

Constant Voltage Power Supply

LNR Series

LNR Series



Highlights & Features

- Constant voltage design
- Universal input voltage from 108-305Vac
- Class 2 and LPS output available
- Normal power factor
- Fully potted design
- Comply with IP54 protection and Dry & Damp location
- Protections: Over Load / Over Voltage / Short Circuit / Over temperature
- Wide operating temperature range -40°C to +55°C
- Suitable for Industrial / Signage application

Safety Standards



Dimensions (L x W x D):

LNR-020A12VJAAD	5.22 x 1.34 x 1.00 inch (132.0 x 34.0 x 25.4 mm)
LNR-020A24VJAAD	5.22 x 1.34 x 1.00 inch (132.0 x 34.0 x 25.4 mm)
LNR-100A24VJAAC	9.50 x 1.70 x 1.18 inch (241.3 x 43.1 x 30.0 mm)

General Description

Delta LNR Series is constant voltage output power supply for industrial and signage application, meet for UL8750 and EN62368-1 safety certifications, and compliant with CE/FCC Immunity/Emissions/Harmonic requirements. The products are designed and rigorously tested to work in various industrial applications.

Model Information

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current
LNR-020A12VJAAD	108 - 305Vac	12V	1.7A
LNR-020A24VJAAD		24V	0.85A
LNR-100A24VJAAC		24V	4.0A

Model Numbering

LNR	□□□	A	□□V	J	A	A	□	□	□
Constant Voltage Power Supply	Wattage 020:20W 100:100W	A: Signal Output	Output Voltage 12V 24V	J: Input Voltage 108-305V (Normal power factor)	A: Wiring Type	A: Fixed Output	C: Metal housing D: Plastic housing	Variable code	Variable code

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Specifications

Model Number	LNR-020A12VJAAD	LNR-020A24VJAAD	LNR-100A24VJAAC
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Input Ratings / Characteristics

Normal Input Voltage	120-277Vac			
Input Voltage Range	108-305Vac			
Normal Input Frequency	50-60 Hz			
Input Frequency Range	47-63 Hz			
Input Current Max	120Vac	0.4A	0.4A	1.90A
	277Vac	0.25A	0.25A	1.20A
Efficiency ¹⁾	120Vac	83.6% typ.	83.6% typ.	87.0% typ.
	277Vac	84.6% typ.	84.6% typ.	89.0% typ.

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

Output Ratings / Characteristics

Nominal Output Voltage	12Vdc	24Vdc	24Vdc
Max. No Load Output Voltage	12.6Vdc	25.2Vdc	25.2Vdc
Output Current Range ¹⁾	0.10A – 1.70A	0.10A – 0.85A	0.10A – 4.00A
Max. Output Power	20W	20W	96W
Output Voltage Tolerance	± 3%		
Line Regulation	± 1%		
Load Regulation	± 3%		
Output Ripple Voltage	< 1000mVp-p		

Mechanical

Casing	Metal sheet, Color: White		
Dimensions (L x W x H)	[inch]	5.22 x 1.34 x 1.00	9.50 x 1.70 x 1.2
	[mm]	132.0 x 34.0 x 25.4	241.3 x 43.1 x 30.5
Unit Weight	[lbs]	0.36	1.18
	[kg]	0.165	0.535
Input Wire	Line: Black, Neutral: White, Wire Length 11.81inch (300mm) UL1316 or UL1015		
Output Wire	Positive: Red, Negative: Black, Wire Length 11.81inch (300mm) UL1316 or UL1007		
Noise (30cm distance)	Sound Pressure Level (SPL) < 24dBA		

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Environment

Ambient Temperature	Operating	-40°C to +55°C (-40°F to +131°F)		
	Storage	-40°C to +85°C (-40°F to +185°F)		
Case Temperature (for UL)		+85°C	+80°C	+85°C
Case Temperature (for Lifetime)		+85°C	+80°C	+70°C
Relative Humidity	Operating	10 to 90% RH (Non-Condensing)		
	Storage	5 to 95% RH (Non-Condensing)		
Environmental Locations		UL Dry & Damp		

Protections

Over Voltage	Latch mode	Auto-Recovery when the fault is removed
Overload / Overcurrent		
Short Circuit		
Over Temperature	Latch mode	Latch mode

Reliability Data

Lifetime	50,000 hrs. at lifetime case temperature	
MTBF (Telcordia SR-332, 10% failure rate)	3000,000 hours @ Ta=55deg	1500,000 hours @ Ta=40deg

