

# DPS Series 120W to 960W

## Three Phase AC-DC DIN Rail Power Supplies



IMO's range of industrial power supplies have been designed especially for the control and automation marketplace. The three phase DPS range offers the benefits of universal input, high efficiency, short circuit protection and the security of our unique 3 year warranty along with an impressive range of international approvals.



### Key Features

- Multiple output voltages from 12 to 48 VDC (model dependent)
- Universal Input: 340-575VAC / 480-820VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



# DPS Series 3 Phase 120W AC-DC DIN Rail Power Supplies



## Key Features

- 12 & 24 VDC
- 3 Phase Input: 340-575VAC / 480-820VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



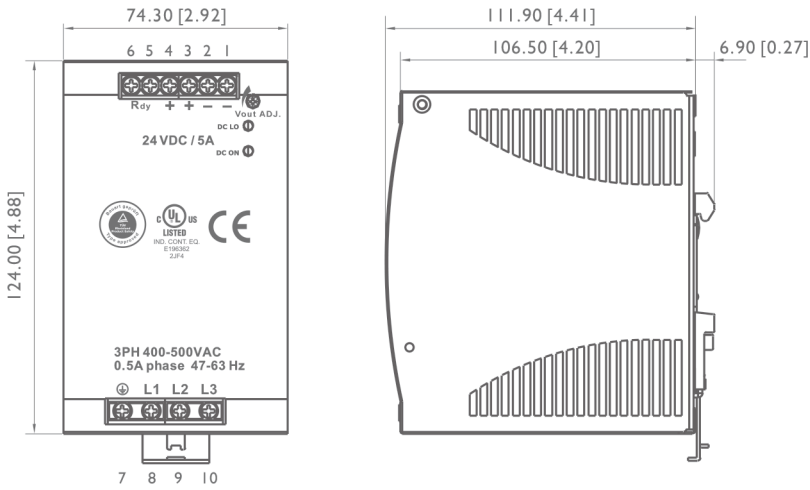
## Technical Specification - 120W Output

Model	DPS-3-120-12DC	DPS-3-120-24DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	120W	
Output Voltage	12VDC	24VDC
Output Current	10A	5A
Efficiency (min/typ)	85/87%	87/89%
<b>General Specification</b>		
Approval	cURus	
Isolation Voltage	3000VAC/4242VDC	
Isolation Resistance	100MΩ @ 500VDC	
Ambient Temperature	-40 to +71°C	
Derating	(61 to 71°C) 2.5%/°C	
Storage Temperature	-40 to +85°C	
Relative Humidity	20 to 95% RH	
Cooling	Free air convection	
Dimensions	L124 x W74.3 x D118.8 mm	
Weight	800g	
Case Material	Metal	
<b>Input Specifications</b>		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Inrush Current (400VAC)	typ. 10A, max. 12A	
<b>Output Specifications</b>		
Output Voltage Accuracy	+1%	
Minimum Load	0%	
Line Regulation	±1%	
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 (115 / 230VAC)	20ms	
Temperature Coefficient	±0.03%/°C	
Ripple & Noise	100mV	
Voltage Trim Range	11.4 ~ 14.5VDC	22.5 ~ 28.5VDC
DC ON & LOW Indicator (Green & Red LED)	10 ~ 11.2VDC	17.6 ~ 19.4VDC
<b>Control &amp; Protection</b>		
Rated Overload Protection	115 ~ 135%	
Over Voltage Protection	15 ~ 16.5VDC	30 ~ 33VDC
Output Short Circuit	Hiccup Mode	

# DPS Series 3 Phase 120W AC-DC DIN Rail Power Supplies



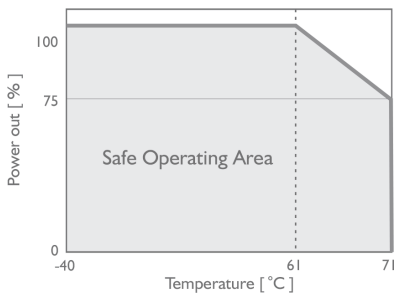
## Dimensions (mm)



