

LPS Series Three Phase AC-DC DIN Rail Power Supplies



Key Features

- 24 VDC / 10A 240W, 20A 480W
- 3 Phase Input: 340-550VAC / 480-780VDC
- Accepts Bi-Phase Input
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



Technical Specification



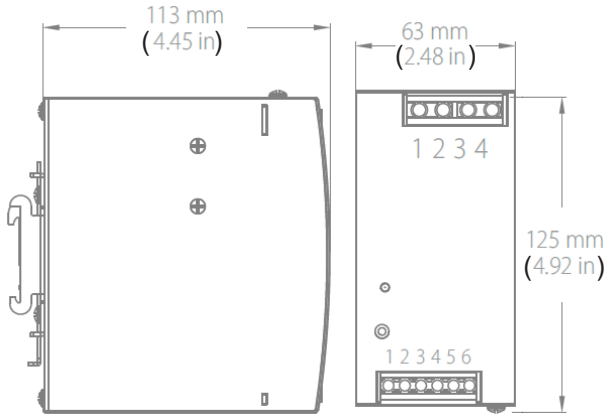
Model	LPS-3-240-24DC	LPS-3-480-24DC	LPS-3-960-24DC
Input Voltage	340-550VAC / 480-780VDC		
Output Wattage	240W	480W	960W
Output Voltage	24VDC / 35W	24VDC / 63W	24VDC / 35W
Output Current	10A	20A	40A
Efficiency	90%	92%	94%
General Specification			
Isolation Voltage	3000VAC/4242VDC		
Isolation Resistance	100MΩ @ 500VDC		
Ambient Temperature	-30 to +70°C / -22 to +158°F		
Derating	(60 to 70°C) 2.5%/°C / (140 to 158°F) 1.8%/°F		
Storage Temperature	-40 to +85°C / -40 to 185°F		
Relative Humidity	10 to 95% RH		
Cooling	Free air convection (Fanless)		
Dimensions	L125 x W63 x D113 (126.5 inc. DIN rail mount) mm	L124 x W85 x D129 (142.5 inc. DIN rail mount) mm	L125.2 x W110 x D152.3 (165.3 inc. DIN rail mount) mm
Weight	1000g	1510g	2470g
Case Material	Metal		
Input Specifications			
Input Voltage Range	340-550VAC, 480-780VDC		
Line Frequency	50/60Hz		
Power Factor @ 400VAC	0.53 Typical		0.88 Typical
Power Factor @ 500VAC	0.52 Typical		0.86 Typical
Inrush Current (400VAC)	Cold Start 50A		Cold Start 60A
Output Specifications			
Output Voltage Accuracy	±1%		
Minimum Load	0%		
Line Regulation	±0.5%		
Load Regulation	±1%		
Turn On Time	1000ms after AC applied to input at full resistive load		
Voltage Fall Time	150ms		
Voltage Rise Time	150ms		
Hold Up Time (400VAC)	20ms		
Temperature Coefficient	±0.03%/°C		
Ripple & Noise	<100mVp-p		
Voltage Trim Range	22.5-28.5VDC		
DC ON & LOW Indicator (Green & Red LED)	DC ON LED (Green) 60VDC / 0.3A; 30VDC / 1A; 30VAC / 0.5A		
Control & Protection			
Rated Overload Protection	105-130%		
Over Voltage Protection	30-36VDC		29-33VDC
Output Short Circuit	Hiccup Mode	Shutdown Output Voltage with Auto Recovery	

Note:

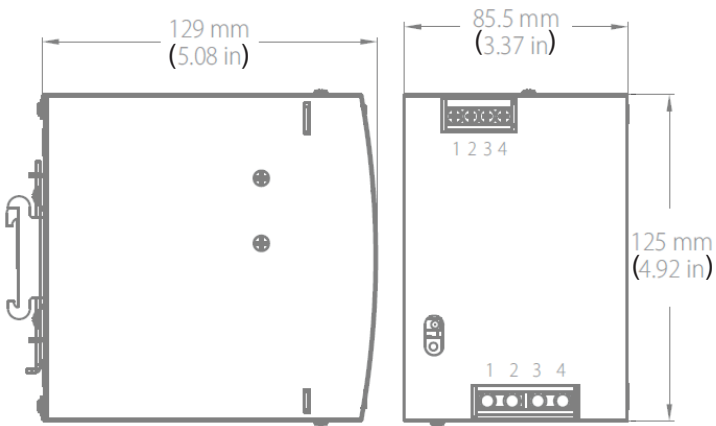
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 * F & 47 F parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

