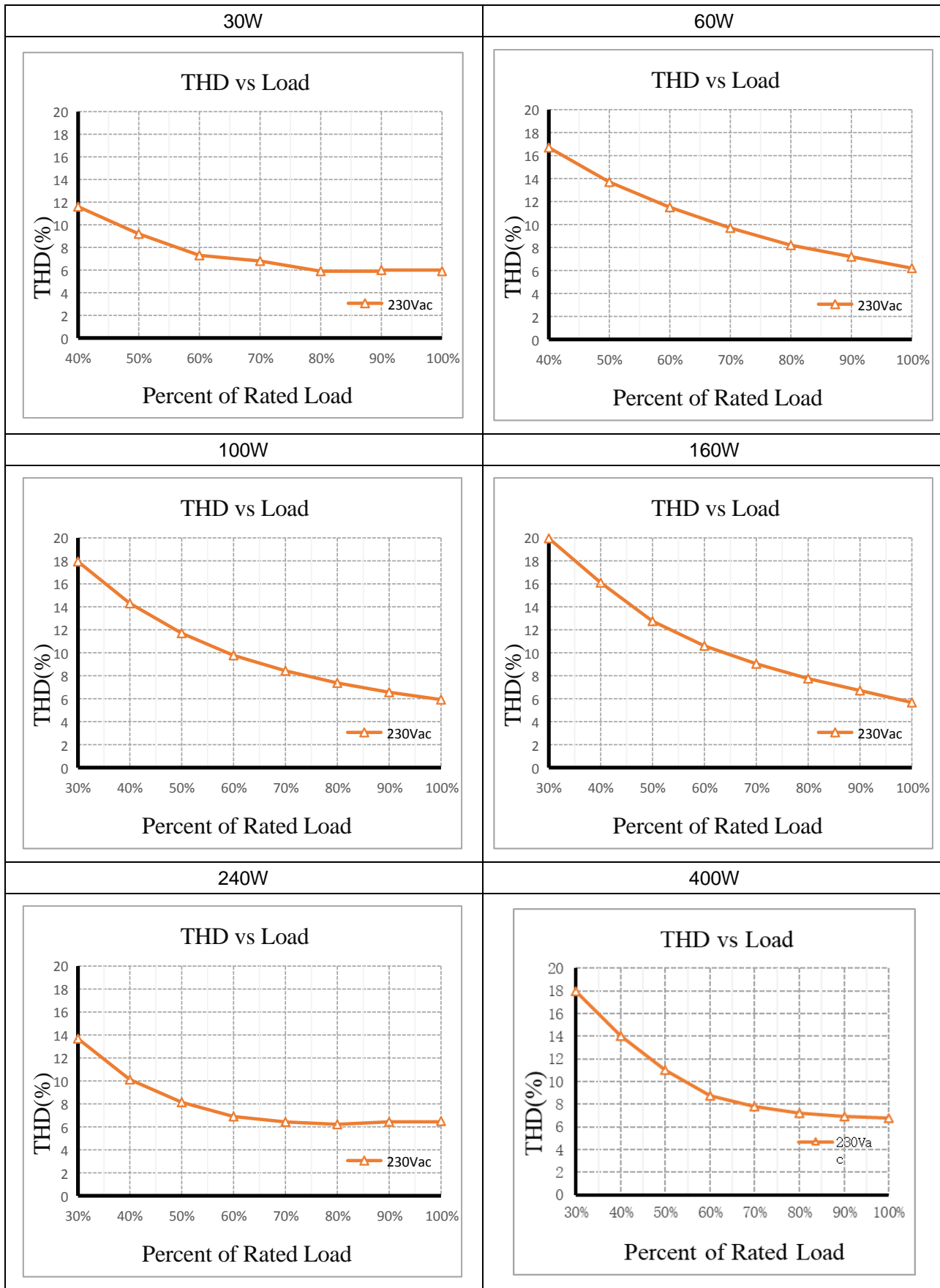
- All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.
- LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
- Output ripple should be measured at the output end which has with 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

