

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
Input Voltage	340-550VAC / 480-780VDC	
Output Wattage	240W	480W
Output Voltage	24VDC	24VDC
Output Current	10A	20A
Efficiency	90%	92%
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	
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
Weight	1000g	1510g
Case Material	Metal	
Input Specifications		
Rated Input Voltage	115 - 230VAC (auto select)	
Input Voltage Range	340-550VAC, 480-780VDC	
Line Frequency	50/60Hz	
Power Factor @ 400VAC	0.53 Typical	
Power Factor @ 500VAC	0.52 Typical	
Inrush Current (400VAC)	Cold Start 50A	
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)	17.6-19.4VDC	
Control & Protection		
Rated Overload Protection	105-130%	
Over Voltage Protection	30-36VDC	
Output Short Circuit	Hiccup Mode	Fold Forward

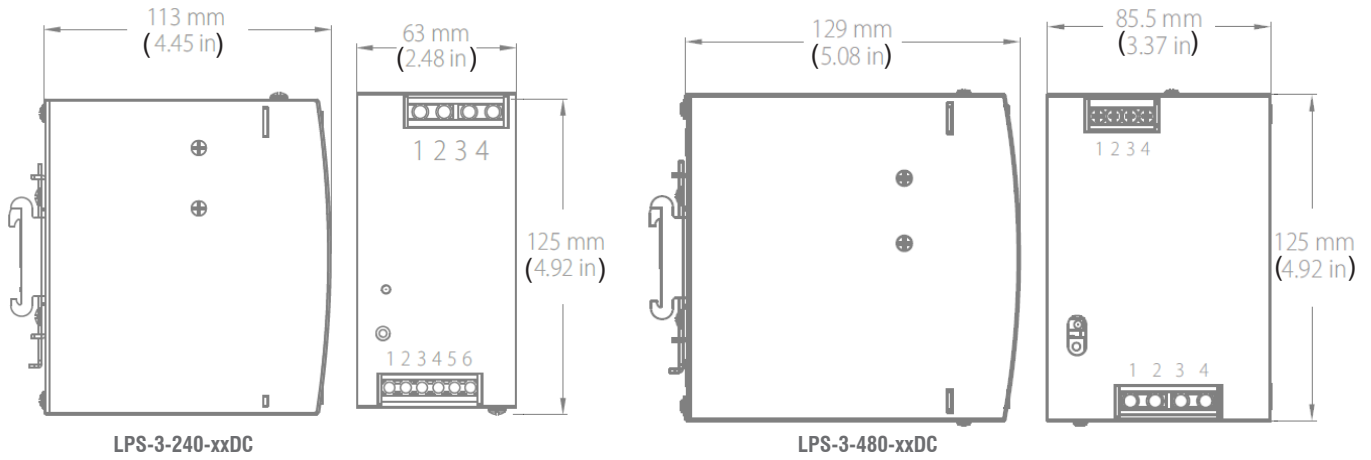
Note:

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)



Terminal Assignment

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

Installation

Ventilation / Cooling

Normal convection
All sides 25mm (0.98in) free space for cooling

Connector Size Range

- AWG24-10 (0.2 ~ 4mm²) flexible / 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)

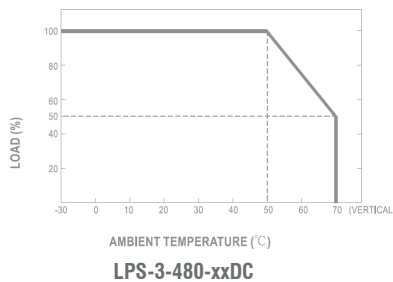
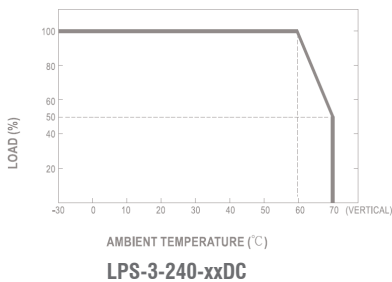
DC OK Relay Contact (optional for LPS-3-480)

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

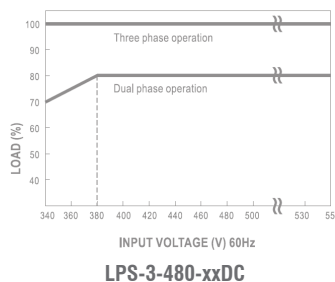
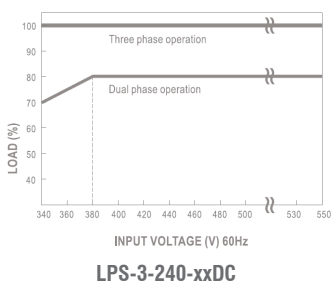
Construction

Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safely and firmly on the rail.

