AC/DC DIN Rail Power Supply

AC / DC Din rail mountable 240W
Industrial control equipment

Features

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

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)		V AC
Input Voltage Range	Ta minimum to Ta maximum,	AC 115V selected	93	-	132
	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	-	-

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

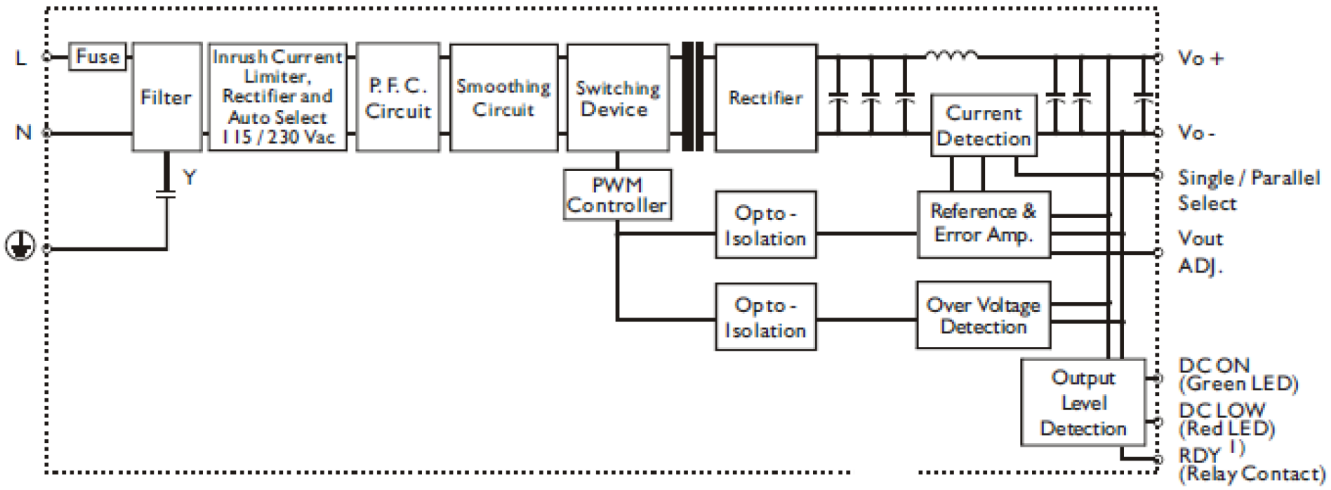
Part Number	Input Voltage	Output Wattage	Output Voltage	Output Current	EFF. (Minimum)	EFF. (Typical)
Single Output Models						
DRA240-24A	115 / 230V AC	240 Watts	+24 V DC	10A	87%	89%
DRA240-48A			+48 V DC	5A	88%	90%

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



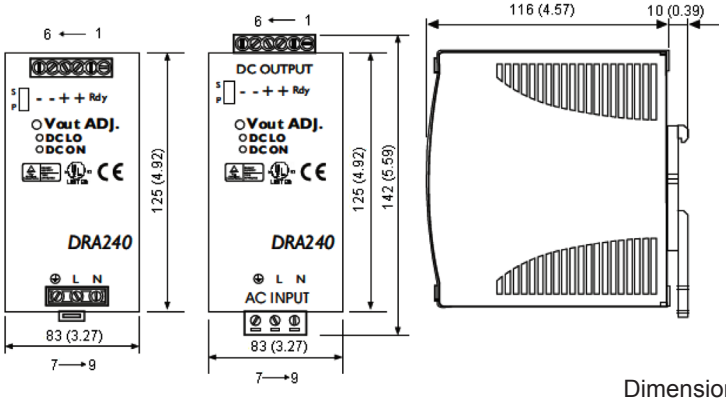
Note: 1) For Only DRA240-24A

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)

Construction

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

Installation

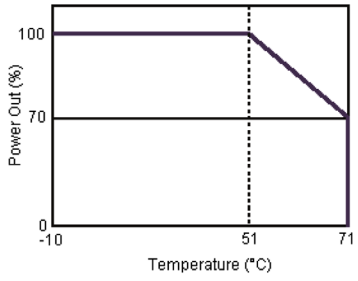
Ventilation / Cooling
Normal convection
All sides 25 m / m free space
For cooling recommended
Connector size range
Screw terminal:
10-24 AWG flexible / solid cable,
8 m/m stripping at cable end recommends

Detachable connector:
14-24 AWG flexible / solid cable,
7 m/m stripping at cable end recommends

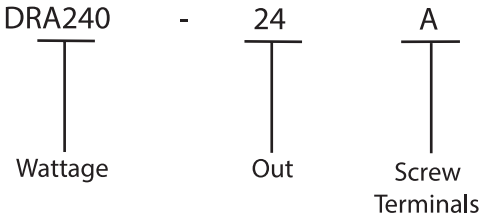
Pin Assignment

Pin Number	Designation		Description
1 2	Out	RDY	A normal open relay contact for DC ON level control (Never connect except 24V, DRA240-24A)
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



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