# DPS Series 5W to 480W Single 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 single phase DPS range offers the benefits of slim lines, 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 5 to 48 VDC (model dependent)
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated
- Class 2 (selected models)



DPS-1 models from 5W to 60W offer plastic body construction.

DPS-1 models from 100W to 480W offer full metal body construction









# **Key Features**

- 5, 12 & 24 VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated
- Class 2



Technical Datasheet

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# **Technical Specification - 5W Output**

Indel	DPS-1-005-5DC	DPS_1_005_12DC	DPS_1_005_2/DC			
	510-1-000-050	90-264VAC / 120-375VDC	510-1-003-2450			
	50-2040K0 / 120-3730D0					
Output Voltage / Power Dissipation	5VDC / 2 2W 12VDC / 1 8W					
Output Current	14	0.424	0.214			
Efficiency (min/typ)	67/69%	70/72%	70/72%			
Ceneral Specification	01/03/0	10/12/0	10/12/0			
Approval	cUBus - Class 2					
Isolation Voltage		3000\/AC/4242\/DC				
Isolation Resistance		100MQ @ 500VDC				
		-20 to ±71°C				
Derating		(61 to 71°C) 2 5%/°C				
Storage Temperature		-25 to +85°C				
Polativo Humidity		20 to 05% PH				
Cooling						
Dimensions						
Weight		1200				
Weight		120g				
	Plastic					
Deted Input Voltage	100 040040					
Indieu Input Voltage	100 ~ 240VAC					
	عن ان کن ۲۵ کی ۲۵ کی ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲					
Power Factor @ 115VAC	0.0 Hypean (0.0 Measured)					
Power Factor @ 230VAC	U.4 lypical (U.39 measured)					
Inrush Current (TTS / 230VAC)	15/30A					
Output Specifications		. 40/				
Output voltage Accuracy		+1%				
Minimum Load		0%				
Line Regulation		±1%				
Load Regulation		±2%				
Iurn On Time	1	000ms after AG applied to input at full resistive load				
Voltage Fall Time		150ms				
Voltage Rise Time		150ms				
Hold Up Time (115 / 230VAC)		30 / 130ms				
Temperature Coefficient		±0.03%/°C				
Ripple & Noise	50mV					
Voltage Trim Range	4.5 ~ 5.75VDC 10.8 ~ 13.8VDC 21.6 ~ 28.8VDC					
DC ON & LOW Indicator (Green & Red LED)	3.5 ~ 4.5VDC	9 ~ 10.8VDC	18 ~ 21.6VDC			
Control & Protection						
Rated Overload Protection		110 ~ 165%				
Over Voltage Protection	$6.5 \sim 7.27 \text{VDC}$	15 ~ 17.4VDC	18.75 ~ 21.75VDC			
Output Short Circuit	Hiccup Mode					

### **Key Features**

- 5, 12 & 24 VDC



• Universal Input: 90-264VAC / 120-375VDC • High Efficiency Short Circuit Protection • Internal Input Filter IP20 Protection Rated Class 2 IMO UL 60950-1 TUV us c 🗣 0 - 240 0.3A 47-63H UL 1310 Class 1. Div 2 NI ....