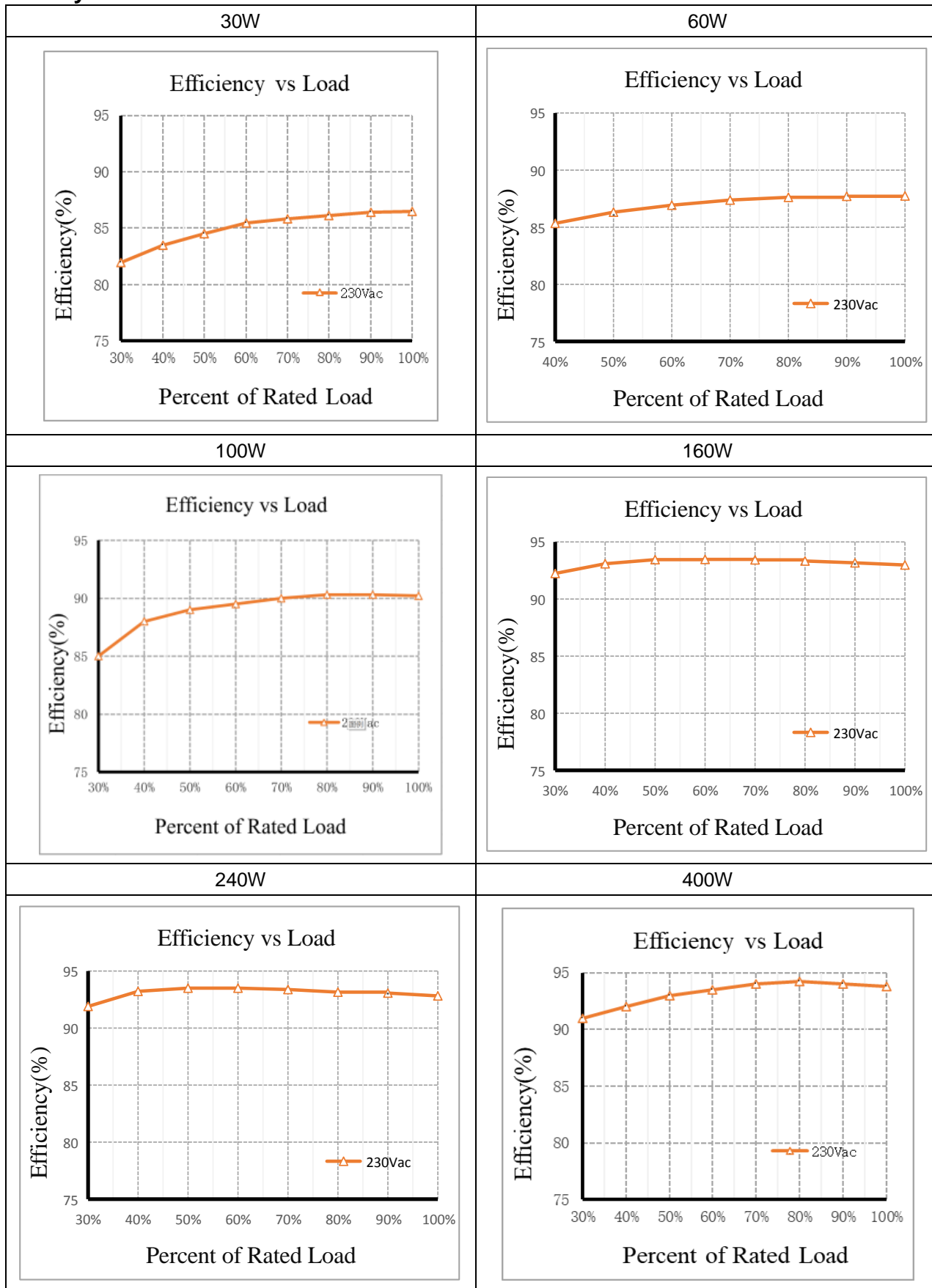




THD VS LOAD Curve



Efficiency VS LOAD Curve