Safety Standards / Directives

Electrical Safety	cULus	UL8750 Recognized, Type HL, UL1310 Class 2	UL8750 List, Class P, Type HL, UL1310 Class 2
	CE	IEC/EN 62368-1	IEC/EN 62368-1
Material and Parts	RoHS Directive Compliant		

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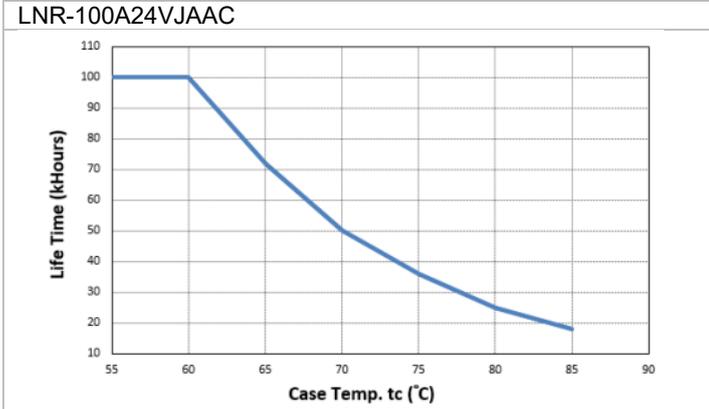
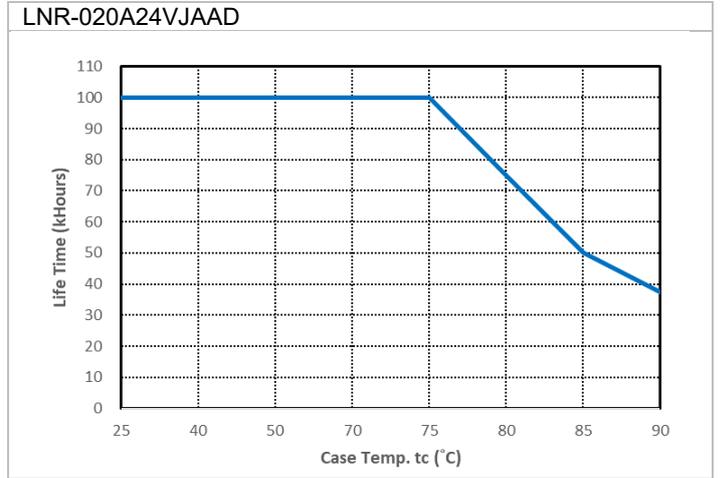
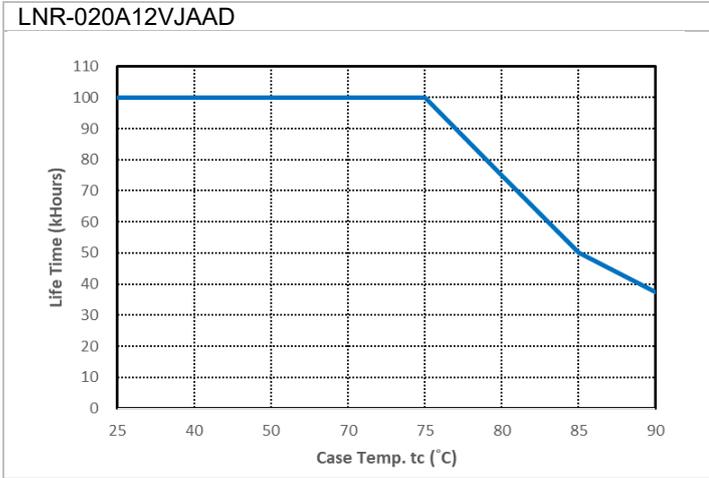
EMC

Emissions (EMI & RFI)	Compliance to 47 CFR FCC Part 15, Subpart B, Class A
Transient Protection (Surge)	L-N and L-G, N-G, L&N-G, ANSI C62.41-Category A1 with a 2.5kV/100kA ring wave
Emissions (EMI & RFI)	Compliance to EN55032, Class A
Immunity	Compliance to EN55035
Electrostatic Discharge	IEC 61000-4-2, Criteria B Air Discharge: 8kV Contact Discharge: 4 kV
Radiated Field	IEC 61000-4-3, Criteria A 80 MHz - 1 GHz, 3 V/M with 1 kHz tone / 80% modulation
Electrical Fast Transient / Burst	IEC 61000-4-4, Criteria B 1 kV with 5 kHz
Surge	L-N and L-G, N-G, Criteria B IEC 61000-4-5, DM/2ohm:1KV, CM/12ohm:2KV
Conducted	IEC 61000-4-6, Criteria A 150 kHz-10 MHz, 3 V 10 MHz-30 MHz, 3~1V 30 MHz-80 MHz, 1 V
Power Frequency Magnetic Fields	IEC 61000-4-8, Criteria A 1 A/Meter
Voltage Dips and Interruptions	IEC 61000-4-11 Dip <5% residual; 1 cycle, Criteria B 70% residual; 25 cycle, Criteria C Interruptions <5% residual; 250 cycle, Criteria C
Harmonic Current Emission	EN 61000-3-2, Class A
Voltage Fluctuations & Flicker	EN 61000-3-3