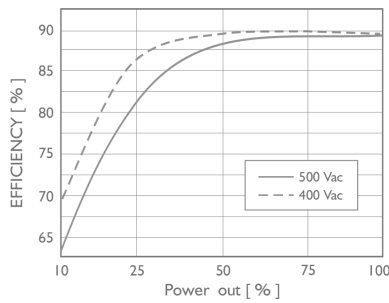
## Pin Connections

Key		Description
1, 2	V -	Negative output terminal
3, 4	V +	Positive output terminal
5, 6	RDY	DC OK output for relay (24V model only)
7		Ground this terminal to minimise high-frequency emissions
8	L1	Input terminals
9	L2	Input terminals
10	L3	Input terminals
	DC ON	Operation indication LED
	DC LO	DC LOW voltage indicator LED
	Vout ADJ.	Trimmer-potentiometer for Vout adjustment

## Derating



## Typ. Efficiency Curve



## Installation

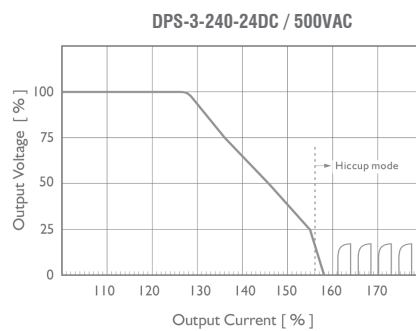
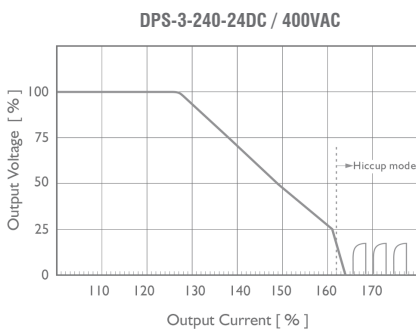
### Ventilation / Cooling

Normal convection  
 All sides 25mm free space  
 For cooling recommended

### Connector Size Range

Input and RDY, P, G Control: AWG24-10 (0.2 ~ 4mm<sup>2</sup>) flexible / solid cable  
 - Input connector can withstand torque at maximum 9 lb/in  
 - Output connector can withstand torque at max. 5.5 lb/in  
 8 m/m stripping cable end recommends  
 Use copper conductors only, 60 / 75°C

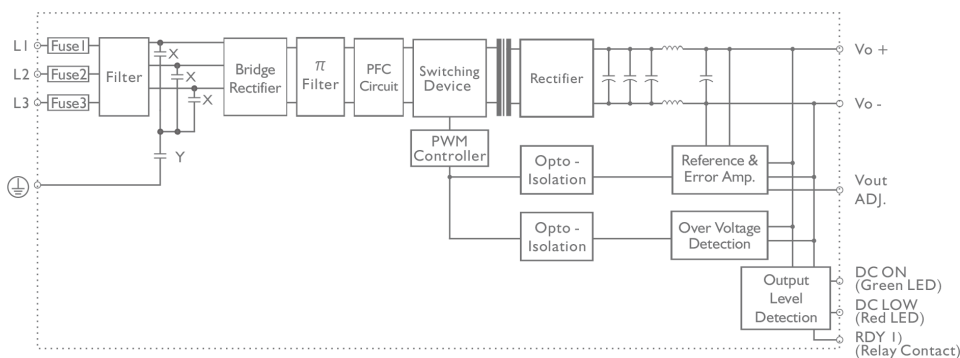
## Typ. Current Limited Curve



## Construction

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

## Circuit Schematic



# DPS Series 3 Phase 240W AC-DC DIN Rail Power Supplies



## Key Features

- 24 & 48 VDC
- 3 Phase Input: 340-575VAC / 480-820VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



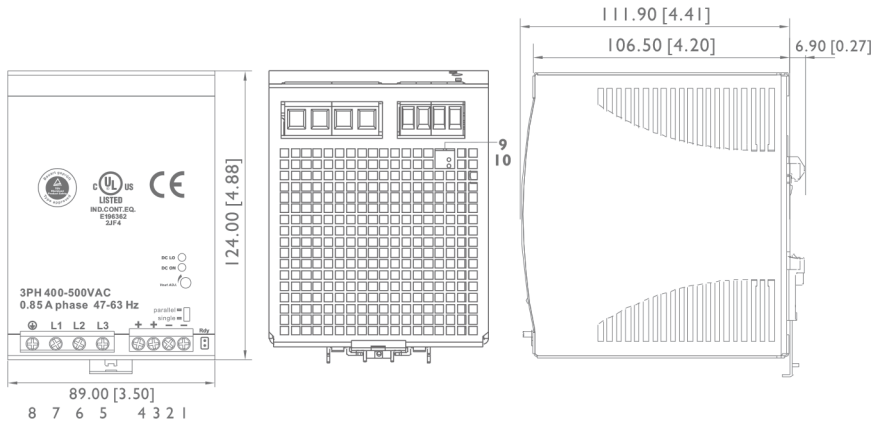
## Technical Specification - 240W Output