Derating Curve

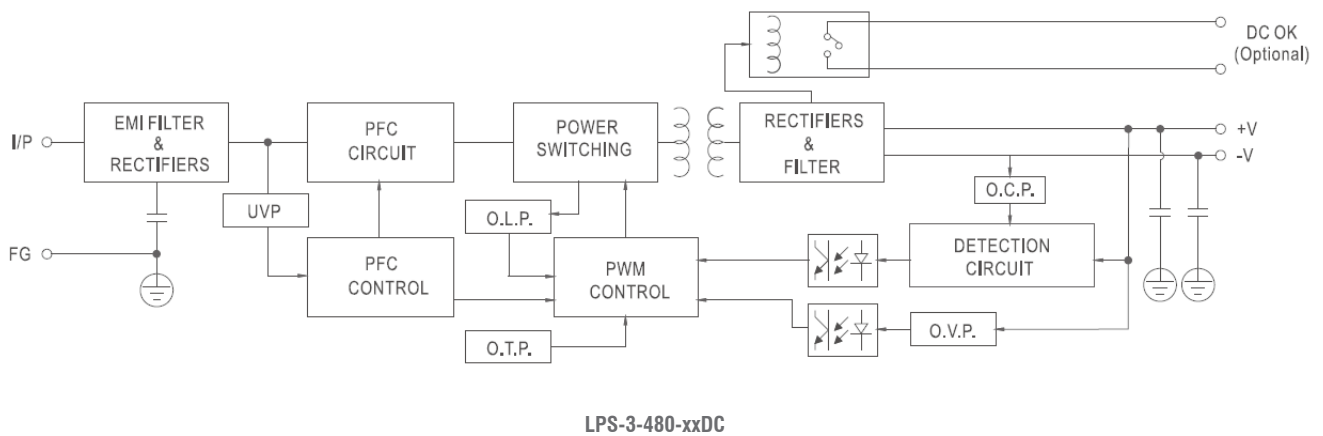
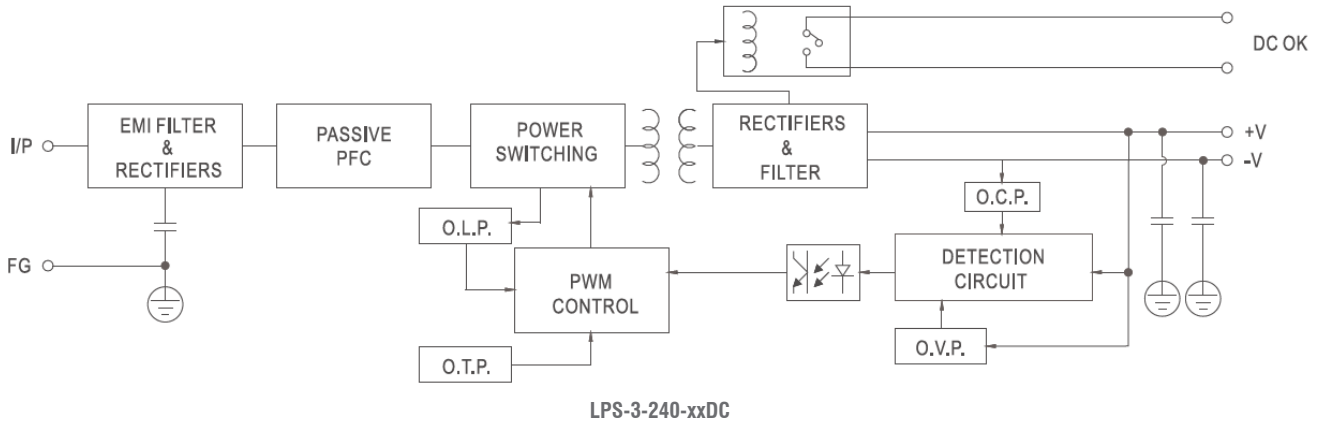


Minus Output & Input Voltage Curves



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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

