

LED Driver

JPVO S12 Series

JPVO S12

Highlights & Features

- 12V constant voltage design
- AC input voltage 100 / 200 / 242Vac
- Meet JIS C 61000-3-2 Class C
- Meets CISPRJ 15
- Up to 90% efficiency for 100W and 150W
- Wide operating temperature range
- IP67 ingress protection

Safety Standards



電気用品安全法
別表第八・第十

Dimensions (L x W x H):

JPVO-030012FA	220 x 60 x 34 mm
JPVO-060012FA	220 x 60 x 34 mm
JPVO-100012FA	240 x 60 x 34 mm
JPVO-150012FA	280 x 70 x 37.5 mm

General Description

Delta JPVO S12 series of fixed constant output voltage LED drivers comes with affordable and reliable features. Compatible with signage from any manufacturer. Compatible with IP67 ingress protection level for indoor and outdoor application. Independent type design for stand-alone installations. The driver is able to operate for -40°C to +55°C ambient temperature range under free air convection.

Model Information

JPVO S12 LED Driver

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current	Output Channels
JPVO-030012FA	100 / 200 / 242Vac Typical	12Vdc	2.5A	1
JPVO-060012FA			5.0A	1
JPVO-100012FA			8.3A	1
JPVO-150012FA			12.5A	1

Model Numbering

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Safety Approval PSE	Constant Voltage	Outdoor		Output Power 030 – 30W 060 – 60W 100 – 100W 150 – 150W	Output Voltage 012 – 12Vdc	Function F – Fixed Output	Variable A – Standard

LED Driver

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Specifications

Model Number	JPVO-030012FA	JPVO-060012FA	JPVO-100012FA	JPVO-150012FA
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Input Ratings / Characteristics

Normal Input Voltage	100 / 200 / 242Vac				
Input Voltage Range	90-266Vac				
Normal Input Frequency	50-60 Hz				
Input Frequency Range	47-63 Hz				
Normal Input Current	100Vac	0.37A	0.72A	1.20A	1.70A
	200Vac	0.18A	0.35A	0.60A	0.85A
	242Vac	0.16A	0.30A	0.50A	0.70A
Efficiency ¹⁾	100Vac	82.9%	82.4%	87.9%	88.1%
	200Vac	85.3%	84.8%	91.3%	91.8%
	242Vac	85.1%	85.2%	91.5%	91.7%
Max Inrush Current	25A @ 100Vac and 60A @ 242Vac at cold start		35A @ 100Vac and 80A @ 242Vac at cold start	40A @ 100Vac and 90A @ 242Vac at cold start	
Power Factor at 100% load	> 0.9 @ full load				
Total Harmonic Distortion	Meet JIS C 61000-3-2 Class C @ full load				
Leakage Current	< 0.7mA				

1) 100% Load (typical) and tested after 30 minutes warm up.

Output Ratings / Characteristics

Nominal Output Voltage	12Vdc			
Output Current Range (per channel)	0.1A - 2.5A	0.1A - 5.0A	0.1A - 8.3A	0.1A - 12.5A
Max. Output Power	30W	60W	100W	150W
Max. No Load Output Voltage	12.6Vdc			
Output Voltage Tolerance	± 5%			
Line Regulation	± 1%			
Load Regulation	± 5%			
Output Ripple Voltage	< 500mV			
Rise Time	< 100ms			
Start-up Time	< 1000ms			

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Mechanical

Casing	Aluminum, Color: Natural			
Dimensions (L x W x H) [mm]	220.0 x 60.0 x 34.0	220.0 x 60.0 x 34.0	240.0 x 60.0 x 34.0	280.0 x 70.0 x 37.5
Unit Weight [kg]	0.75	0.75	0.81	1.25
Cooling System	Convection			
Input Cable	Rubber cable (PNCTF type), Line: Black, Neutral: White, PE: Green/Yellow, cable length 150mm			
Output Cable	Rubber cable (SJOW type), Positive: Red, Negative: Black, cable length 150mm			
Acoustic Noise	Sound Pressure Level (SPL) < 24dBA, 30cm distance			