# **Technical Specification - 10W Output**

Model	DPS-1-010-5DC	DPS-1-010-12DC	DPS-1-010-24DC			
Input Voltage	00-26//VAC / 120-375//DC					
Output Wattage	10W					
Output Voltage / Power Dissipation	5VDC / 4.0W 12VDC / 3.4W 24VDC / 2.8W					
Output Current	2A	0.84A	0.42A			
Efficiency (min/typ)	71/73%	73/75%	74/76%			
General Specification		10,1070				
Approval	cURus - Class 2					
Isolation Voltage	3000VAC/4242VDC					
Isolation Resistance		100MΩ @ 500VDC				
Ambient Temperature		-20 to +71°C				
Derating		(61 to 71°C) 2.5%/°C				
Storage Temperature		-25 to +85°C				
Relative Humidity		20 to 95% RH				
Cooling		Free air convection				
Dimensions		L90 x W22.5 x D114 mm				
Weight		120g				
Case Material		Plastic				
Input Specifications						
Rated Input Voltage	100 ~ 240VAC					
Input Voltage Range	90 to 264VAC, 120 to 375VDC					
Line Frequency	47 ~ 63Hz					
Power Factor @ 115VAC	0.55 Typical (0.55 Measured)					
Power Factor @ 230VAC	0.45 Typical (0.43 Measured)					
Inrush Current (115 / 230VAC)	15/30A					
Output Specifications						
Output Voltage Accuracy		+1%				
Minimum Load		0%				
Line Regulation		±1%				
Load Regulation		±2%				
Turn On Time	10	000ms after AC applied to input at full resistive loa	d			
Voltage Fall Time		150ms				
Voltage Rise Time		150ms				
Hold Up Time (115 / 230VAC)		30 / 130ms				
Temperature Coefficient		±0.03%/°C				
Ripple & Noise		50mV				
Voltage Trim Range	4.5 ~ 5.75VDC 10.8 ~ 13.8VDC 21.6 ~ 28.8VDC					
DC ON (Green) & LOW (Red) Indicator	$3.5 \sim 4.5 \text{VDC}$	9 ~ 10.8VDC	18 ~ 21.6VDC			
Control & Protection						
Rated Overload Protection		110 ~ 165%				
Over Voltage Protection	$6.5 \sim 7.27 \text{VDC}$	15~ 17.4VDC	$18.75 \sim 21.75 \text{VDC}$			
Output Short Circuit	Hiccup Mode					

### **Key Features**

- 5, 12 & 24 VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter







# Technical Specification - 15W & 18W Output

Model	DPS-1-015-5DC*	DPS-1-018-12DC	DPS-1-018-24DC			
Input Voltage	90-264VAC / 120-375VDC					
Output Wattage	15W 18W					
Output Voltage / Power Disspiation	5VDC / 5.0W 12VDC / 4.65W 24VDC		24VDC / 4.45W			
Output Current	3A	1.5A	0.75A			
Efficiency (min/typ)	73/75%	75/77%	75/7%			
General Specification						
Approval	cURus - Class 2					
Isolation Voltage		3000VAC/4242VDC				
Isolation Resistance		100MΩ @ 500VDC				
Ambient Temperature		-20 to +71°C				
Derating		(61 to 71°C) 2.5%/°C				
Storage Temperature		-25 to +85°C				
Relative Humidity		20 to 95% RH				
Cooling		Free air convection				
Dimensions		L90 x W22.5 x D114 mm				
Weight		150g				
Case Material		Plastic				
Input Specifications						
Rated Input Voltage	100 ~ 240VAC					
Input Voltage Range	90 to 264VAC, 120 to 375VDC					
Line Frequency	47 ~ 63Hz					
Power Factor @ 115VAC	0.55 Typical (0.58 Measured)					
Power Factor @ 230VAC	0.45 Typical (0.47 Measured)					
Inrush Current (115 / 230VAC)	15 / 30A					
Output Specifications						
Output Voltage Accuracy		+1%				
Minimum Load		0%				
Line Regulation		±1%				
Load Regulation		±2%				
Turn On Time	1	000ms after AC applied to input at full resistive load	d			
Voltage Fall Time		150ms				
Voltage Rise Time		150ms				
Hold Up Time (115 / 230VAC)		30 / 130ms				
Temperature Coefficient		±0.03%/°C				
Ripple & Noise		50mV				
Voltage Trim Range	$4.5 \sim 5.75 \text{VDC}$	10.8 ~ 13.8VDC	21.6 ~ 28.8VDC			
DC ON (Green) & LOW (Red) Indicator	3.5 ~ 4.5VDC 9 ~ 10.8VDC 18 ~ 21.6VDC					
Control & Protection						
Rated Overload Protection		110 ~ 165%				
Over Voltage Protection	$6.5 \sim 7.27 \text{VDC}$	15 ~ 17.4VDC	$18.75 \sim 21.75 \text{VDC}$			
Output Short Circuit	Hiccup Mode					