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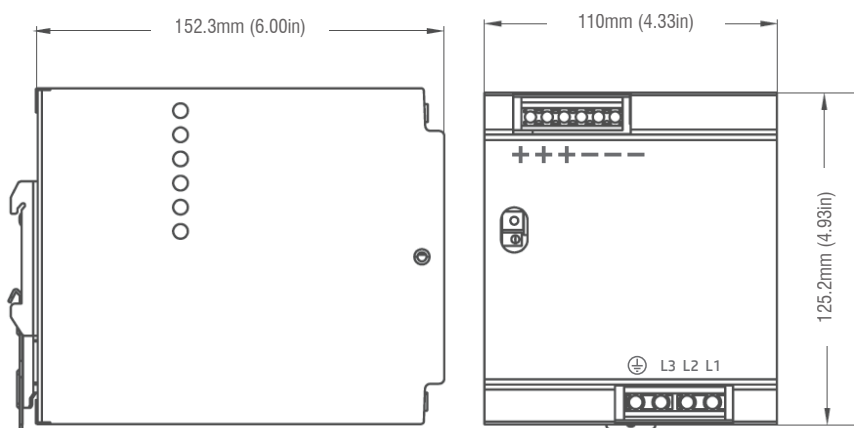
Dimensions (mm)



LPS-3-240-xxDC



LPS-3-480-xxDC



LPS-3-960-24DC

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Terminal Assignment

	Pin No.	LPS-3-240-xxDC	LPS-3-480-xxDC	Pin No.	LPS-3-960-xxDC
Input	1	AC / L1	PE (⊕)	1	FG (⊕)
	2	AC / L2 or DC-	AC / L3	2	AC / L3
	3	AC / L3 or DC+	AC / L2	3	AC / L2
	4	FG (⊕)	AC / L1	4	AC / L1
Output	1, 2	DC OUTPUT V+	DC OUTPUT V+	1,2,3	DC OUTPUT V+
	3, 4	DC OUTPUT V-	DC OUTPUT V-	4,5,6	DC OUTPUT V-
	5,6	DC OK Relay Contact	-	-	-

Installation

Ventilation / Cooling

Suggested installation clearance, top 40mm, bottom 20mm and 25mm left or right if the adjacent device is also a heat generating source.

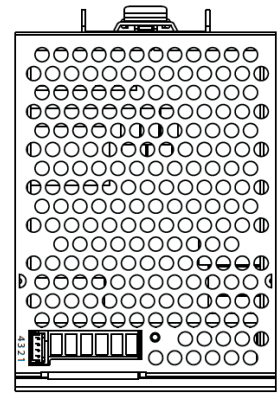
Connector Size Range

- AWG24-10 (0.2 ~ 4mm²) stranded / solid cable,
- Input connector can withstand torque at maximum 1,016Nm/ 0.7494 lb-ft
- Output connector can withstand torque at maximum 0.62Nm/ 0.4573 lb-ft
- Cable stripping 8mm (0.315in)
- Only use copper conductors 60/75°C (140/167°F)

DC OK Relay Contact (optional for LPS-3-480)

