

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



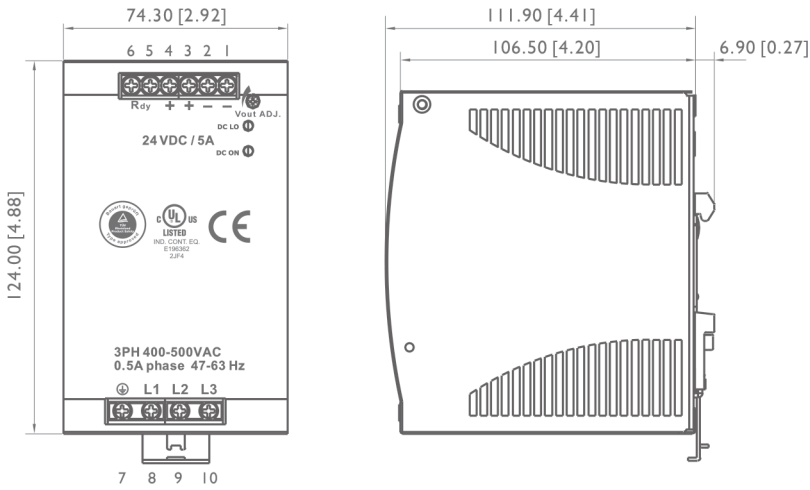
Technical Specification - 120W Output

Model	DPS-3-120-12DC	DPS-3-120-24DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	120W	
Output Voltage / Power Dissipation	12VDC / 24W	24VDC / 20W
Output Current	10A	5A
Efficiency (min/typ)	85/87%	87/89%
General Specification		
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	
Input Specifications		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Power Factor @ 115VAC	0.55 Typical (0.57 Measured)	
Power Factor @ 230VAC	0.55 Typical (0.54 Measured)	
Inrush Current (400VAC)	typ. 10A, max. 12A	
Output Specifications		
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
Control & Protection		
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



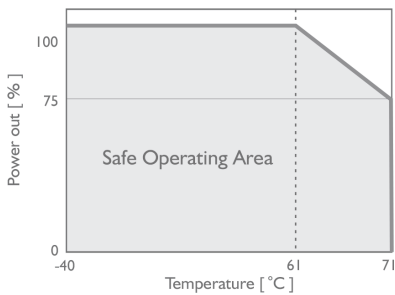
Dimensions (mm)



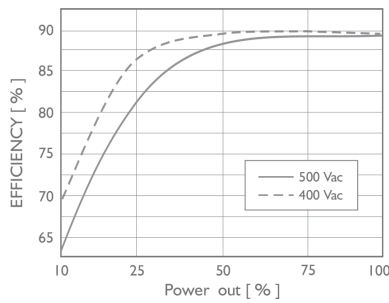
Pin Connections

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

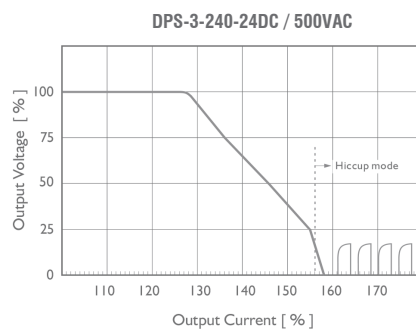
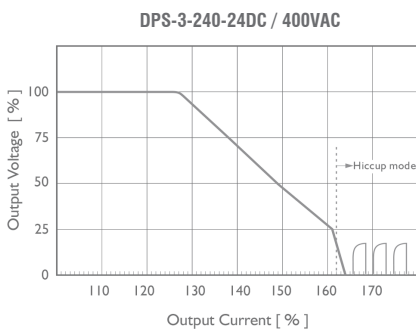
Ventilation / Cooling

Normal convection
All sides 25mm free space
For cooling recommended

Connector Size Range

Input and RDY, P, G Control: AWG24-10 (0.2 ~ 4mm²) 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