# **Dimensions** (mm)



# Derating



# **Typ. Efficiency Curve**



# **Circuit Schematic**



85

80

75 70

45

40

35

10

25

EFFICIENCY [ % ]

# **Pin Connections**

Кеу		Description
1	V+	Positive output terminal
2	V -	Negative output terminal
3		Ground this terminal to minimise high-frequency emissions
4	Ν	Input terminals (neutral conductor, no polarity at DC input)
5	L	Input terminals (phase conductor, no polarity at DC input)
	ON	Operation indicator LED
	LO	DC LOW indicator LED
	Vout ADJ	Trimmer-potentiometer for Vout adjustment

**Technical Datasheet** 

# Installation

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

 $\begin{array}{l} \mbox{Connector Size Range} \\ \mbox{AWG26-12 (0.2 } \sim 2.5 \mbox{mm}^2) \mbox{ flexible / solid cable,} \end{array}$ 

- Input connector can withstand torque at maximum 5 pound-inches 4-5 m/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.



DPS-1-010-24DC

50 Power out[%]

230 Vad

– - 115 Vad

75

100

# **Key Features**

- 5, 12, 24 & 48 VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated
- Class 2





# **Technical Specification - 30W Output**

Model	DPS-1-030-5DC*	DPS-1-030-12DC	DPS-1-030-24DC	DPS-1-030-48DC	
Input Voltage	90-264VAC / 120-375VDC				
Output Wattage	30W				
Output Voltage / Power Dissipation	5VDC / 8.5W	12VDC / 5.6W	24VDC / 5.5W	48VDC / 4.9W	
Output Current	6A	2.5A	1.25A	0.625A	
Efficiency (min/typ)	77/79%	82/84%	83/86%	83/86%	
General Specification					
Approval	cURus - Class 2				
Isolation Voltage		3000VAC	/4242VDC		
Isolation Resistance		100MΩ (	@ 500VDC		
Ambient Temperature		-41 to	+71°C		
Derating		(61 to 71)	°C) 2.5%/°C		
Storage Temperature		-40 to	+85°C		
Relative Humidity		20 to 9	95% RH		
Cooling		Free air	convection		
Dimensions		L90 x W40.	5 x D114 mm		
Weight		2	70g		
Case Material		Pla	astic		
Input Specifications					
Rated Input Voltage	120 ~ 240VAC				
Input Voltage Range	85 to 264VAC, 90 to 375VDC				
Line Frequency	47 ~ 63Hz				
Power Factor @ 115VAC	0.55 Typical (0.57 Measured)				
Power Factor @ 230VAC	0.45 Typical (0.49 Measured)				
Inrush Current (115 / 230VAC)		20,	/ 40A		
Output Specifications					
Output Voltage Accuracy		+	1%		
Minimum Load		(	)%		
Line Regulation		±(	).5%		
Load Regulation		±(	).5%		
Turn On Time		1000ms after AC applied	to input at full resistive load		
Voltage Fall Time		15	Oms		
Voltage Rise Time		15	Oms		
Hold Up Time (115 / 230VAC)		25 /	30ms		
Temperature Coefficient		±0.0	)3%/°C		
Ripple & Noise		50	)mV		
Voltage Trim Range	$5\sim 5.5 \text{VDC}$	12 ~ 14VDC	$24 \sim 28 \text{VDC}$	48 ~ 55VDC	
DC ON & LOW Indicator (Green & Red LED)	$3.5 \sim 4.5 \text{VDC}$	9~10.8VDC	18~21.6VDC	37 ~ 43VDC	
Control & Protection					
Rated Overload Protection		110 ~	- 150%		
Over Voltage Protection	6~6.8VDC	15~16.5VDC	30 ~ 33VDC	$60 \sim 66 \text{VDC}$	
Output Short Circuit	Fold Forward				