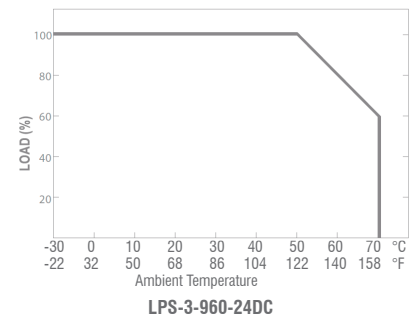
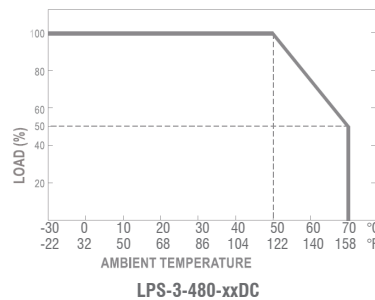
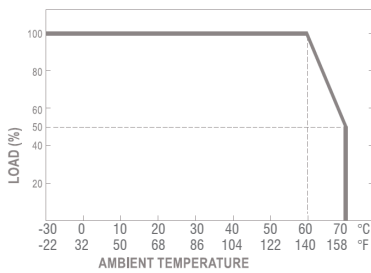
Contact Close	PSU turns on / DC OK
Contact Open	PSU turns off / DC Fail
Contact Ratings (max.)	60VDC / 0.3A, 30VDC / 1A, 30VAC / 0.5A resistive load

DC Contact for Current Share (960W Only)

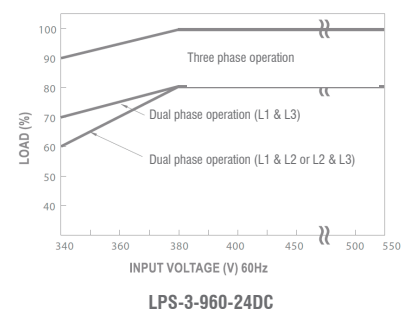
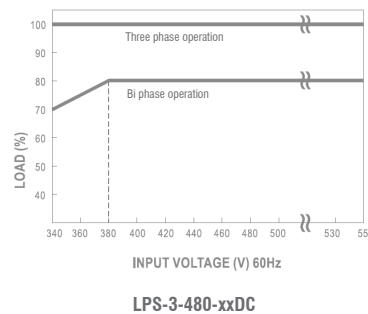
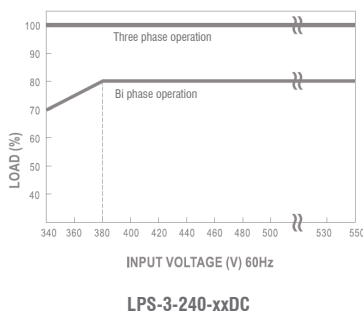


Terminal	Description
1	P- (Current Share)
2	P+ (Current Share)
3, 4	DC OK Relay Contact