Model	DPS-3-240-24DC	DPS-3-240-48DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	240W	
Output Voltage	24VDC	48VDC
Output Current	10A	5A
Efficiency (min/typ)	88/90%	89/91%
<b>General Specification</b>		
Approval	cURus	
Isolation Voltage	3000VAC/4242VDC	
Isolation Resistance	100MΩ @ 500VDC	
Ambient Temperature	-40 to +71°C	
Derating	(61 to 71°C) 2.5%/°C	
Storage Temperature	-40 to +85°C	
Relative Humidity	20 to 95% RH	
Cooling	Free air convection	
Dimensions	L124 x W89 x D118.8 mm	
Weight	1100g	
Case Material	Metal	
<b>Input Specifications</b>		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Inrush Current (400VAC)	typ. 20A, max. 25A	
<b>Output Specifications</b>		
Output Voltage Accuracy	+1%	
Minimum Load	0%	
Line Regulation	±1%	
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 (115 / 230VAC)	20ms	
Temperature Coefficient	±0.03%/°C	
Ripple & Noise	100mV	
Voltage Trim Range	22.5 ~ 28.5VDC	47 ~ 56VDC
DC ON & LOW Indicator (Green & Red LED)	17.6 ~ 19.4VDC	37 ~ 43VDC
<b>Control &amp; Protection</b>		
Rated Overload Protection	120 ~ 140%	
Over Voltage Protection	30 ~ 33VDC	60 ~ 66VDC
Output Short Circuit	Hiccup Mode	

# DPS Series 3 Phase 240W AC-DC DIN Rail Power Supplies



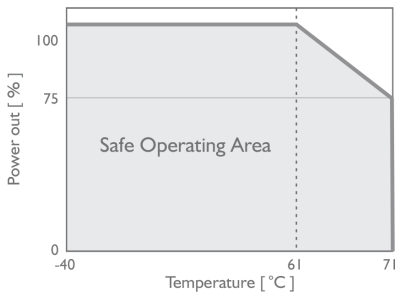
## Dimensions (mm)



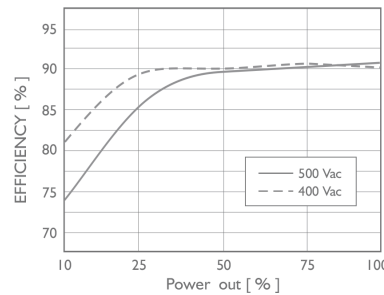
## Pin Connections

Key		Description
1, 2	V -	Negative output terminal
3, 4	V +	Positive output terminal
5	L3	Input terminals
6	L2	Input terminals
7	L1	Input terminals
8		Ground this terminal to minimise high-frequency emissions
9, 10	RDY	DC OK output for relay (24V model only)
	DC ON	Operation indication LED
	DC LO	DC LOW voltage indicator LED
	Vout ADJ	Trimmer-potentiometer for Vout adjustment
	S / P	Single / Parallel select switch

## Derating



## Typ. Efficiency Curve



## Installation

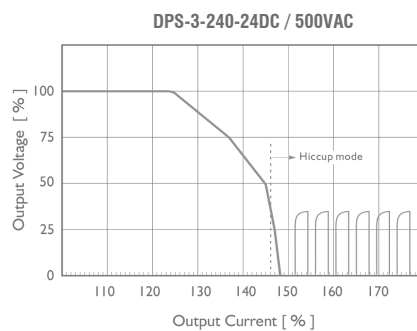
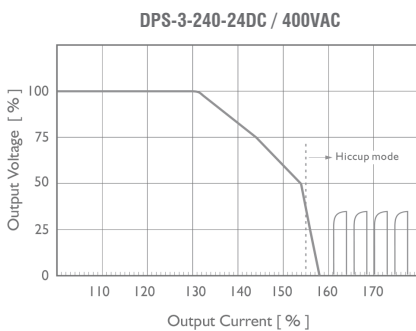
### Ventilation / Cooling