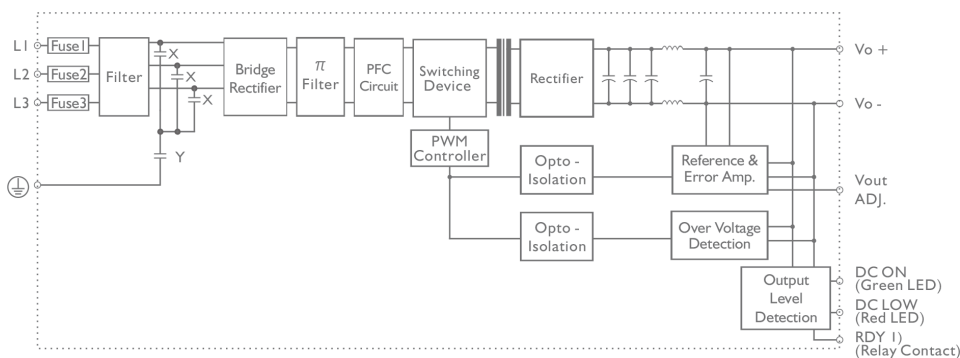
Typ. Current Limited Curve



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



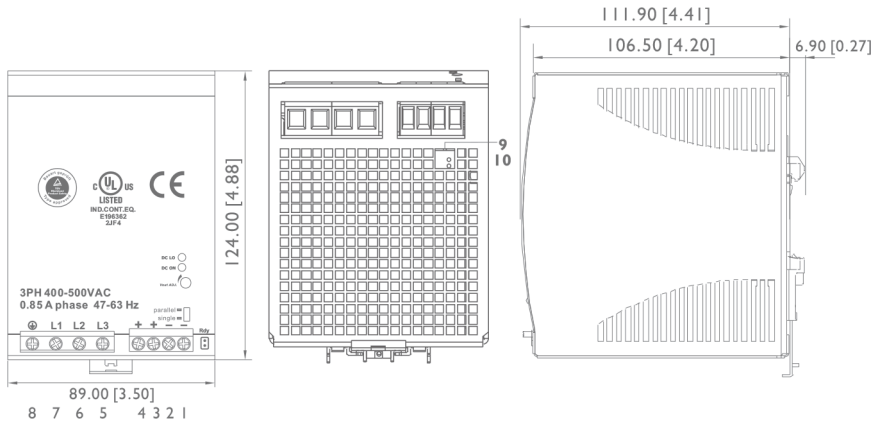
Technical Specification - 240W Output

Model	DPS-3-240-24DC	DPS-3-240-48DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	240W	
Output Voltage / Power Dissipation	24VDC / 35W	48VDC / 32W
Output Current	10A	5A
Efficiency (min/typ)	88/90%	89/91%
General Specification		
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	
Input Specifications		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Power Factor @ 115VAC	0.55 Typical (0.6 Measured)	
Power Factor @ 230VAC	0.55 Typical (0.56 Measured)	
Inrush Current (400VAC)	typ. 20A, max. 25A	
Output Specifications		
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
Control & Protection		
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



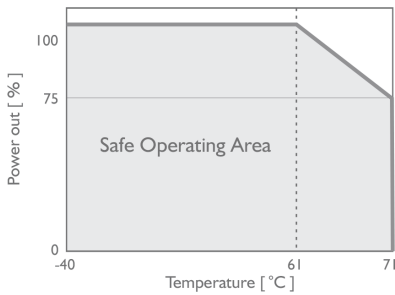
Dimensions (mm)



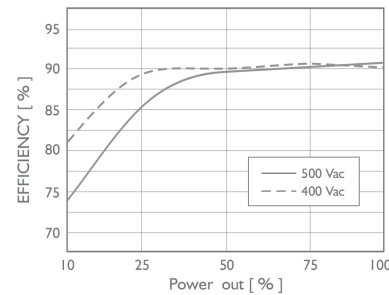
Pin Connections

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

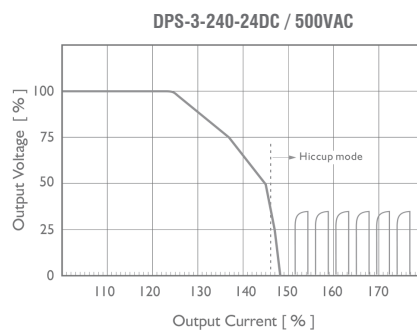
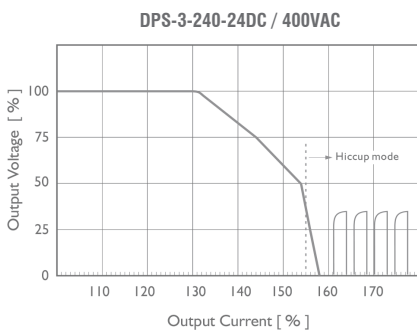
Ventilation / Cooling