Environment

Ambient Temperature	Operating	-40°C to +55°C			
	Storage	-40°C to +85°C			
Maximum Case Temperature		+75°C	+75°C	+80°C	+85°C
Lifetime Ambient Temperature		+55°C	+50°C	+45°C	+45°C
Relative Humidity	Operating	10 to 90% RH (Non-Condensing)			
	Storage	5 to 95% RH (Non-Condensing)			
Drop Test (Non-Operating)		40cm height, drop to concrete floor as below drawing, total 10 times.			
Vibration (Non-Operating)		5Hz to 10 Hz (1G); 30 min per axis for all X, Y, Z direction			
Packing		10pcs per carton			

Protections

Over Voltage	Auto-Recovery when the fault is removed
Overload / Overcurrent	Auto-Recovery when the fault is removed
Over current Range	105-130% of full load
Short Circuit	Auto-Recovery when the fault is removed
Over Temperature	Auto-Recovery when the fault is removed
Ingress Protection classification	IP67

Reliability Data

Lifetime	50,000 hrs. @ lifetime case temperature
MTTF	500,000 hrs. @ 40°C ambient temperature as per Telcordia SR-332

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Safety Standards / Directives

Electrical Safety	PSE	PSE Clause 1, Interpretation on Ministerial Ordinance establishing Technical Requirements Appendix 8, Sec. 1, 2 (102) DC Power Supply Unit, Appendix 10 Sec. 5 & Appendix 4 of the Enforcement Regulations (AC Electric Appliances)
Material and Parts	RoHS Directive Compliant	
Galvanic Isolation	Input to Output	4,000Vac
	Input to Case	1,500Vac
	Output to Case	500Vac

EMC

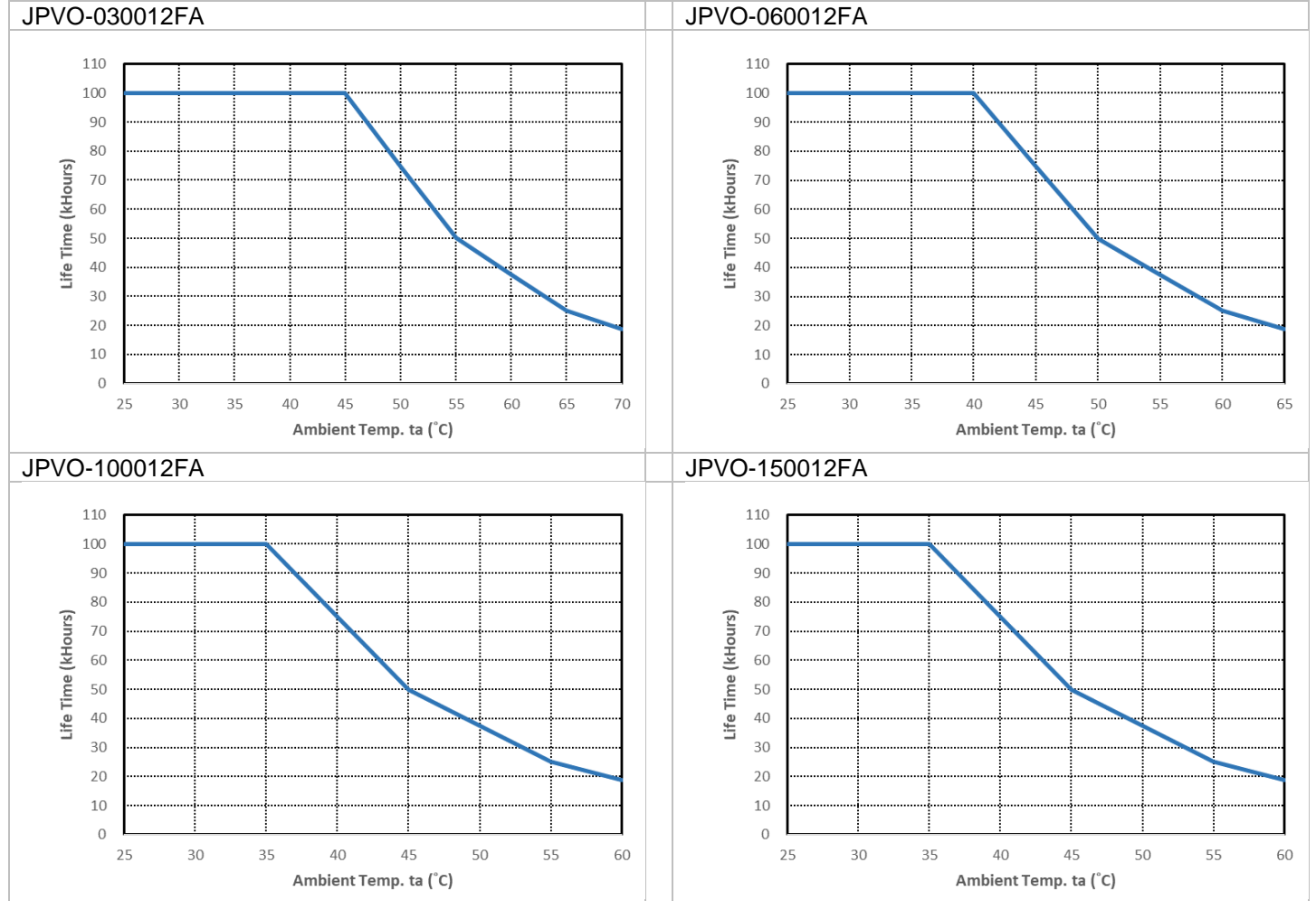
Noise Terminal Voltage Disturbance	0.5265M~5MHz : QP<56dBuV; 5M~30MHz : QP<60dBuV	
Noise Power Disturbance	30M~300MHz : QP<55dBpW	
EMI	CISPRJ 15	Meet CISPRJ 15
Harmonic Emission	JIS C 61000-3-2	Class C @ 100 / 200 / 242Vac, full load condition
Surge Immunity	JIS C 61000-4-5	Differential Mode: 2kV; Common Mode: 4kV 1.2/50μs, 8/20μs Combination Wave with 2ohms (L-N), 12ohms (L-PE & N-PE) source impedance Criteria B ²

