

# AC - DC Power Modules



## Features:

- UL / cUL / TUV / CE
- Universal input 90 to 265 V ac
- High efficiency up to 77%
- Short circuit protection
- Internal input filter
- 2 Years Warranty

AC - DC Din rail mountable  
18 W class 2 power supply  
Industrial control equipment

## Model List

Model No.	Input Voltage	Output Wattage	Output Voltage	Output Current	EFF. (Minimum)	EFF. (Typical)
<b>Single Output Models</b>						
DRA18-05	90 to 265 V ac	15 W	+5 V dc	3,000 A	73%	75%
DRA18-12		18 W	+12 V dc	1,500 A	75%	77%
DRA18-24			+24 V dc	750 A		

## Specifications

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

<b>General</b>						
Characteristics	Conditions	Minimum	Typical	Maximum	Unit	
Switching Frequency	Vi nom, Io nom	100			KHz	
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	-	-	+85	-	
Derating	Vi nom, Io nom +51 to +71°C	-	-	2	% / °C	
Storage Temperature	Non Operational	-25	-	+85	°C	
M.T.B.F.	According to MIL-HDBK-217F, GF40	-	195,000	-	Hrs	
Relative Humidity	Vi nom, Io nom	20	-	95	% RH	
Dimension	L90 × W22.5 × D115	-	-	-	mm	
Cooling	Free air convection	-	-	-	-	
Case Material	Plastic	-	-	-	-	

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Input Specifications					
Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Rated Input Voltage	Io nom	100	-	240	V ac
Input Voltage Range	Ta minimum to Ta maximum, AC in	90	-	265	
	Io nom DC in	120	-	370	V dc
Line Frequency	Vi nom, Io nom	47	-	63	Hz
Inrush Current	Io nom Vi : 115 V ac	-	-	10	A
	Io nom Vi : 230 V ac	-	-	18	

Output Specifications					
Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Output Voltage Accuracy	Vi nom, Io minimum to Io nom	-	-	±1	%
Minimum Load	Vi nom	0	-	-	
Line Regulation	Io nom, Vi minimum to Vi maximum	-	-	±1	
Load Regulation	Vi nom, Io nom to Io nom	-	-	±2	
Transient Recovery Time	50% load step changed	-	300	-	µs
Temperature Coefficient	Vi nom, Io minimum	-	-	±0.02	% / °C
Ripple and noise	Vi nom, Io nom, BW = 20 MHz	-	-	50	mV
Hold up Time	Io nom Vi = 115 V ac	20	-	-	ms
	Io nom Vi = 230 V ac	75	-	-	
Voltage Trim Range	Vi nom, Io nom 5 V to 15 V models	-10	-	+15	%
	Io nom 24 V model		-	+20	
DC on Indicator Threshold at Start up	Vi nom, Io nom 5 V models	4.5	-	-	V dc
	Io nom 12 V models	10.8	-	-	
	Io nom 24 V models	21.6	-	-	
DC Low Indicator Threshold at Start up	Vi nom, Io nom 5 V models	3.75	-	4.5	
	Io nom 12 V models	9	-	10.8	
	Io nom 24 V models	18	-	21.6	
Efficiency	Vi nom, Io nom, Po / Pi	Up to 77%, see model list			

Control and Protection					
Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Input Fuse	-	T2 A / 250 V ac internal			
Rated Over Load Protection	Vi nom	110	-	135	%
Over Voltage Protection	Vi nom, Io nom	125	-	145	
Output Short Circuit	Vi nom, Io nom	Hiccup mode			

Approvals and Standards	
UL / cUL	UL508 / UL1310 Listed, Class 2 Power Supply
TUV	EN60950

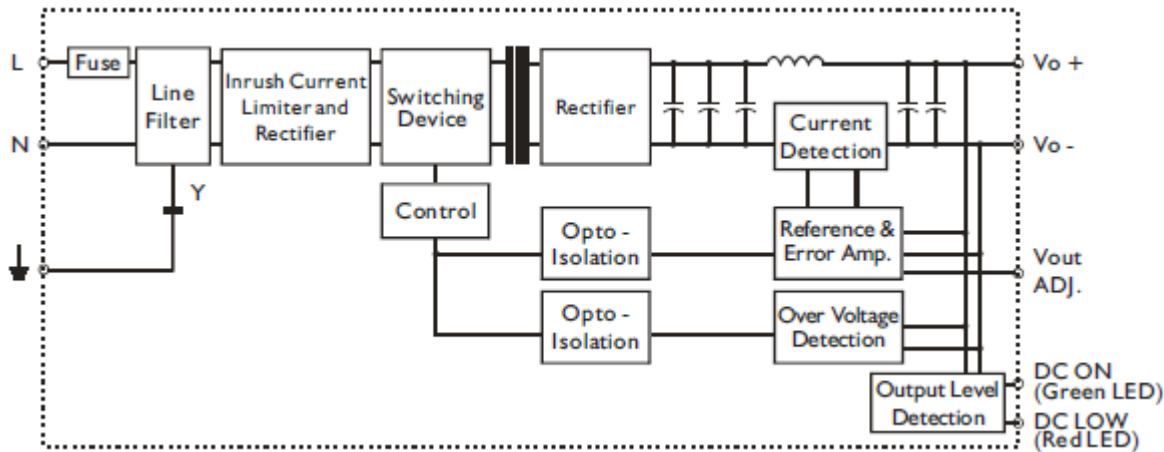
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Approvals and Standards	
CE	EN50081-1 / EN55022 for EMI EN50082-1 / EN55024 for EMS
FCC	Class B

