

AC - DC Din Rail



Features:

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

AC - DC Din rail mountable 240 W
Industrial control equipment

Model List

Model No.	Input Voltage	Output Wattage	Output Voltage	Output Current	EFF. (Minimum)	EFF. (Typical)
Single Output Models						
DRA240-24A	115 / 230 V ac	240 Watts	+24 V dc	10 A	87%	89%
DRA240-48A	115 / 230 V ac	240 Watts	+48 V dc	5 A	88%	90%

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	-	-	VAC	
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 to +71°C	-	-	1.5	% / °C	
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	-	-	-	-	

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Input Specifications					
Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Rated Input Voltage	Io nom	115 / 230 (auto select)			V ac
Input Voltage Range	Ta minimum to Ta maximum, AC 115 V selected	93	-	132	V ac
	Io nom C 230 V selected	186	-	264	V ac
	DC	210	-	370	V ac
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 : 115 V ac	-	-	30	A
	Vi : 230 V ac	-	-	60	A
P. F. C.	Vi : 230 V 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 = 20 MHz	-	-	100	mV
Hold up Time	Vi nom, Io nom Vi = 115 V ac	25	-	-	ms
	Vi = 230 V ac	30	-	-	ms
Voltage Trim Range	Vi nom, Io nom 24 V models	22.5	-	28.5	V dc
	48 V models	47	-	56	V dc
DC on Indicator Threshold at Start up	Vi nom, Io nom 24 V models	17.6	-	19.4	V dc
	48 V models	37	-	43	V dc
DC Low Indicator Threshold After Start up	Vi nom, Io nom 24 V models	17.6	-	19.4	V dc
	48 V models	37	-	43	V dc
Parallel Operation	0.9 Io maximum	-	-	3	unit
Efficiency	Vi nom, Io nom, Po / Pi	Up to 90%, see model list			

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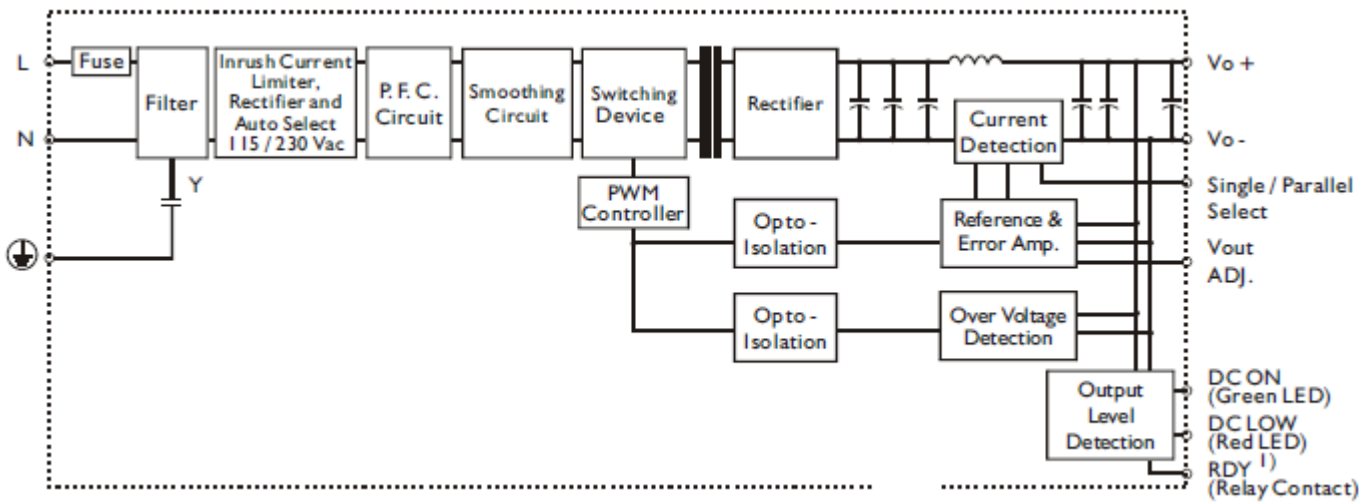


Control and Protection					
Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Input Fuse	-	T6.3 A / 250 V ac internal			
Rated Over Load Protection	Vi nom	105	-	145	%
Power Rdy (for 24 V Model Only)	Threshold voltage of contact closed (at start up)	17.6	-	19.4	V dc
	Electrical isolation	500	-	-	V dc
	Contact rating at 60 V dc	-	-	0.3	A
Over Voltage Protection	Vi nom, Io nom	120	-	145	%
Output Short Circuit	Vi nom, Io nom	Current limited			