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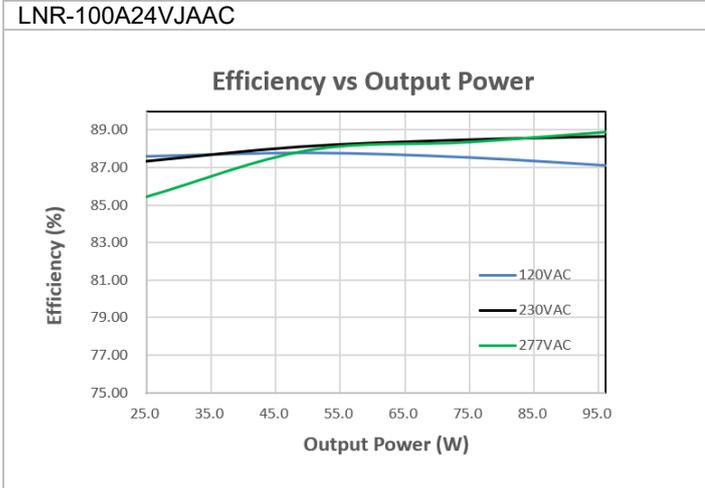
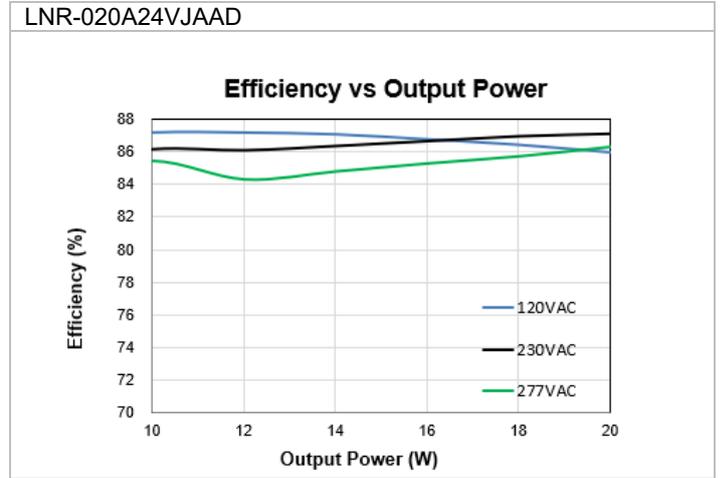
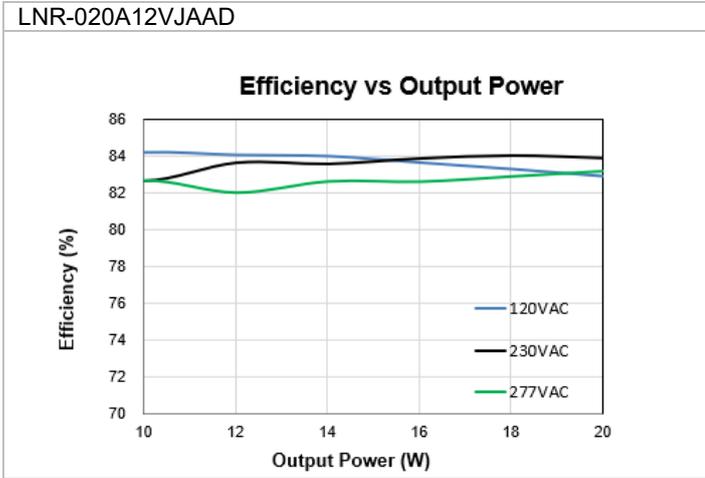
Driver Lifetime vs. Case Temperature



