

AC/DC DIN Rail Power Supply



Features

- Compact design
- High efficiency up to 90%
- P.F.C function available
- Parallel function available (switch)
- Input Voltage 115 / 230V AC auto select

AC / DC Din rail mountable 240W
Industrial control equipment

Specifications

All specifications typical at nominal line, full load, 25°C unless otherwise noticed

General

Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Isolation Voltage	Input / output	3,000	-	-	V AC
Isolation Resistance	Input / output, at 500 V DC	100	-	-	MΩ
Ambient Temperature	Operating at Vi nom, Io 70% to 100%	-10	-	+50	°C
Case Temperature	Operating at Vi nom, Io nom	-	-	+90	-
Derating	Vi nom, Io nom +51°C to +71°C	-	-	1.5	-
Storage Temperature	Non Operational	-25	-	+85	°C
M.T.B.F.	According to MIL-HDBK-217F, GF40	-	200,000	-	Hrs
Relative Humidity	Vi nom, Io nom	20	-	95	% RH
Dimension	Screw terminal type	L125 × W83 × D126			mm
	Detachable connector type	L142 × W83 × D126			mm
Cooling	Free air convection	-	-	-	-
Case Material	Metal	-	-	-	-

Input Specifications

Rated Input Voltage	Io nom	115 / 230 (auto select)			
Input Voltage Range	Ta minimum to Ta maximum, AC 115V selected	93	-	132	V AC
	Io nom C 230V selected	186	-	264	
	DC	210	-	370	
Rated Input Current	Io nom	-	5.4 / 2.2	-	A
Line Frequency	Vi nom, Io nom	47	-	63	Hz
Inrush Current	Vi nom, Io nom Vi : 115V AC	-	-	30	A
	Vi : 230V AC	-	-	60	A
P. F. C.	Vi : 230V AC, Io nom	-	0.7	-	-

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Output Specifications

Characteristics	Conditions	Minimum	Typical	Maximum	Unit	
Output Voltage Accuracy (Adjusted before shipment)	Vi nom, Io maximum	0	-	+1	%	
Minimum Load	Vi nom	0	-	-	%	
Line Regulation	Io nom, Vi minimum to Vi maximum	-	-	±0.5	%	
Load Regulation	Vi nom, single mode	-	-	±1	%	
	Io minimum to Io nom parallel mode	-	-	±5	%	
Temperature Coefficient	Vi nom, Io minimum	-	-	±0.3	% / °C	
Ripple and Noise	Vi nom, Io nom, BW = 20MHz	-	-	100	mV	
Hold up Time	Vi nom, Io nom Vi = 115V AC	25	-	-	ms	
	Vi = 230V AC	30	-	-	ms	
Voltage Trim Range	Vi nom, Io nom 24V models	22.5	-	28.5	V DC	
	48V models	47	-	56		
DC on Indicator Threshold at Start up	Vi nom, Io nom 24V models	17.6	-	19.4		
	48V models	37	-	43		
DC Low Indicator Threshold After Start up	Vi nom, Io nom 24V models	17.6	-	19.4		
	48V models	37	-	43		
Parallel Operation	0.9 Io maximum	-	-	3		Unit
Efficiency	Vi nom, Io nom, Po / Pi	Up to 90%, see model list				

Control and Protection

Input Fuse	-	T6.3A / 250V AC internal			
Rated Over Load Protection	Vi nom	105	-	145	%
Power Rdy (Only for DRA240-24A)	Threshold voltage of contact closed (at start up)	17.6	-	19.4	V DC
	Electrical isolation	500	-	-	V DC
	Contact rating at 60V DC	-	-	0.3	A
Over Voltage Protection	Vi nom, Io nom	120	-	145	%
Output Short Circuit	Vi nom, Io nom	Current limited			

Specification Table

Part Number	Input Voltage	Output Wattage	Output Voltage	Output Current	EFF. (Minimum)	EFF. (Typical)
Single Output Models						
DRA240-24A	115 / 230V AC	240 Watts	+24 V DC	10A	87%	89%
DRA240-48A			+48 V DC	5A	88%	90%