\* Not Class 2 listed

# **Key Features**



Technical Datasheet



# Technical Specification - 50W & 60W Output

Model	DPS-1-050-5DC*	DPS-1-060-12DC*	DPS-1-060-24DC	DPS-1-060-48DC	
Input Voltage	90-264VAC / 120-375VDC				
Output Wattage	50W 60W				
Output Voltage / Power Dissipation	5VDC / 12.5W	12VDC / 9.0W	24VDC / 8.8W	48VDC / 7.8W	
Output Current	10A	5A	2.5A	1.25A	
Efficiency (min/typ)	77/79%	84/86%	86/89%	86/89%	
General Specification					
Approval	cURus - Class 2				
Isolation Voltage		3000VAC	/4242VDC		
Isolation Resistance		100MΩ @	@ 500VDC		
Ambient Temperature		-41 to	+71°C		
Derating		(61 to 71°	C) 2.5%/°C		
Storage Temperature		-40 to	+85°C		
Relative Humidity		20 to 9	95% RH		
Cooling		Free air c	convection		
Dimensions		L90 x W40.5	5 x D114 mm		
Weight		34	10g		
Case Material		Pla	stic		
Input Specifications					
Rated Input Voltage	120 ~ 240VAC				
Input Voltage Range	85 to 264VAC, 90 to 375VDC				
Line Frequency	47 ~ 63Hz				
Power Factor @ 115VAC	0.55 Typical (0.56 Measured)				
Power Factor @ 230VAC	0.5 Typical (0.52 Measured)				
Inrush Current (115 / 230VAC)		20 /	40A		
Output Specifications					
Output Voltage Accuracy		+	1%		
Minimum Load		0	%		
Line Regulation		±0	0.5%		
Load Regulation		±0	0.5%		
Turn On Time		1000ms after AC applied t	to input at full resistive load		
Voltage Fall Time		150	Oms		
Voltage Rise Time		150	Oms		
Hold Up Time (115 / 230VAC)		25 /	30ms		
Temperature Coefficient		±0.0	3%/°C		
Ripple & Noise		50	mV		
Voltage Trim Range	$5\sim 5.5 \text{VDC}$	12~14VDC	24 ~ 28VDC	$48 \sim 55 \text{VDC}$	
DC ON & LOW Indicator (Green & Red LED)	$3.5 \sim 4.5 \text{VDC}$	9~10.8VDC	18 ~ 21.6VDC	37 ~ 43VDC	
Control & Protection					
Rated Overload Protection		110 ~	- 150%		
Over Voltage Protection	$6 \sim 6.8 \text{VDC}$	15~16.5VDC	30 ~ 33VDC	$60 \sim 66 \text{VDC}$	
Output Short Circuit	Fold Forward				

\* Not Class 2 listed

# **Dimensions** (mm)



# Derating



# **Typ. Efficiency Curve**



# **Circuit Schematic**





95 90 85

50

45

40

10

25

EFFICIENCY [ % ]

**Pin Connections** 

Key		Description
1	RDY	DC OK output for relay (not connected except 24V model)
2	+	Positive output terminal
3	+	Positive output terminal
4	-	Negative output terminal
5	-	Negative output terminal
6	$\left( \frac{1}{\overline{\overline{y}}} \right)$	Ground this terminal to minimise high-frequency emissions
7	Ν	Input terminals (neutral conductor, no polarity at DC input)
8	L	Input terminals (phase conductor, no polarity at DC input)
	Vout ADJ.	Trimmer potentiometer for Vout adjustment
	DC ON	Operation indicator LED

# Installation

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

 $\begin{array}{l} \mbox{Connector Size Range} \\ \mbox{AWG26-12 (0.2 } \sim 2.5 \mbox{mm}^2) \mbox{ flexible / solid cable,} \end{array}$ 

- Input connector can withstand torque at maximum 5 pound-inches 4-5 m/m striping cable end recommends

Use copper conductors only, 60 / 75°C

# Construction

DPS-1-060-24DC

50

Power out [ % ]

– 230 Vac

- 115 Vac

75

100

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

# **Rdy Connection**





Note: I) for 24V Model Only For more information visit www.emfservices.com.au



# **Key Features**

- 12, 24 & 48 VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



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12VDC / 8.4A

Vout ADJ.