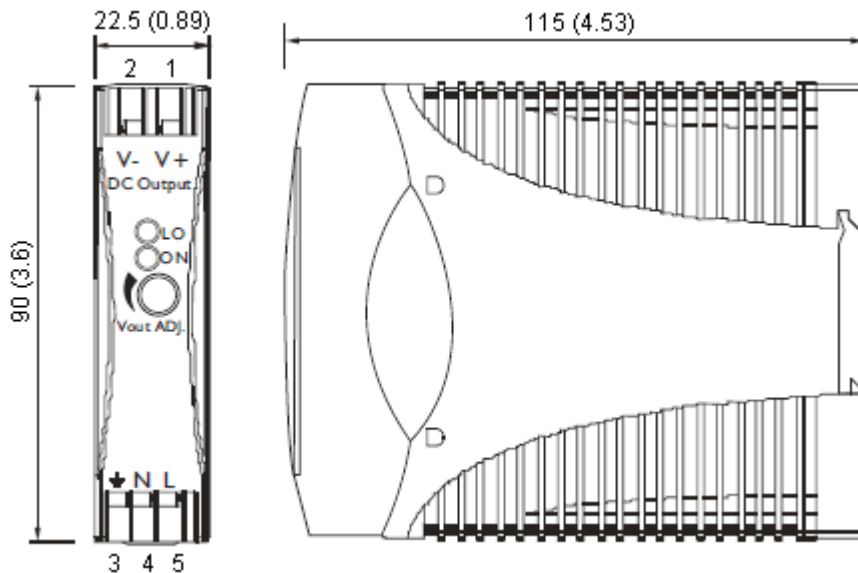
## Circuit Schematic

Block diagram for DRA18 series



Note: 1) For 24 V Model Only

## 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; no tools required even to remove


## Installation

Ventilation / Cooling  
Normal convection  
All sides 25 mm / 1 inch free space  
For cooling recommended  
Connector size range  
Solid : 0.2-2 mm<sup>2</sup> (AWG24-14)  
(use copper conductors only)

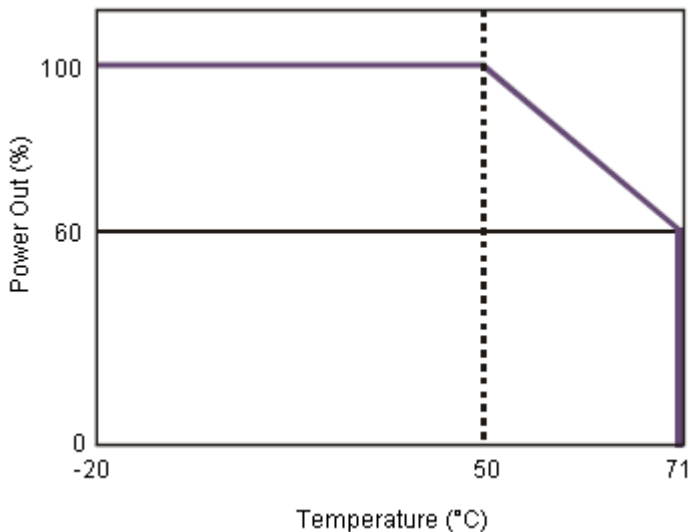
## Physical Characteristics

Case Size : 90 × 22.5 × 115 mm 3.6 × 0.89 × 4.53 inches  
Case Material : Plastic  
Weight : 150 g

## Pin Assignment

Pin Number	Designation		Description
1	Out	V+	Positive output terminal
2		V-	Negative output terminal
3	In		Ground this terminal to minimize high-frequency emissions
4		N	Input terminals (neutral conductor, no polarity at DC input)
5		L	Input terminals (phase conductor, no polarity at DC input)
6	Other	ON	Operation indicator LED
7		LO	DC LOW indicator LED
8		Vout ADJ.	Trimmer-potentiometer for Vout adjustment

## Derating



## Part Number Table

Description	Part Number
PSU, Din Rail, 18 W, 5 V	DRA18-05
PSU, Din Rail, 18 W, 12 V	DRA18-12
PSU, Din Rail, 18 W, 24 V	DRA18-24

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