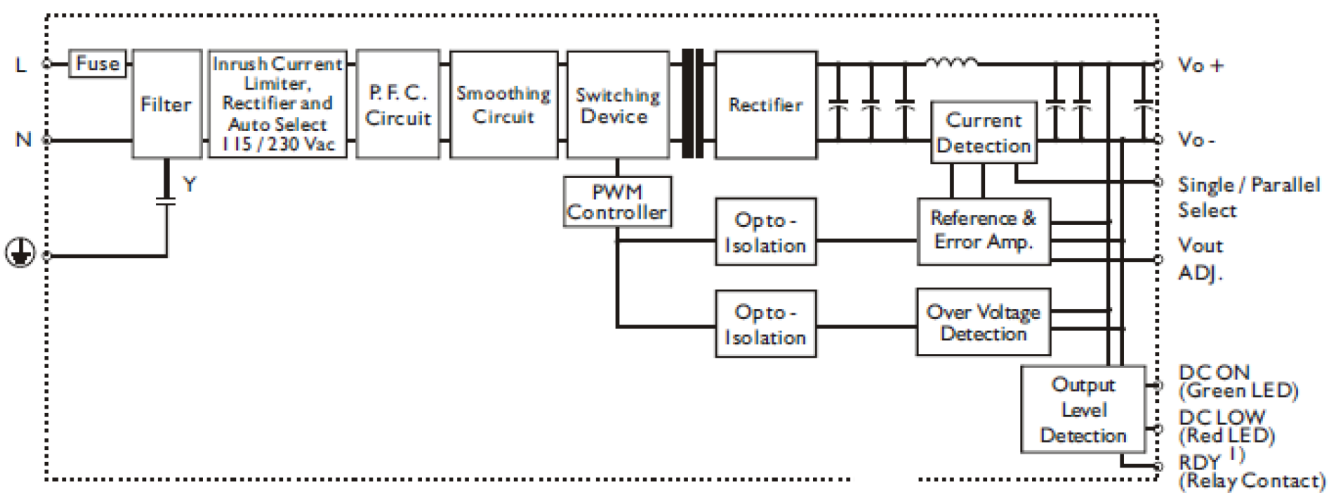
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Approvals and Standards

UL / cUL	UL508 Listed
TUV	EN60950
CE	EN61000-6-3
	EN61000-6-2
	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11

Circuit Schematic

- Block diagram for DRA240 series



Note: 1) For Only DRA240-24A

Physical Characteristics

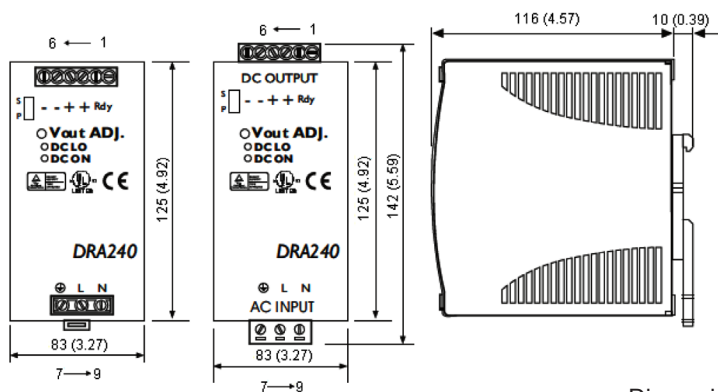
Case Size

Screw Terminal Type : 125mm × 83mm × 126mm (4.92" × 3.27" × 4.96")

Detachable Connector Type : 142mm × 83mm × 126mm (5.59" × 3.27" × 4.96")

Weight : 1,000g

Mechanism and Pin Configuration



Dimensions : Millimetres (Inches)

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Construction

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

Installation

Ventilation / Cooling

Normal convection

All sides 25 mm free space

For cooling recommended

Connector size range

Screw terminal:

10-24 AWG flexible / solid cable,


8 mm stripping at cable end recommends

Detachable connector:

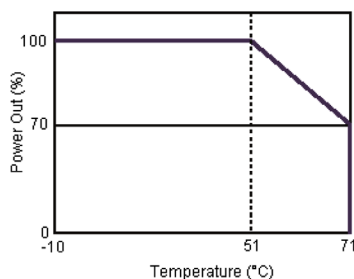
14-24 AWG flexible / solid cable,

7 mm stripping at cable end recommends

Pin Assignment

Pin Number	Designation	Description
1	Out	RDY A normal open relay contact for DC ON level control (Never connect except 24V, DRA240-24A)
2		
3		V + Positive output terminal
4		V + Positive output terminal
5		V - Negative output terminal
6		V - Negative output terminal
7	In	 Ground this terminal to minimize high-frequency emissions
8		L Input terminals (phase conductor, no polarity at DC input)
9		N 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

Derating

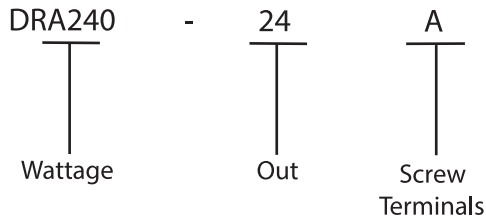


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Part Number Explanation



Out : 24 = 24V out and 48 = 48V out
Screw Terminals : A = Screw Terminals

Part Number Table

Description	Part Number
PSU, Din Rail, 240W, 24V	DRA240-24A
PSU, Din Rail, 240W, 48V	DRA240-48A

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