Normal convection
 All sides 25mm free space
 For cooling recommended

Connector Size Range

Input and RDY, P, G Control: AWG24-10 (0.2 ~ 4mm²)
 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

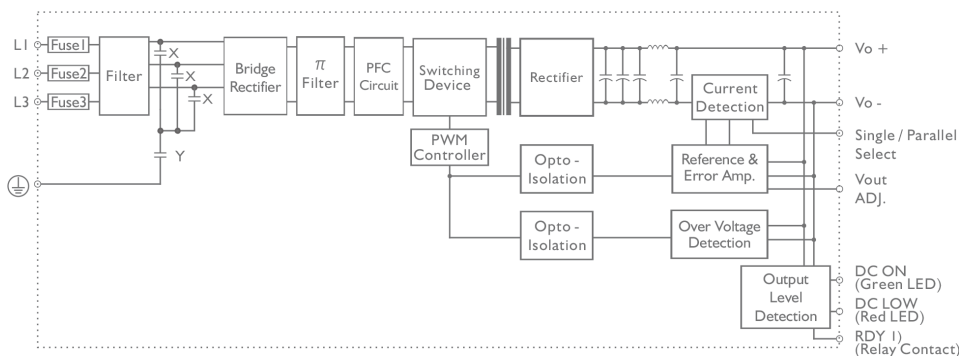
Typ. Current Limited Curve



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



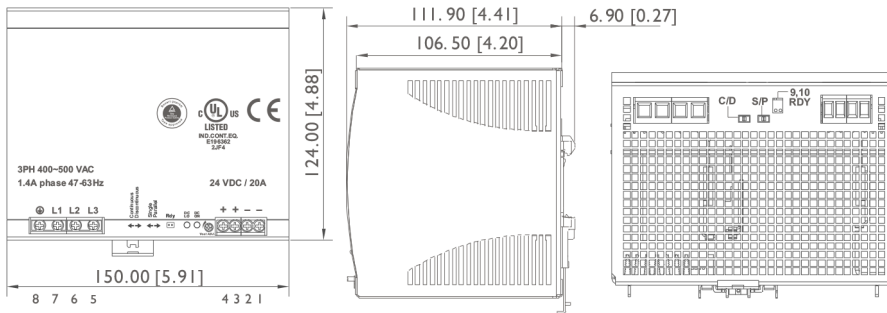
Technical Specification - 480W Output

Model	DPS-3-480-24DC	DPS-3-480-48DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	480W	
Output Voltage / Power Dissipation	24VDC / 63W	48VDC / 60W
Output Current	20A	10A
Efficiency (min/typ)	88/90%	89/91%
General Specification		
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	
Input Specifications		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Power Factor @ 115VAC	0.65 Typical (0.7 Measured)	
Power Factor @ 230VAC	0.65 Typical (0.67 Measured)	
Inrush Current (400VAC)	typ. 20A, max. 25A	
Output Specifications		
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
Control & Protection		
Rated Overload Protection	110 ~ 135%	
Over Voltage Protection	30 ~ 33VDC	60 ~ 66VDC
Output Short Circuit	Fold Forward	

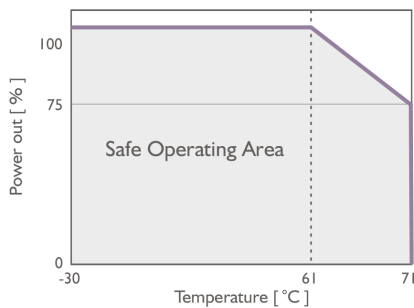
DPS Series 3 Phase 480W AC-DC DIN Rail Power Supplies



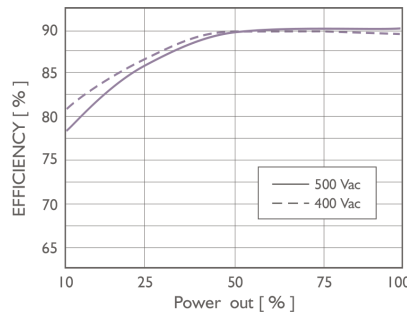
Dimensions (mm)