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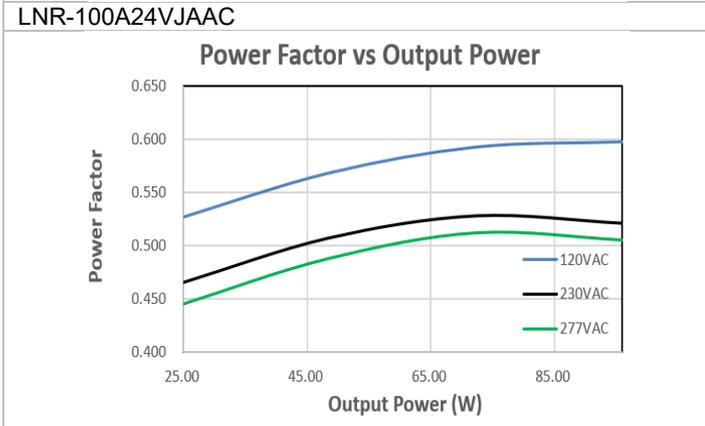
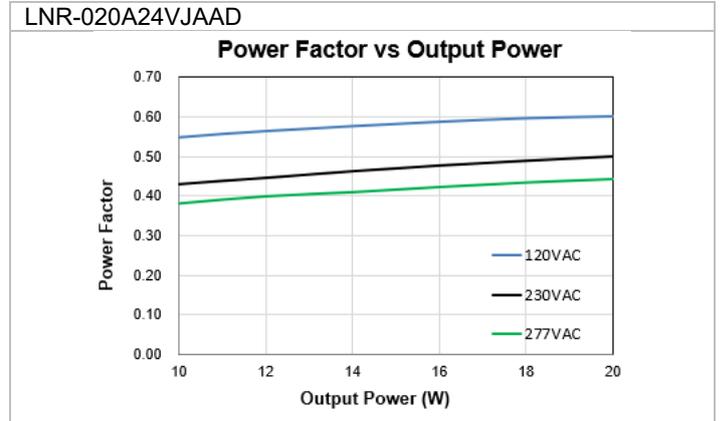
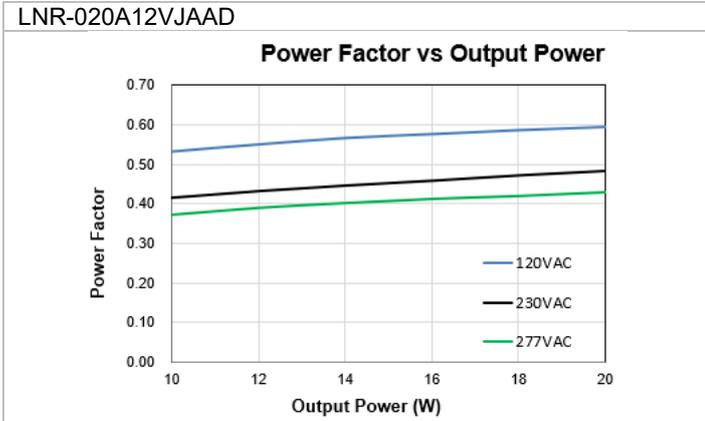
Efficiency vs. Output Power



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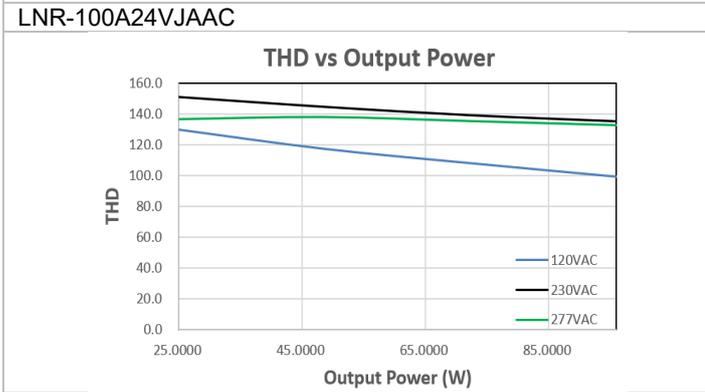
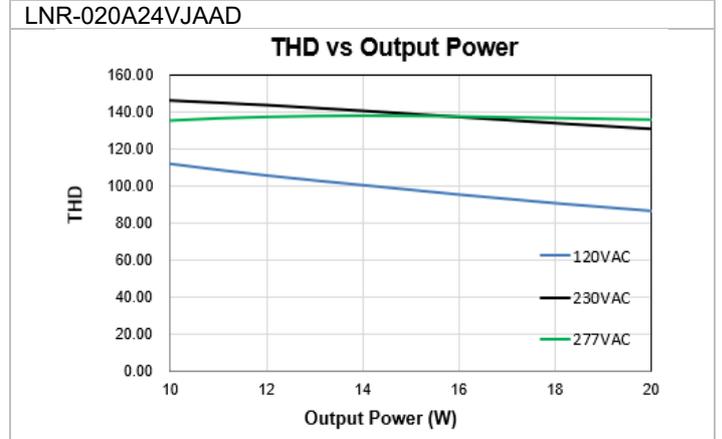
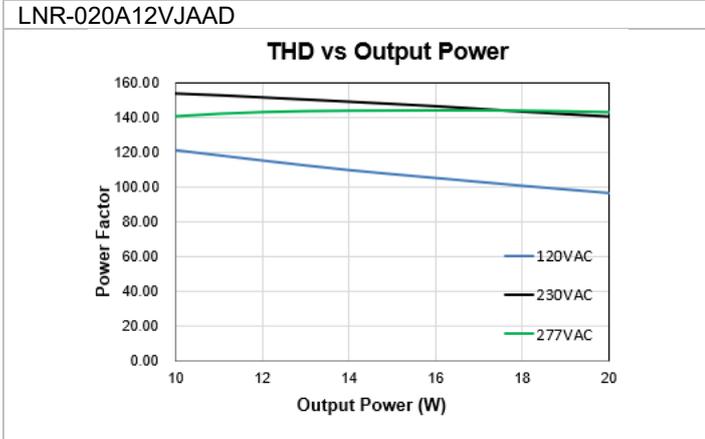
Power Factor vs. Output Power