- 1) Criteria A: Normal performance within the specification limits
2) Criteria B: Temporary degradation or loss of function which is self-recoverable

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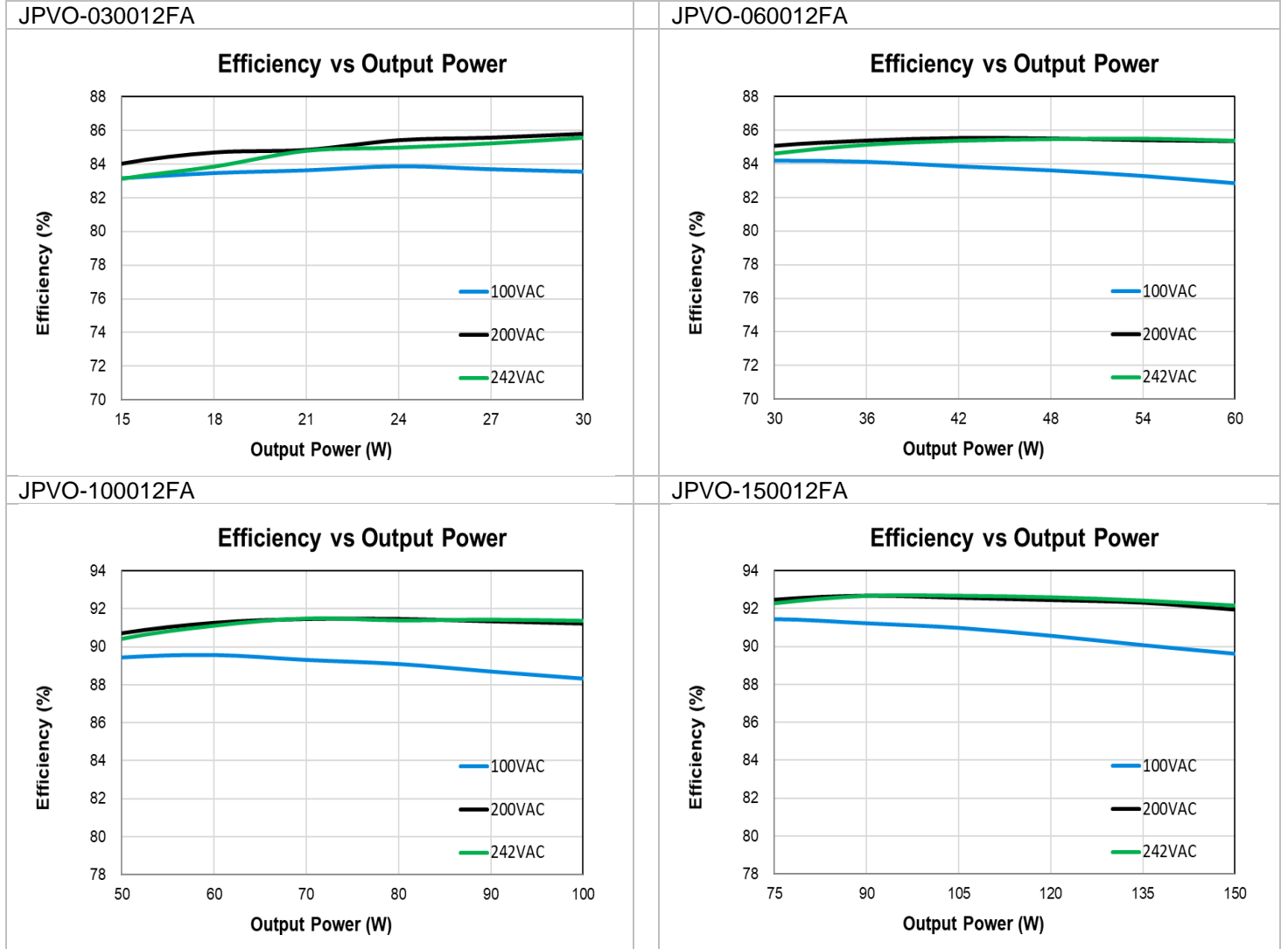
Lifetime VS Case Temperature