IMO DPS-1-100-12

- 240 VAC 2.4A 47 - 63Hz

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# **Technical Specification - 100W Output**

Model	DPS-1-100-12DC	DPS-1-100-24DC	DPS-1-100-48DC			
Input Voltage		90-264VAC / 120-375VDC				
Output Wattage	100W					
Output Voltage / Power Dissipation	12VDC / 18.5W 24VDC / 15W 48VDC / 14W					
Output Current	8.4A	4.2A	2.1A			
Efficiency (min/typ)	82/84%	84/86%	86/88%			
General Specification						
Approval	cURus					
Isolation Voltage		3000VAC/4242VDC				
Isolation Resistance		100MΩ @ 500VDC				
Ambient Temperature		-35 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		L90 x W54 x D114 mm				
Weight		430g				
Case Material		Metal				
Input Specifications						
Rated Input Voltage		115 $\sim$ 230VAC (auto select)				
Input Voltage Range	90 to 264VAC, 210 to 375VDC					
Line Frequency	47 ~ 63Hz					
Power Factor @ 115VAC	0.55 Typical (0.57 Measured)					
Power Factor @ 230VAC	0.55 Typical (0.54 Measured)					
Inrush Current (115 / 230VAC)	30 / 60A					
Output Specifications						
Output Voltage Accuracy		+1%				
Minimum Load		0%				
Line Regulation		±1%				
Load Regulation		±1%				
Turn On Time	10	00ms after AC applied to input at full resistive lo	ad			
Voltage Fall Time		150ms				
Voltage Rise Time		150ms				
Hold Up Time (115 / 230VAC)		15 / 30ms				
Temperature Coefficient		±0.03%/°C				
Ripple & Noise		50mV				
Voltage Trim Range	11.4 ~ 14.5VDC 22.5 ~ 28.5VDC 47 ~ 55VDC					
DC ON & LOW Indicator (Green & Red LED)	10 ~ 11.2VDC	17.6 ~ 19.4VDC	$37 \sim 43 \text{VDC}$			
Control & Protection						
Rated Overload Protection		110 ~ 140%				
Over Voltage Protection	15 ~ 16.5VDC	30 ~ 33VDC	$60 \sim 66 \text{VDC}$			
Output Short Circuit	Fold Forward					

### **Dimensions** (mm)



# Derating



# Typ. Efficiency Curve



# **Circuit Schematic**



# **Pin Connections**

Key		Description
1, 2	RDY	DC OK output for relay (24V model only)
3,4	V+	Positive output terminal
5,6	V -	Negative output terminal
7		Ground this terminal to minimise high-frequency emissions
8	Ν	Input terminals (neutral conductor, no polarity at DC input)
9	L	Input terminals (phase conductor, no polarity at DC input)
	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

# Installation

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

### **Connector Size Range**

AWG24-10 (0.2  $\sim$  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 striping cable end recommends