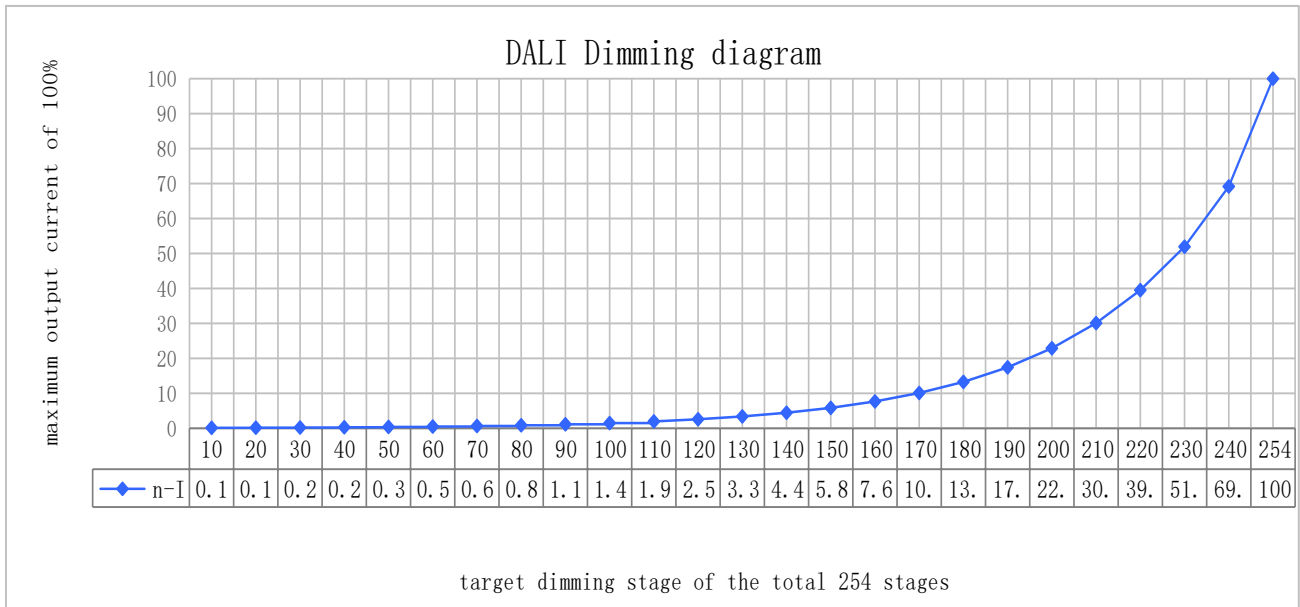
3. DALI dimming curve

4.1 formula for DALI dimming.