Normal convection  
 All sides 25mm free space  
 For cooling recommended

### Connector Size Range

Input and RDY, P, G Control: AWG24-10 (0.2 ~ 4mm<sup>2</sup>) flexible / solid cable  
 - Input connector can withstand torque at maximum 9 lb/in  
 - Output connector can withstand torque at max. 5.5 lb/in  
 8 m/m stripping cable end recommends  
 Use copper conductors only, 60 / 75°C

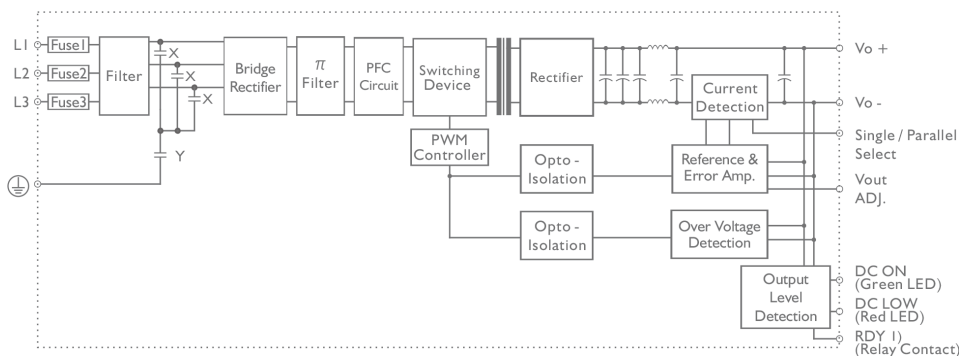
## Typ. Current Limited Curve



## Construction

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

## Circuit Schematic



# DPS Series 3 Phase 480W AC-DC DIN Rail Power Supplies



## Key Features

- 24 & 48 VDC
- 3 Phase Input: 340-575VAC / 480-820VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



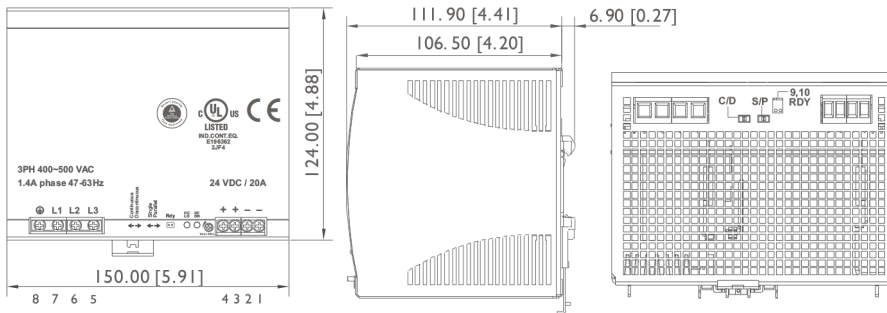
## Technical Specification - 480W Output

Model	DPS-3-480-24DC	DPS-3-480-48DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	480W	
Output Voltage	24VDC	48VDC
Output Current	20A	10A
Efficiency (min/typ)	88/90%	89/91%
<b>General Specification</b>		
Approval	cURus	
Isolation Voltage	3000VAC/4242VDC	
Isolation Resistance	100MΩ @ 500VDC	
Ambient Temperature	-30 to +71°C	
Derating	(61 to 71°C) 2.5%/°C	
Storage Temperature	-40 to +85°C	
Relative Humidity	20 to 95% RH	
Cooling	Free air convection	
Dimensions	L124 x W150 x D118.8 mm	
Weight	1720g	
Case Material	Metal	
<b>Input Specifications</b>		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Inrush Current (400VAC)	typ. 20A, max. 25A	
<b>Output Specifications</b>		
Output Voltage Accuracy	+ 1%	
Minimum Load	0%	
Line Regulation	± 1%	
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 (115 / 230VAC)	20ms	
Temperature Coefficient	± 0.03%/°C	
Ripple & Noise	100mV	
Voltage Trim Range	22.5 ~ 28.5VDC	47 ~ 56VDC
DC ON & LOW Indicator (Green & Red LED)	17.6 ~ 19.4VDC	37 ~ 43VDC
<b>Control &amp; Protection</b>		
Rated Overload Protection	110 ~ 135%	
Over Voltage Protection	30 ~ 33VDC	60 ~ 66VDC
Output Short Circuit	Fold Forward	