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Total Harmonic Distortion vs. Output Power

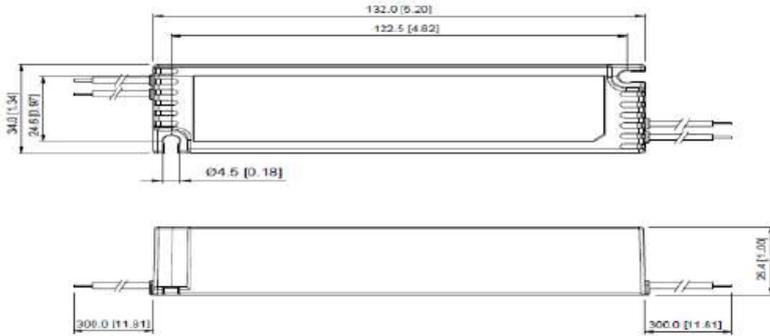


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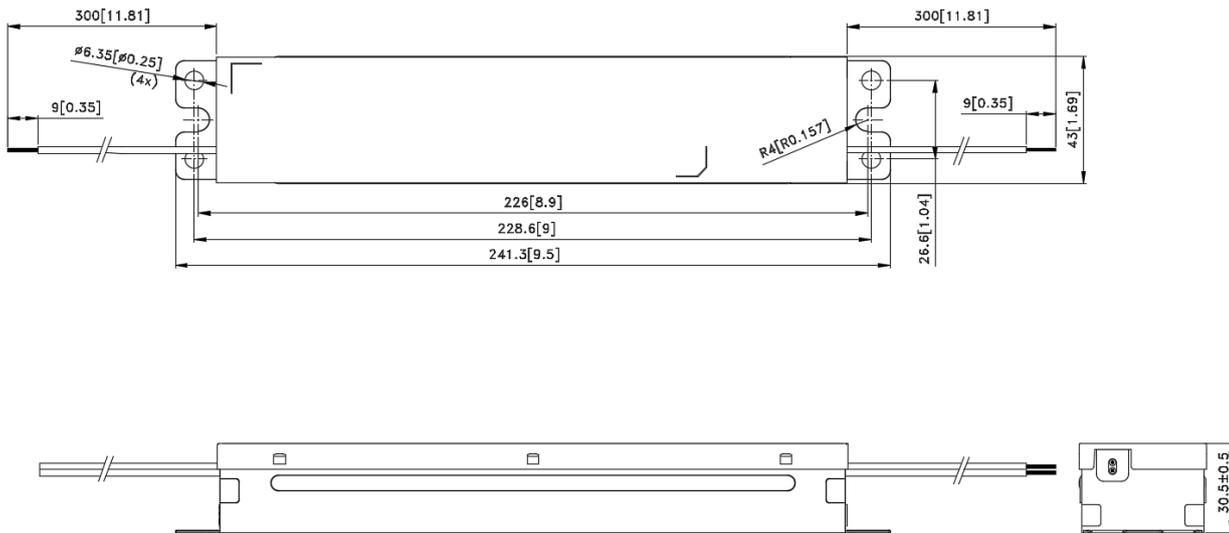
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Dimensions

LNR-020A24VJAAD, LNR-020A24VJAAD



LNR-100A24VJAAC



Others

Warranty Policy

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