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

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

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

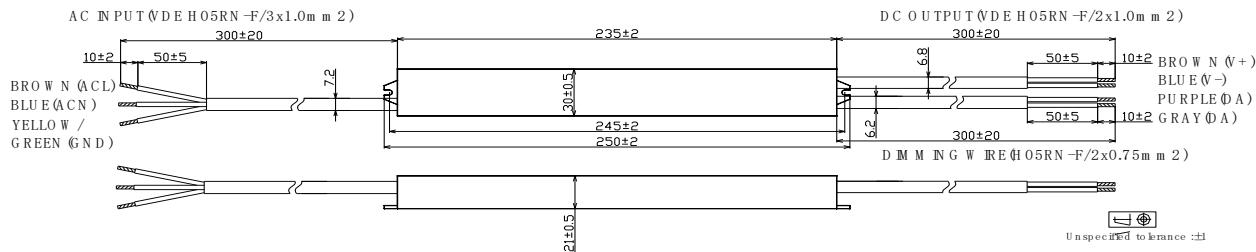


4. Label

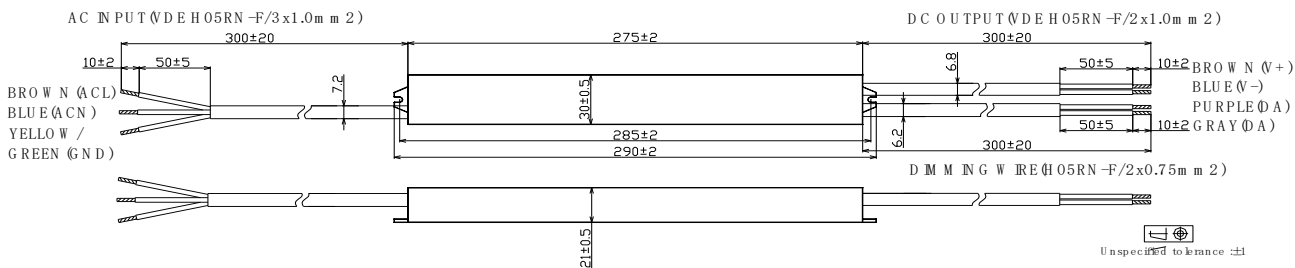
<input type="radio"/> L (Brown) <input type="radio"/> N (Blue) <input type="radio"/> (Yellow-green)	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	XSV30W24 DALI Dimmable LED Driver Constant Voltage Type For LED modules only	Input: 220-240V~, 50/60Hz, 0.2A, λ>0.95 Output: 24V- 0-1.25A Max.30W •tc Ta: -25 ~ +50°C Tc:75°C DALI SELV CE ENEC IP67	<input type="radio"/> (Blue) + <input type="radio"/> (Brown) + <input type="radio"/> (Purple) DA <input type="radio"/> (Gray) DA
<input type="radio"/> L (Brown) <input type="radio"/> N (Blue) <input type="radio"/> (Yellow-green)	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	XSV60W24 DALI Dimmable LED Driver Constant Voltage Type For LED modules only	Input: 220-240V~, 50/60Hz, 0.4A, λ>0.95 Output: 24V- 0-2.5A Max.60W •tc Ta: -25 ~ +50°C Tc:75°C DALI SELV CE ENEC IP67	<input type="radio"/> (Blue) + <input type="radio"/> (Brown) + <input type="radio"/> (Purple) DA <input type="radio"/> (Gray) DA
<input type="radio"/> L (Brown) <input type="radio"/> N (Blue) <input type="radio"/> (Yellow-green)	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	XSV100W24 DALI Dimmable LED Driver Constant Voltage Type For LED modules only	Input: 220-240V~, 50/60Hz, 0.6A, λ>0.95 Output: 24V- 0-4.17A Max.100W •tc Ta: -25 ~ +50°C Tc:75°C DALI SELV CE ENEC IP67	<input type="radio"/> (Blue) + <input type="radio"/> (Brown) + <input type="radio"/> (Purple) DA <input type="radio"/> (Gray) DA
<input type="radio"/> L (Brown) <input type="radio"/> N (Blue) <input type="radio"/> (Yellow-green)	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	XSV160W24 DALI Dimmable LED Driver Constant Voltage Type For LED modules only	Input: 220-240V~, 50/60Hz, 0.9A, λ>0.95 Output: 24V- 0-6.67A Max.160W •tc Ta: -25 ~ +50°C Tc:85°C DALI SELV CE ENEC IP67	<input type="radio"/> (Blue) + <input type="radio"/> (Brown) + <input type="radio"/> (Purple) DA <input type="radio"/> (Gray) DA
<input type="radio"/> L (Brown) <input type="radio"/> N (Blue) <input type="radio"/> (Yellow-green)	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	XSV240W24 DALI Dimmable LED Driver Constant Voltage Type For LED modules only	Input: 220-240V~, 50/60Hz, 1.5A, λ>0.95 Output: 24V- 0-10A Max.240W •tc Ta: -25 ~ +50°C Tc:90°C DALI SELV CE ENEC IP67	<input type="radio"/> (Blue) + <input type="radio"/> (Brown) + <input type="radio"/> (Purple) DA <input type="radio"/> (Gray) DA
<input type="radio"/> L (Brown) <input type="radio"/> N (Blue) <input type="radio"/> (Yellow-green)	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	XSV400W24 DALI Dimmable LED Driver Constant Voltage Type For LED modules only	Input: 220-240V~, 50/60Hz, 2.3A, λ>0.95 Output: 24V= 0-16.67A Max.400W •tc Ta: -25 ~ +50°C Tc:90°C DALI SELV CE ENEC IP67	<input type="radio"/> (Blue) + <input type="radio"/> (Brown) + <input type="radio"/> (Purple) DA <input type="radio"/> (Gray) DA