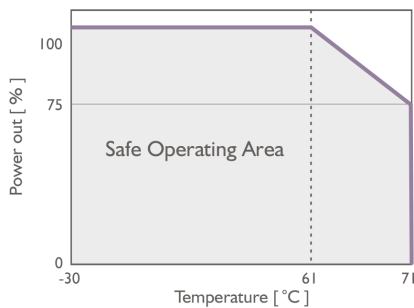
# DPS Series 3 Phase 480W AC-DC DIN Rail Power Supplies



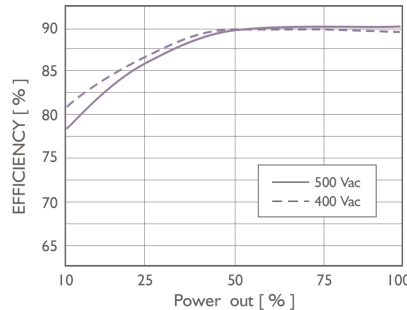
## Dimensions (mm)



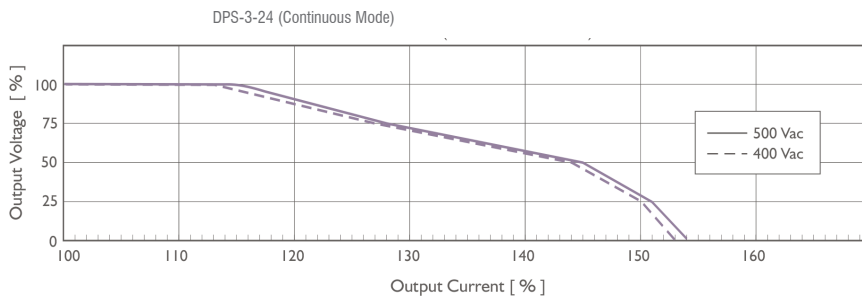
## Derating



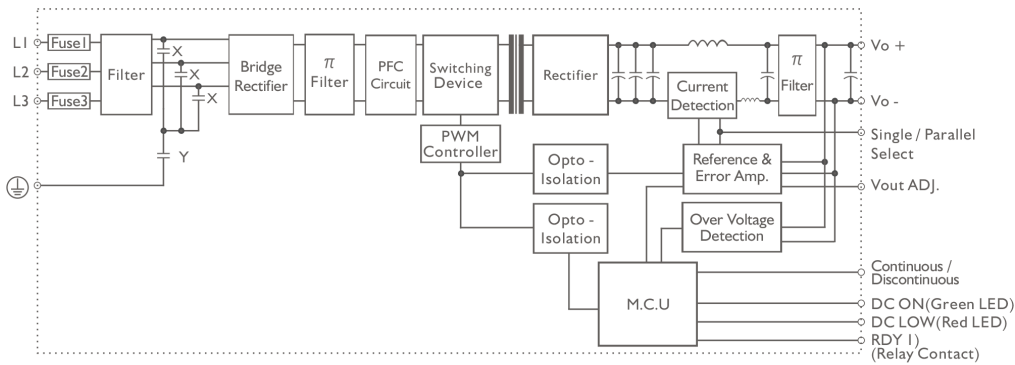
## Typ. Efficiency Curve



## Typ. Current Limited Curve



## Circuit Schematic



Note: 1) For 24V Model Only

## Pin Connections

Key		Description
1, 2	V -	Negative output terminal
3, 4	V +	Positive output terminal
5	L3	Input terminals
6	L2	Input terminals
7	L1	Input terminals
8		Ground this terminal to minimise high-frequency emissions
9	RDY	A normal open relay contact for DC ON level control
10		(Never connect except 24V model)
	DC ON	Operation indicator LED
	DC LO	DC LOW voltage indicator LED
	Vout ADJ	Trimmer-potentiometer for Vout adjustment
	S / P	Single / Parallel select switch
	C / D	Continuous / Discontinuous