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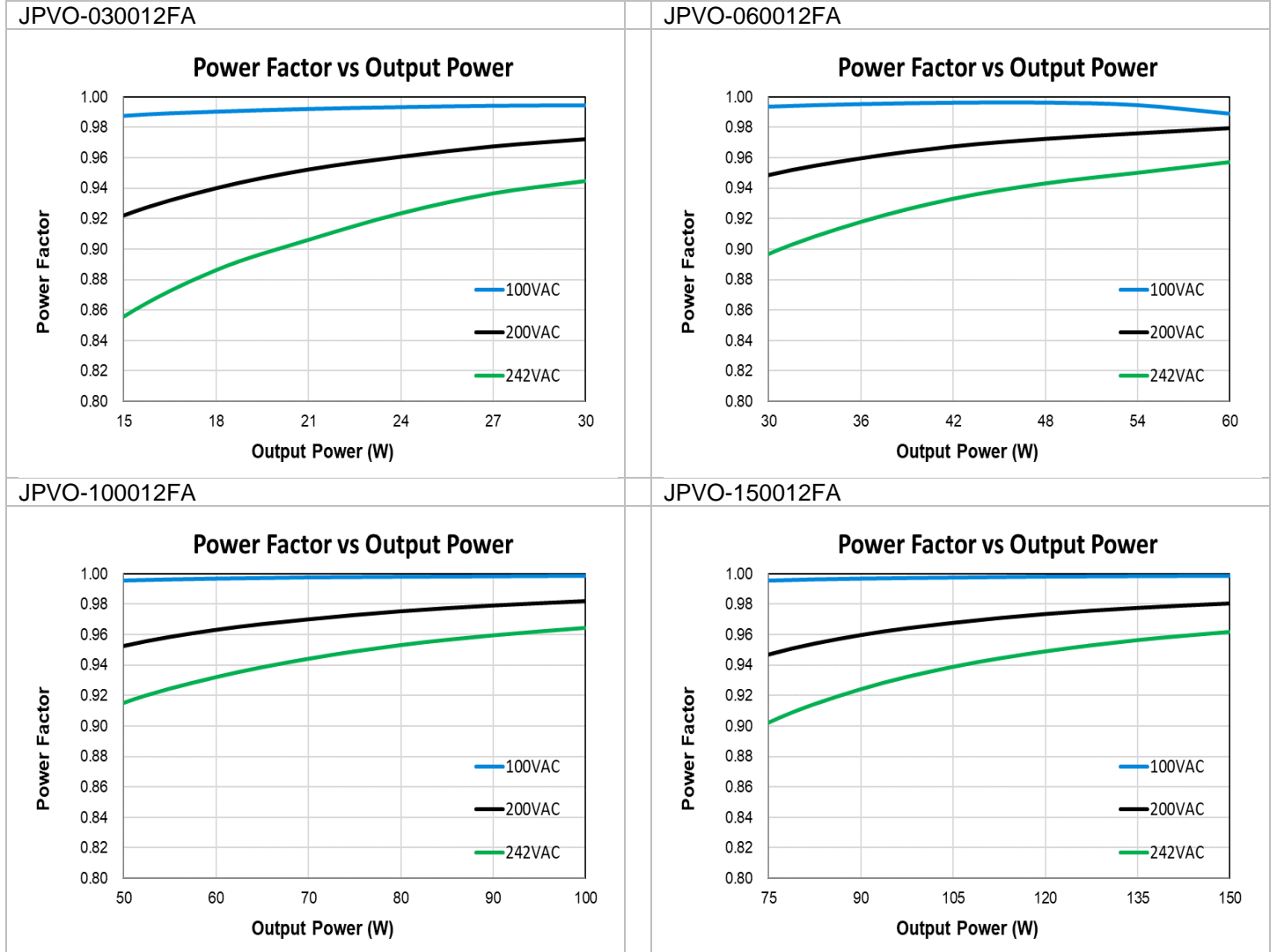
Efficiency vs. Output Power