5. Dimension (Unit: mm)

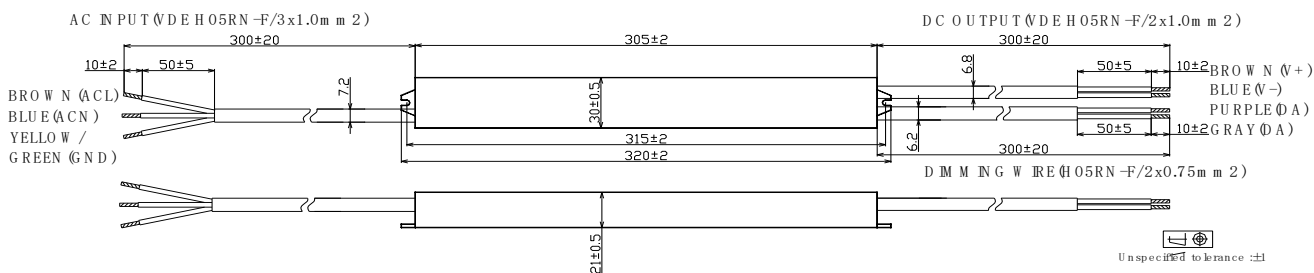
XSV30W24 DALI



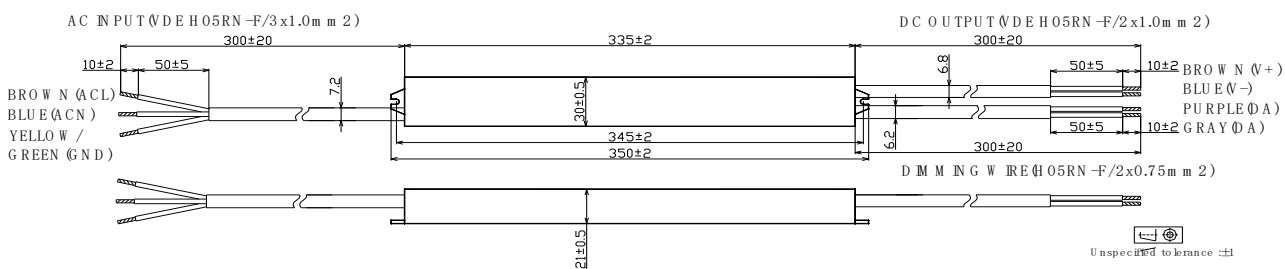
XSV60W24 DALI



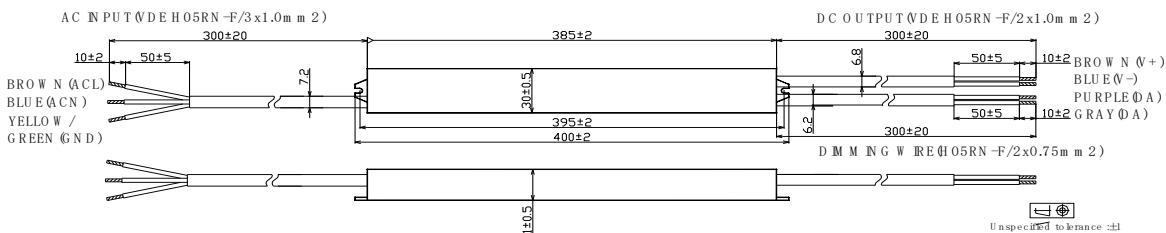
XSV100W24 DALI



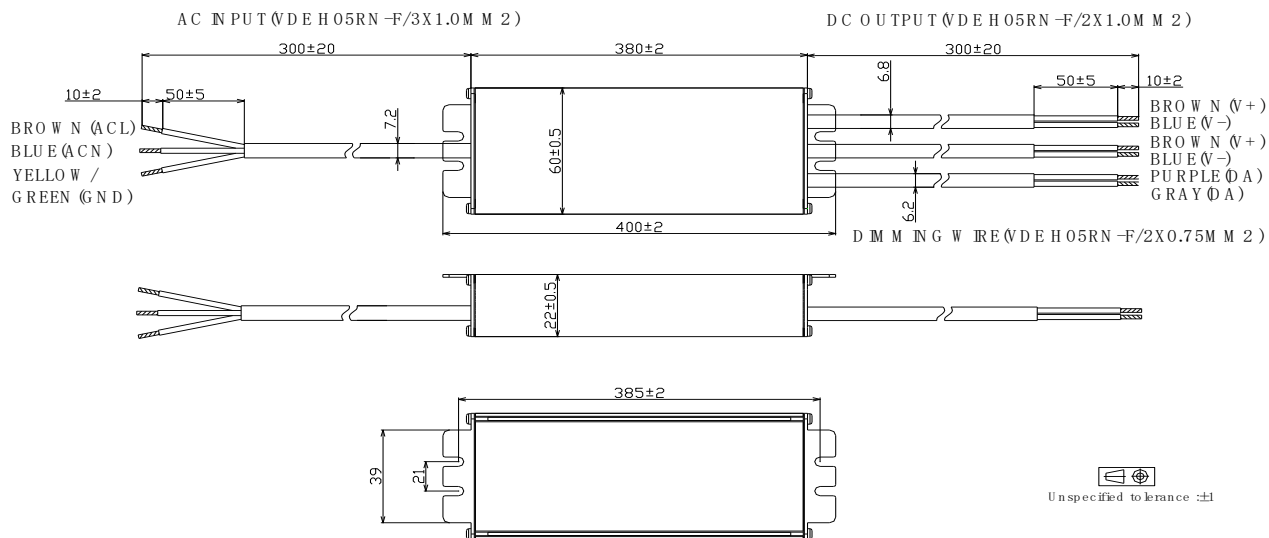
XSV160W24 DALI



XSV240W24 DALI



XSV400W24 DALI



Remark: Two output cables are in parallel inside the drive, and the current of each cable does not exceed 10A.

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	34*29*20	30	340	10.2	11.8
XSV60W24 DALI	34*29*20	30	390	11.7	13.3
XSV100W24 DALI	39*29*20	30	420	12.6	14.3
XSV160W24 DALI	39*29*20	30	470	14.1	15.8
XSV240W24 DALI	44*29*14	20	530	10.6	11.9
XSV400W24 DALI	44*29*14	12	1050	12.6	13.6