Use copper conductors only,  $60\,/\,75^\circ\text{C}$ 

### Construction

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



# **Key Features**

- 12, 24 & 48 VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated



# **Technical Specification - 120W Output**

Class 1. Div 2

Model	DPS-1-120-12DC	DPS-1-120-24DC	DPS-1-120-48DC		
Input Voltage		90-264VAC / 120-375VDC			
Output Wattage	120W				
Output Voltage / Power Dissipation	12VDC / 24W 24VDC / 20W 48VDC / 19W				
Output Current	10A	5A	2.5A		
Efficiency (min/typ)	82/84%	84/86%	85/87%		
General Specification					
Approval		cURus			
Isolation Voltage		3000VAC/4242VDC			
Isolation Resistance		100MΩ @ 500VDC			
Ambient Temperature		-35 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		L124.5 x W64 x D123.6 mm			
Weight		920g			
Case Material		Metal			
Input Specifications					
Rated Input Voltage		115 $\sim$ 230VAC (auto select)			
Input Voltage Range	90 to 264VAC, 210 to 375VDC				
Line Frequency	47 ~ 63Hz				
Power Factor @ 115VAC		0.55 Typical (0.58 Measured)			
Power Factor @ 230VAC	0.70 Typical (0.75 Measured)				
Inrush Current (115 / 230VAC)	24 / 48A				
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 (115 / 230VAC)		25 / 30ms			
Temperature Coefficient	±0.03%/°C				
Ripple & Noise	50mV				
Voltage Trim Range	$11.4 \sim 14.5 \text{VDC}$	22.5 ~ 28.5VDC	$45 \sim 55 \text{VDC}$		
DC ON & LOW Indicator (Green & Red LED)	10 ~ 11.2VDC	17.6 ~ 19.4VDC	37 ~ 43VDC		
Control & Protection					
Rated Overload Protection		110 ~ 145%			
Over Voltage Protection	$15 \sim 16.8 \text{VDC}$	30 ~ 33VDC	$60 \sim 66 \text{VDC}$		
Output Short Circuit	Fold Forward				



# **Dimensions** (mm)



# Derating



# Typ. Efficiency Curve

DPS-1-120-24DC



# **Circuit Schematic**



# **Pin Connections**

Key		Description
1, 2	RDY	DC OK output for relay (24V model only)
3,4	V+	Positive output terminal
5,6	V -	Negative output terminal
7		Ground this terminal to minimise high-frequency emissions
8	L	Input terminals (phase conductor, no polarity at DC input)
9	Ν	Input terminals (neutral conductor, no polarity at DC input)
	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

# Installation

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

### **Connector Size Range**

AWG24-10 (0.2  $\sim$  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 striping cable end recommends

Use copper conductors only,  $60\,/\,75^\circ\text{C}$ 

### Construction

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



### **Key Features**

- 24 & 48 VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated





# Technical Specification - 240W & 300W Output

Class 1, Div 2

Model	DPS-1-240-24DC	DPS-1-300-24DC*	DPS-1-240-48DC	DPS-1-300-48DC*
Input Voltage	90-264VAC / 120-375VDC			
Output Wattage	240W	300W	240W	300W
Output Voltage / Power Dissipation	24VDC / 35W	24VDC / 42W	48VDC / 32W	48VDC / 40W
Output Current	10A	12.5A	5A	6.5A
Efficiency (min/typ)	87/89%	87/89%	88/90%	88/90%
General Specification				
Approval		cl	JRus	
Isolation Voltage		3000VA0	C/4242VDC	
Isolation Resistance		100MΩ	@ 500VDC	
Ambient Temperature	-40 to +71°C	-30 to +71°C	-40 to +71°C	-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		L124.5 x W83	8.5 x D123.6 mm	
Weight	1380g	1400g	1380g	1400g
Case Material	Metal			
Input Specifications				
Rated Input Voltage	115 ~ 230VAC			
Input Voltage Range		90 to 264VAC	, 210 to 375VDC	
Line Frequency		47 ~	~ 63Hz	
Power Factor @ 115VAC		0.6 Typical (	0.61 Measured)	
Power Factor @ 230VAC		0.75 Typical (	(0.77 Measured)	
Inrush Current (115 / 230VAC)	30 / 60A	35 / 65A	30 / 60A	35 / 65A
Output Specifications				
Output Voltage Accuracy		+	-1%	
Minimum Load			0%	
Line Regulation		±	0.5%	
Load Regulation		<u>±</u>	=1%	
Turn On Time		1000ms after AC applied	to input at full resistive load	
Voltage Fall Time		15	iOms	
Voltage Rise Time		15	50ms	
Hold Up Time (115 / 230VAC)		25 /	' 30ms	
Temperature Coefficient		±0.0	03%/°C	
Ripple & Noise		10	00mV	
Voltage Trim Range	22.5 ~ 28.5VDC 47 ~ 56VDC			56VDC
DC ON & LOW Indicator (Green & Red LED)	17.6 ~	19.4VDC	37 ~	43VDC
Control & Protection				
Rated Overload Protection		120 -	~ 145%	
Over Voltage Protection	30 ~	33VDC	60 ~	66VDC
Output Short Circuit	Fold Forward			