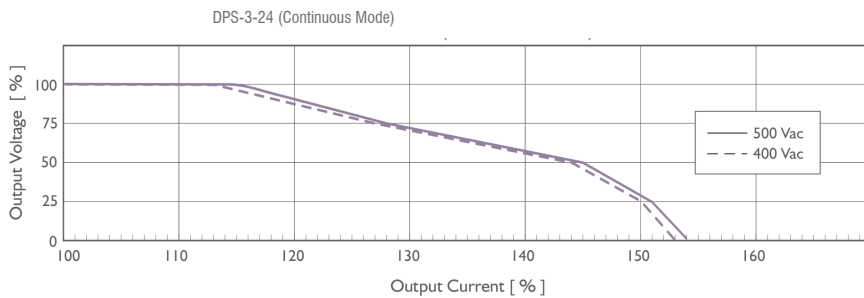
Derating



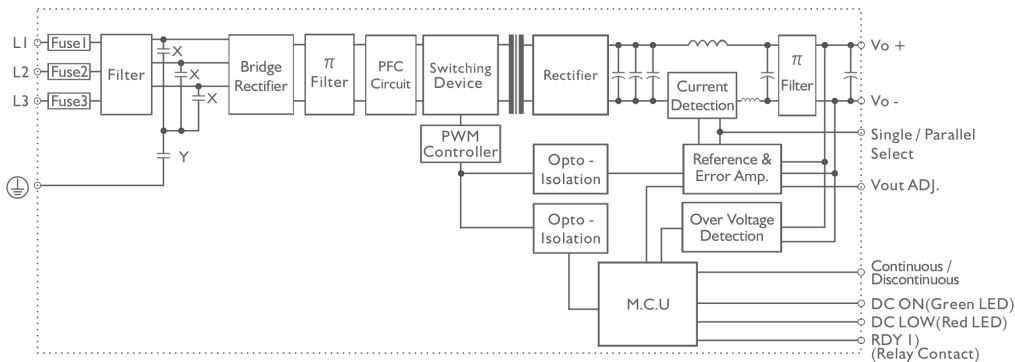
Typ. Efficiency Curve



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 ~ 4mm²) 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

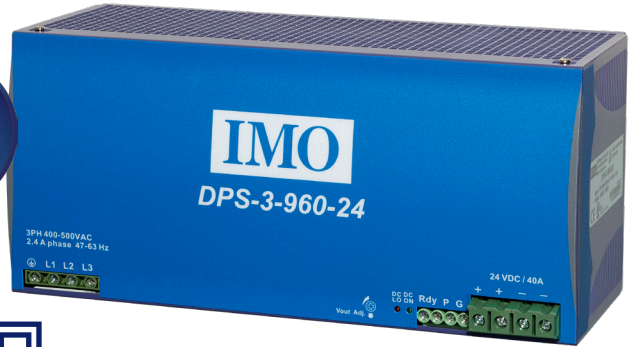
Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safely and firmly on the rail.