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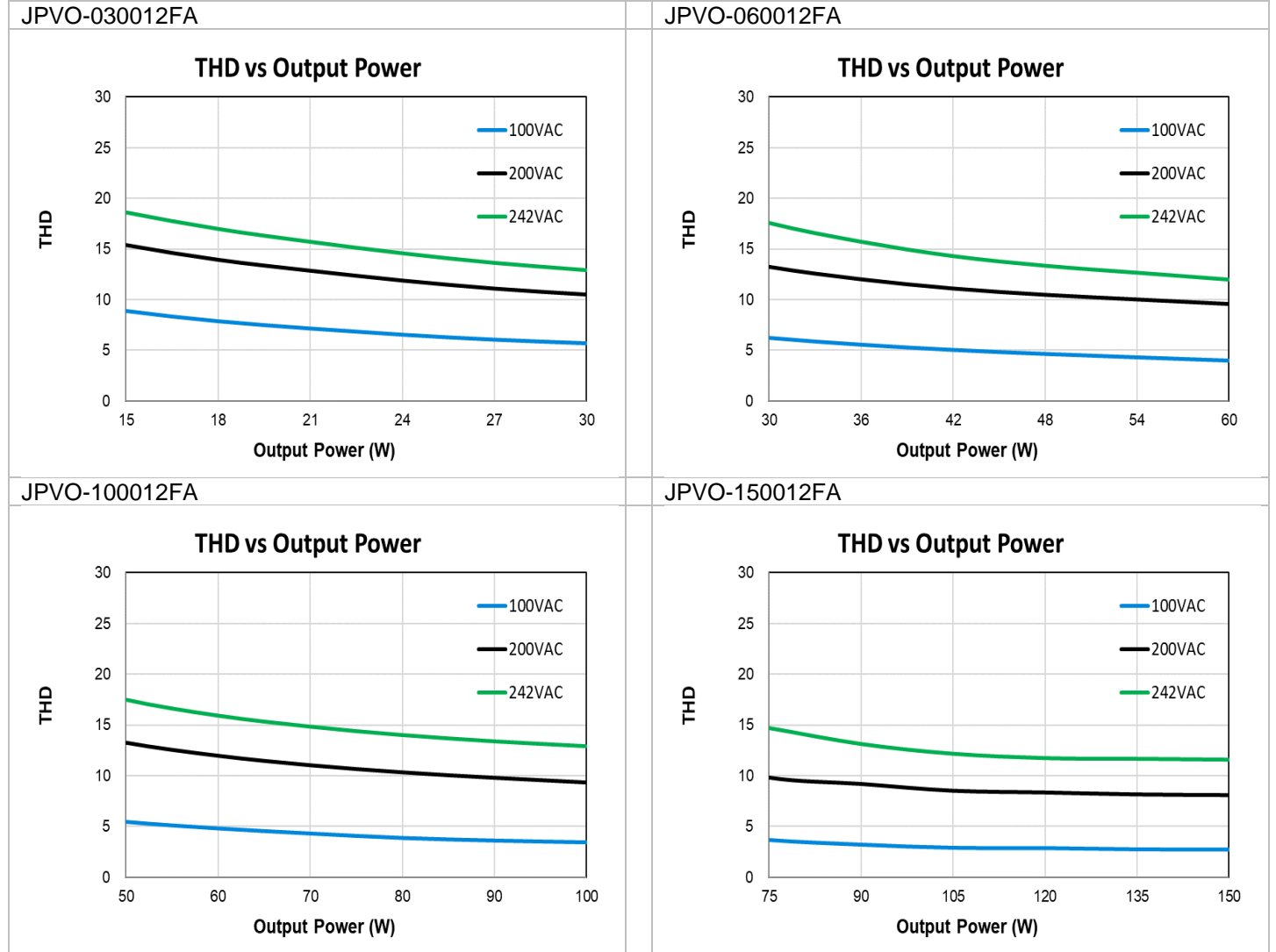
Power Factor vs. Output Power