# **Dimensions** (mm)





# Derating







# **Pin Connections**

Key		Description
1, 2	RDY	DC OK output for relay (24V model only)
3,4	V+	Positive output terminal
5,6	V -	Negative output terminal
7		Ground this terminal to minimise high-frequency emissions
8	L	Input terminals (phase conductor, no polarity at DC input)
9	Ν	Input terminals (neutral conductor, no polarity at DC input)
	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

**Technical Datasheet** 

# Installation

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

### **Connector Size Range**

AWG24-10 (0.2  $\sim$  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 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.

# Typ. Efficiency Curve





# **Circuit Schematic**



### For more information visit www.emfservices.com.au

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

# **Key Features**

- 24 & 48 VDC
- Universal Input: 90-264VAC / 120-375VDC
- High Efficiency
- Short Circuit Protection
- Internal Input Filter
- IP20 Protection Rated

# CECULUS CLass 1, Div 2 CLASS 1, Div

Model	DPS-1-480-24DC	DPS-1-480-48DC
Input Voltage	90-264VAC /	120-375VDC
Output Wattage	480	DW
Output Voltage / Power Dissipation	24VDC / 63W	48VDC / 60W
Output Current	20A	10A
Efficiency (min/typ)	86/89%	87/90%
General Specification		
Approval	cUF	Rus
Isolation Voltage	3000VAC/-	4242VDC
Isolation Resistance	100MΩ @	9 500VDC
Ambient Temperature	-40 to -	+71°C
Derating	(56 to 71°C	C) 2.5%/°C
Storage Temperature	-40 to -	+85°C
Relative Humidity	20 to 9	5% RH
Cooling	Free air co	onvection
Dimensions	L124.5 x W175.	5 x D123.6 mm
Weight	192	20g
Case Material	Me	tal
Input Specifications		
Rated Input Voltage	115 ~ 2	230VAC
Input Voltage Range	90 to 264VAC,	120 to 375VDC
Line Frequency	47 ~	63Hz
Power Factor @ 115VAC	0.99 Typical (0.	.99 Measured)
Power Factor @ 230VAC	0.97 Typical (0.	.97 Measured)
Inrush Current (115 / 230VAC)	25 /	50A
Output Specifications		
Output Voltage Accuracy	+1	1%
Minimum Load	09	%
Line Regulation	±0.	5%
Load Regulation	±1	1%
Turn On Time	1000ms after AC applied to	o input at full resistive load
Voltage Fall Time	150	Ims
Voltage Rise Time	150	Ims
Hold Up Time (115 / 230VAC)	25 / 3	30ms
Temperature Coefficient	±0.03	3%/°C
Ripple & Noise	100	mV
Voltage Trim Range	$22.5 \sim 28.5 \text{VDC}$	$47 \sim 56 \text{VDC}$
DC ON & LOW Indicator (Green & Red LED)	17.6 ~ 19.4VDC	37 ~ 43VDC
Control & Protection		
Rated Overload Protection	110 ~	140%
Over Voltage Protection	30 ~ 33VDC	$60 \sim 66 \text{VDC}$
Output Short Circuit	Fold Fo	prward



24 VDC / 20A

paraties Rdy + + --

DP



# **Dimensions** (mm)



### Derating



# Typ. Efficiency Curve



# **Circuit Schematic**



# **Pin Connections**

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