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



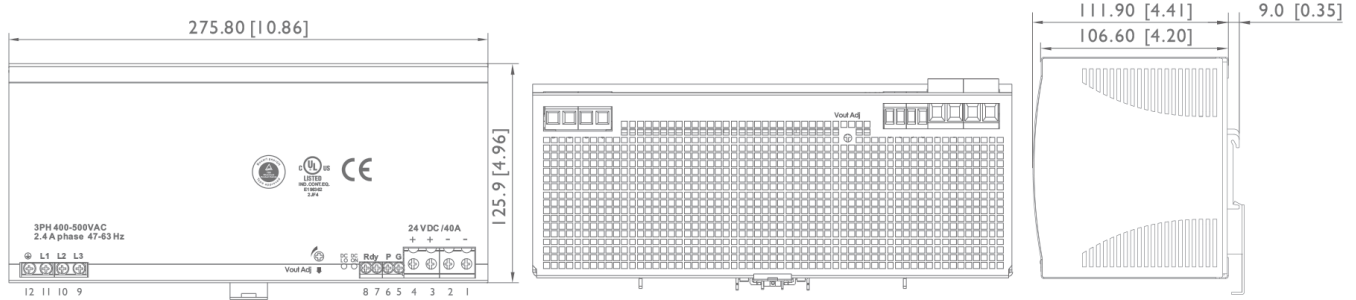
Technical Specification - 960W Output

Model	DPS-3-960-24DC	DPS-3-960-48DC
Input Voltage	340-575VAC / 480-820VDC	
Output Wattage	960W	
Output Voltage / Power Dissipation	24VDC / 98W	48VDC / 90W
Output Current	40A	20A
Efficiency (min/typ)	90/92%	91/93%
General Specification		
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	
Input Specifications		
Rated Input Voltage	400 ~ 500VAC	
Input Voltage Range	340 to 575VAC, 480 to 820VDC	
Line Frequency	47 ~ 63Hz	
Power Factor @ 115VAC	0.8 Typical (0.89 Measured)	
Power Factor @ 230VAC	0.8 Typical (0.82 Measured)	
Inrush Current (400VAC)	typ. 30A, max. 35A	
Output Specifications		
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
Control & Protection		
Rated Overload Protection	110 ~ 135%	
Over Voltage Protection	30 ~ 33VDC	60 ~ 66VDC
Output Short Circuit	Hiccup Mode	

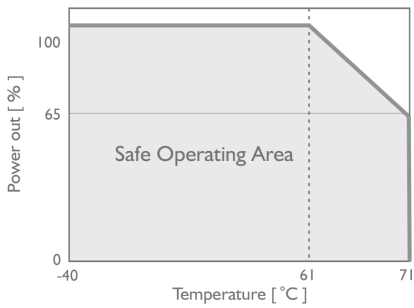
DPS Series 3 Phase 960W AC-DC DIN Rail Power Supplies



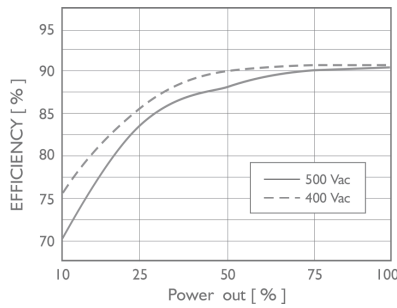
Dimensions (mm)



Derating



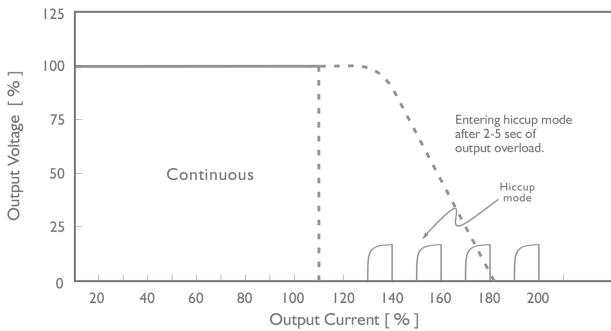
Typ. Efficiency Curve



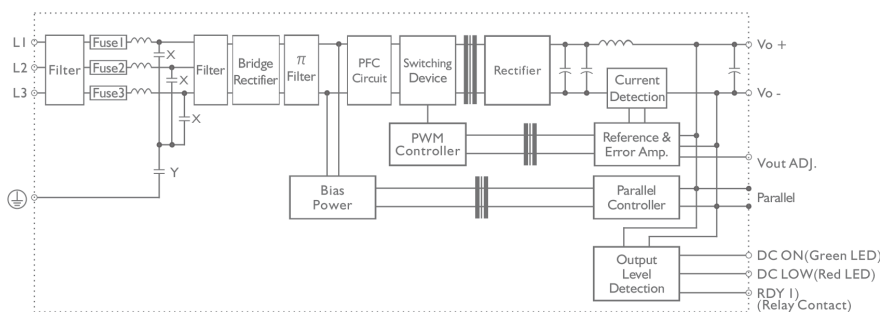
Pin Connections

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

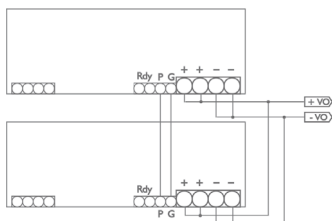
Typ. Current Limited Curve



Circuit Schematic



Parallel Connection



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 ~ 4mm²) flexible / solid cable
Output: AWG20-6 (0.5 ~ 10mm²)
- 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.