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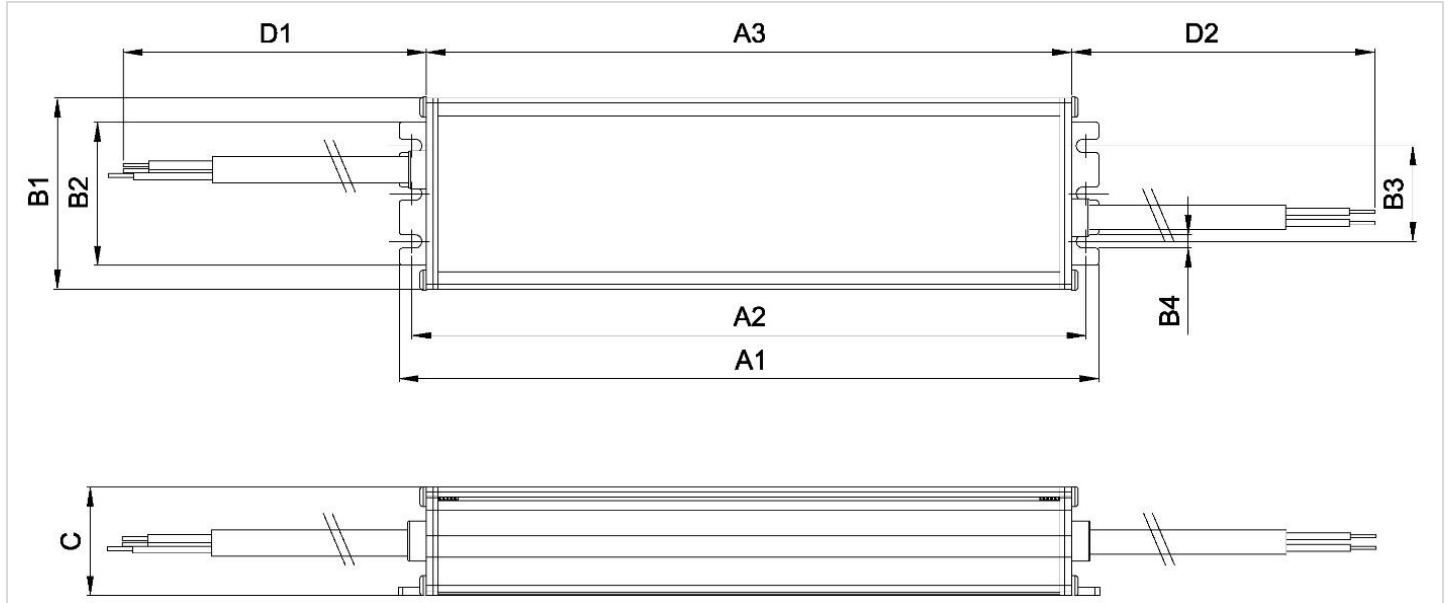
Total Harmonic Distortion vs. Output Power



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Dimensions



Model Number	A1	A2	A3	B1	B2	B3	B4	C	D1	D2
JPVO-030012FA	220	212	203	60	45	30	4.2	34	150	150
JPVO-060012FA	220	212	203	60	45	30	4.2	34	150	150
JPVO-100012FA	240	232	223	60	45	30	4.2	34	150	150
JPVO-150012FA	280	272	263	70	55	36	4.2	37.5	150	150

Unit:mm

Warranty Policy

Please reach out our [Warranty Policy](#) should you require any further clarification.