## Installation

**Ventilation / Cooling**  
Normal convection  
All sides 25mm free space  
For cooling recommended

**Connector Size Range**  
AWG24-10 (0.2 ~ 4mm<sup>2</sup>) flexible / solid cable,  
- Input connector can withstand torque at maximum 9 pound-inches  
- Output connector can withstand torque at maximum 5.5 pound-inches  
8 m/m stripping cable end recommends  
Use copper conductors only, 60 / 75°C

## Construction

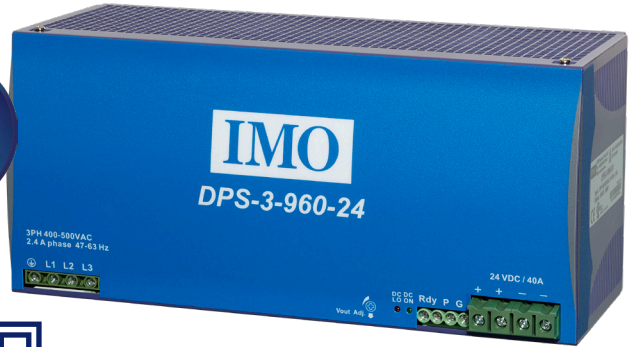
Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safely and firmly on the rail.

# DPS Series 3 Phase 960W AC-DC DIN Rail Power Supplies



## Key Features

- 24 & 48 VDC
- 3 Phase Input: 340-575VAC / 480-820VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



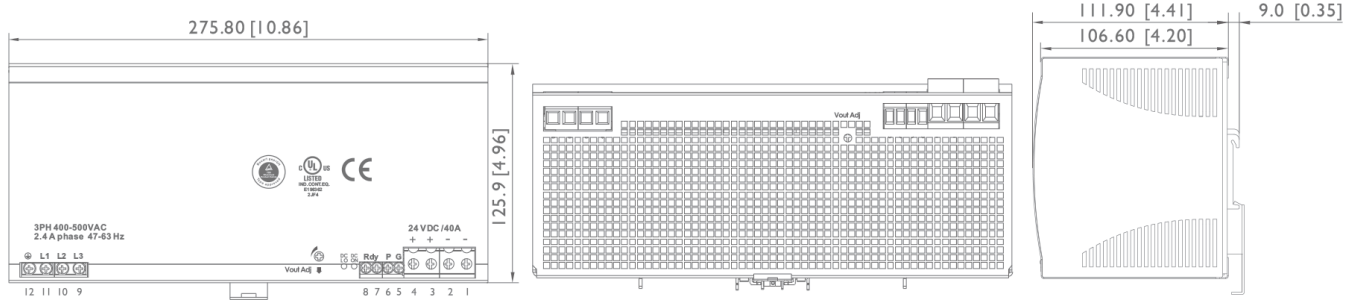
## Technical Specification - 960W Output

Model	DPS-3-960-24DC	DPS-3-960-48DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	960W	
Output Voltage	24VDC	48VDC
Output Current	40A	20A
Efficiency (min/typ)	90/92%	91/93%
<b>General Specification</b>		
Approval	cURus	
Isolation Voltage	3000VAC/4242VDC	
Isolation Resistance	100MΩ @ 500VDC	
Ambient Temperature	-40 to +71°C	
Derating	(61 to 71°C) 2.5%/°C	
Storage Temperature	-40 to +85°C	
Relative Humidity	20 to 95% RH	
Cooling	Free air convection	
Dimensions	L124 x W275.8 x D118.8 mm	
Weight	3400g	
Case Material	Metal	
<b>Input Specifications</b>		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Inrush Current (400VAC)	typ. 30A, max. 35A	
<b>Output Specifications</b>		
Output Voltage Accuracy	+1%	
Minimum Load	0%	
Line Regulation	±1%	
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 (115 / 230VAC)	15ms	
Temperature Coefficient	±0.03%/°C	
Ripple & Noise	180mV	
Voltage Trim Range	22.5 ~ 28.5VDC	47 ~ 56VDC
DC ON & LOW Indicator (Green & Red LED)	17.6 ~ 19.4VDC	37 ~ 43VDC
<b>Control &amp; Protection</b>		
Rated Overload Protection	110 ~ 135%	
Over Voltage Protection	30 ~ 33VDC	60 ~ 66VDC
Output Short Circuit	Hiccup Mode	