Derating Curve

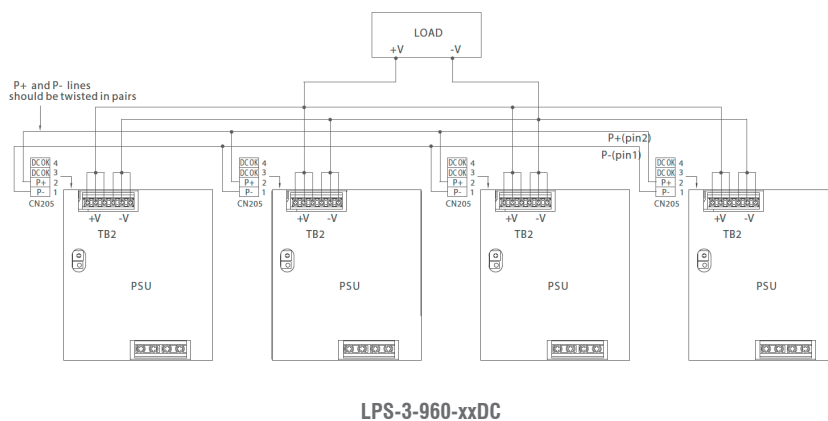
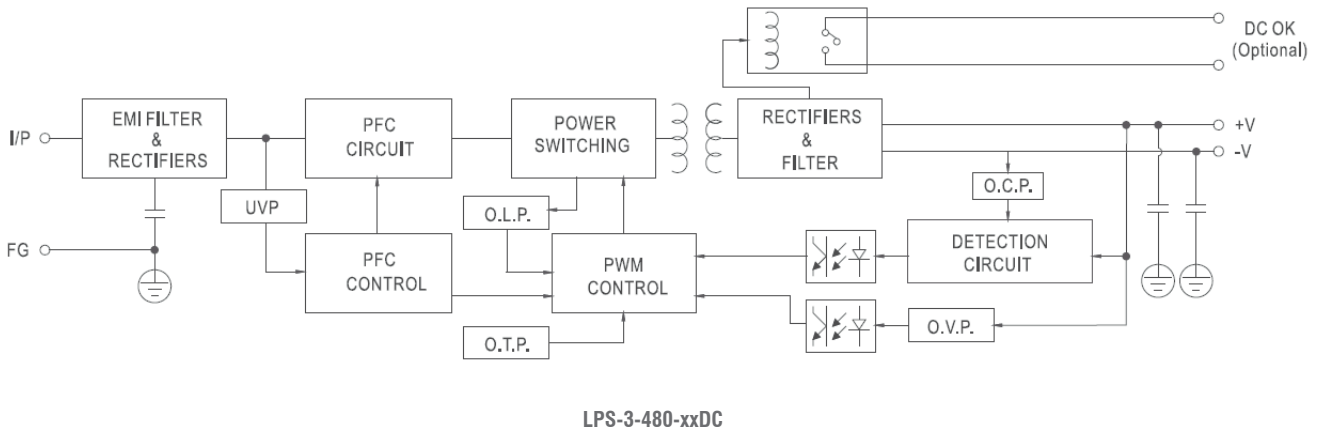
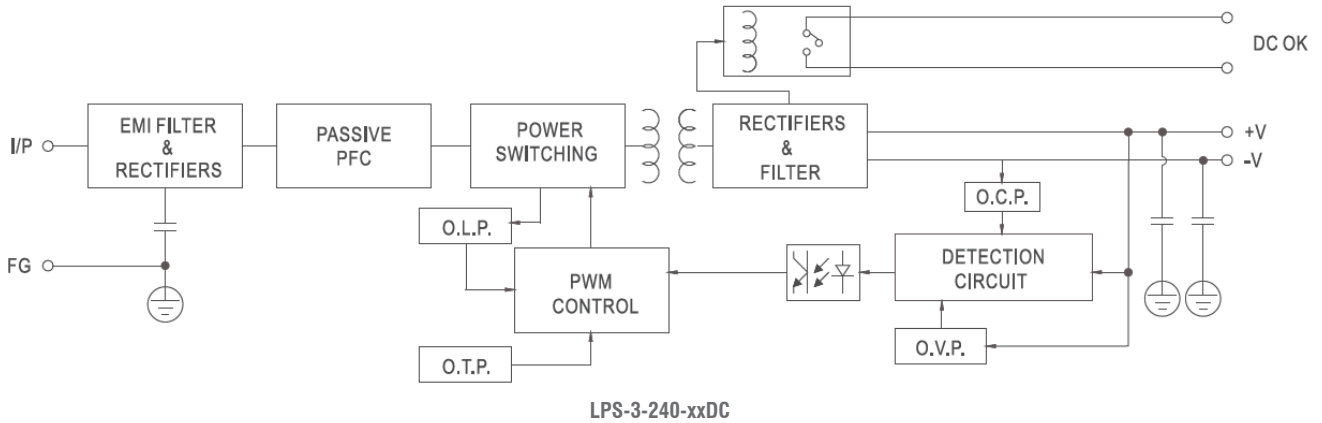


Minus Output & Input Voltage Curves



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Circuit Schematic



Wire Gauge Template Selector

A Cross-Section of a Copper Conductor (Electric Wire)	Current-Carrying Capability	Voltage 230V	Rated Current	Current Limiting
1.5	19	4.1kW	10A	16A
2.5	27	5.9kW	16A	25A
4.0	38	8.9kW	25A	32A
6.0	46	10.1kW	32A	40A
10.0	70	15.4kW	50A	63A