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 24 V Model Only

Physical Characteristics

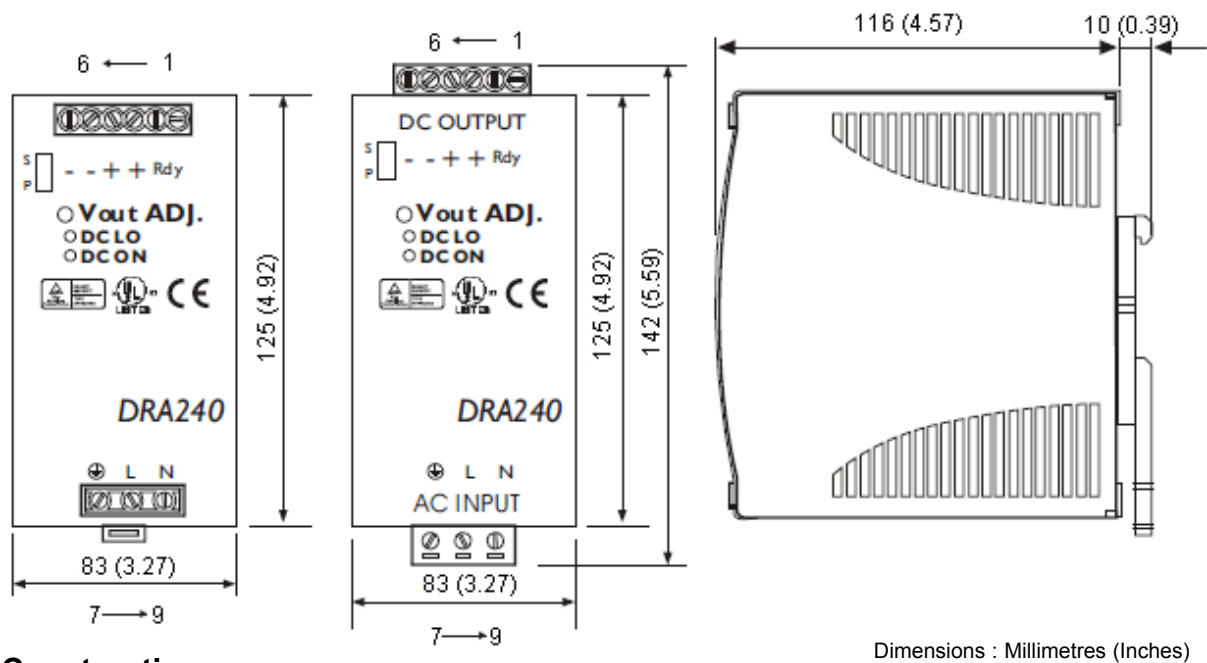
Case Size	
Screw Terminal Type	: 125 × 83 × 126 mm 4.92 × 3.27 × 4.96 inches
Detachable Connector Type	: 142 × 83 × 126 mm 5.59 × 3.27 × 4.96 inches
Weight	: 1,000 g



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Mechanism and Pin Configuration



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 / m free space
- For cooling recommended
- Connector size range
- Screw terminal:
- 10-24 AWG flexible / solid cable,
- 8 mm/m stripping at cable end recommends

Detachable connector:
14-24 AWG flexible / solid cable,
7 mm/m 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 24 V model)
2		V +	Positive output terminal
3		V +	Positive output terminal
4		V -	Negative output terminal
5		V -	Negative output terminal
6	In		
7			Ground this terminal to minimize high-frequency emissions



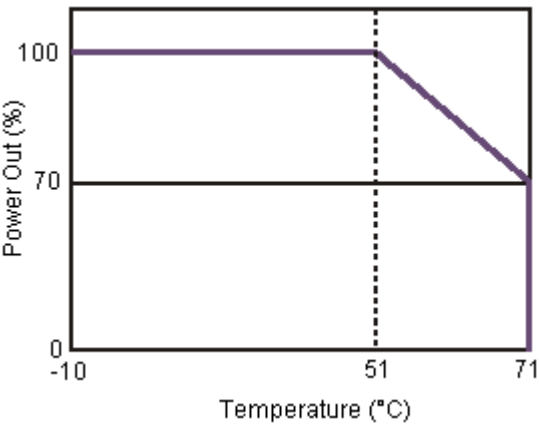
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Pin Assignment

Pin Number	Designation		Description
8	In	L	Input terminals (phase conductor, no polarity at DC input)
9		N	Input terminals (neutral conductor, no polarity at DC input)
-	Other	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

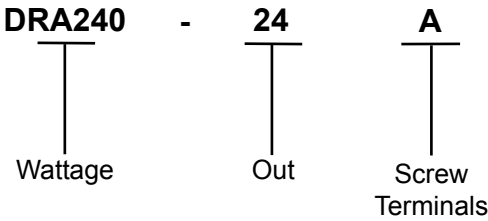
Derating



Part Number Table

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

Part Number Explanation:



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

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