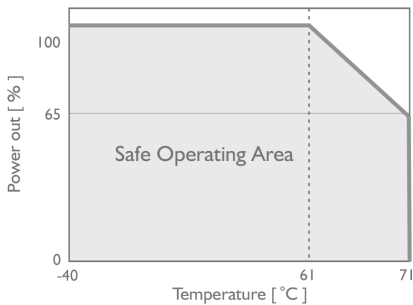
# DPS Series 3 Phase 960W AC-DC DIN Rail Power Supplies



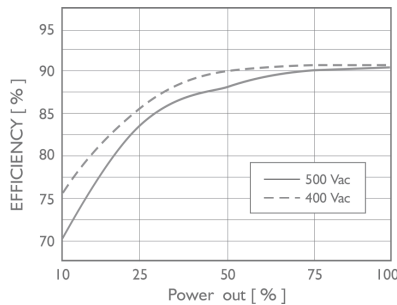
## Dimensions (mm)



## Derating



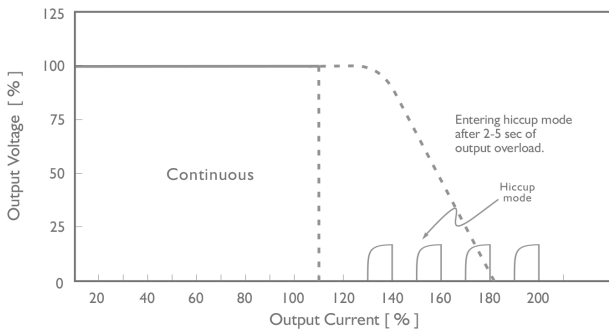
## Typ. Efficiency Curve



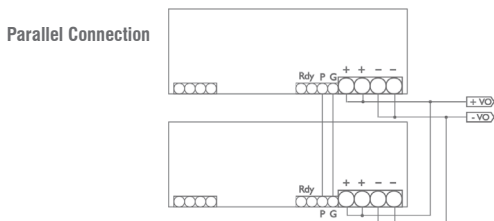
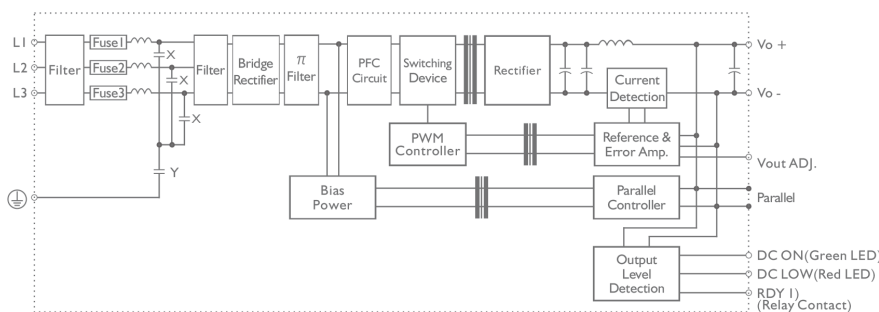
## Pin Connections

Key		Description
1, 2	V -	Negative output terminal
3, 4	V +	Positive output terminal
5	G	Parallel GND PIN for current share
6	P	Parallel PIN for current share
7, 8	RDY	DC OK output for relay (24V model only)
9	L3	Input terminals
10	L2	Input terminals
11	L1	Input terminals
12		Ground this terminal to minimise high-frequency emissions
	DC ON	Operation indicator LED
	DC LO	DC LOW voltage indicator LED
	Vout ADJ	Trimmer-potentiometer for Vout adjustment

## Typ. Current Limited Curve



## Circuit Schematic



## Installation

**Ventilation / Cooling**  
Normal convection  
All sides 25mm free space  
For cooling recommended

### Connector Size Range

Input and RDY, P, G Control: AWG24-10 (0.2 ~ 4mm<sup>2</sup>) flexible / solid cable  
Output: AWG20-6 (0.5 ~ 10mm<sup>2</sup>)  
- Input connector can withstand torque at maximum 9 lb/in  
RDY, P, G Control connector can withstand torque at max. 5.5 lb/in  
- Output connector can withstand torque at max. 15.6 lb/in  
10m/m striping cable end recommends  
Use copper conductors only, 60 / 75°C

## Construction

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