

Preliminary

DRA 100 SERIES



AC - DC DIN RAIL MOUNTABLE
INDUSTRIAL CONTROL EQUIPMENT

FEATURES

- AC/DC POWER MODULE
- UNIVERSAL INPUT 90~264VAC
- HIGH EFFICIENCY UP TO 88%
- SHORT CIRCUIT PROTECTION
- INTERNAL INPUT FILTER
- 2 YEARS WARRANTY

SELECTION CHART

DRA 100 - 24 x

Wattage ——— | 12 : 12V OUT ——— | A:SCREW TERMINAL TYPE
 | 24 : 24V OUT | AL:CLASS 2 POWER (24V ONLY)
 | 48 : 48V OUT |

MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)	EFF. (typ.)
Single Output Models						
DRA100-12A	90~264 VAC	100.8 WATTS	+ 12 VDC	8400 mA	82%	84%
DRA100-24A	90~264 VAC	100.8 WATTS	+ 24 VDC	4200 mA	84%	86%
DRA100-24AL	90~264 VAC	91.2 WATTS	+ 24 VDC	3800 mA	83%	85%
DRA100-48A	90~264 VAC	100.8 WATTS	+ 48 VDC	2100 mA	86%	88%

SPECIFICATION

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

GENERAL						
Characteristics	Conditions	min.	typ.	max.	unit	
Isolation voltage	Input / Output	3,000			VAC	
Isolation resistance	Input / Output, @ 500VDC	100			MΩ	
Ambient temperature	Operating at Vi nom	-25		+ 71	°C	
Derating	Vi nom, from +61°C to +71°C			2.5	% / °C	
Storage temperature	Non operational	-25		+ 85	°C	
Relative humidity	Vi nom, Io nom	20		95	% RH	
Dimension	Screw terminal type	L90 x W54 x D113.5			mm	
Cooling	Free air convection					
Case material	Plastic					

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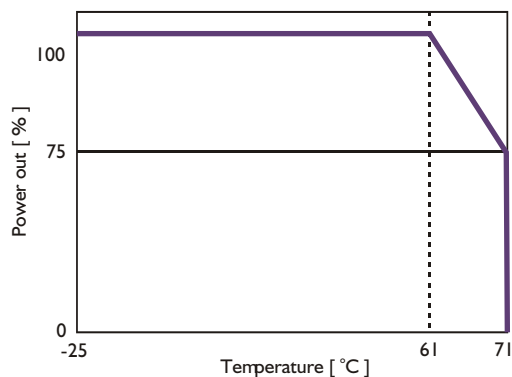
INPUT SPECIFICATIONS

Characteristics	Conditions		min.	typ.	max.	unit
Rated input voltage	Io nom		100		240	VAC
Input voltage range	Ta min ... Ta max, Io nom	AC in	90		264	VAC
		DC in	120		375	VDC
Line frequency	Vi nom, Io nom		47		63	Hz
Inrush current	Io nom	Vi : 115VAC			30	A
		Vi : 230VAC			60	A

OUTPUT SPECIFICATIONS

Characteristics	Conditions		min.	typ.	max.	unit
Output voltage accuracy (Adjusted before shipment)	Vi nom, Io min ... Io nom		-0		±1	%
Minimum load	Vi nom		0			%
Line regulation	Io nom, Vi min ... Vi max				±1	%
Load regulation	Vi nom, Io min ... Io nom				±1	%
Hold up time	Io nom	Vi : 115VAC	15			ms
		Vi : 230VAC	30			ms
Temperature coefficient	Vi nom, Io min				±0.02	% / °C
Ripple & noise	Vi nom, Io nom, BW = 20MHz				50	mV
Voltage trim range	Vi nom, Wo=96W max	12V model	11.4		14.5	VDC
	Vi nom, Wo=100.8W max	24V model	22.5		28.5	VDC
	Vi nom, Wo=91.2W max	24AL model	22.5		24.5	VDC
	Vi nom, Wo=100.8W max	48V model	47		56	VDC
DC ON indicator / DC low indicator threshold at start up	Vi nom, Io nom	12V model	10		11.2	VDC
		24V model	17.6		19.4	VDC
		48V model	37		43	VDC
Efficiency	Vi nom, Io nom, Po / Pi		Up to 88% , see model list			

DERATING



SPECIFICATION

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CONTROL AND PROTECTION

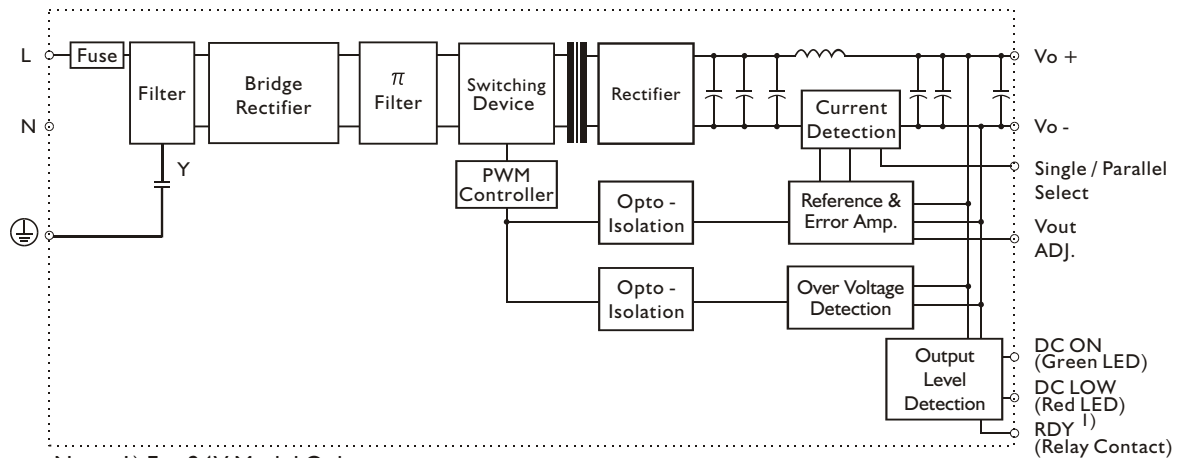
Characteristics	Conditions	min.	typ.	max.	unit
Input fuse		T3.15A / 250VAC internal			
Rated over load protection	Vi nom	110		140	%
	24L model	102		108	%
Over voltage protection	Vi nom, Io nom	12V model	14.5	17.4	VDC
		24V model	30	33	VDC
		24AL model	24.5	25.5	VDC
		48V model	60	66	VDC
Output short circuit	Vi nom, Io nom	Current limited			
Power Rdy (for 24V model only)	Threshold voltage of contact closed(at start up)	17.6		19.4	VDC
	Electrical isolation	500			VDC
	Contact rating at 60VDC			0.3	A

APPROVALS AND STANDARDS

UL / cUL	UL508 Listed UL1310 Class 2 power supply (24L model only), UL60950-1 Recognized
TUV	EN60950-1
CE	EN61000-6-3, EN55022 Class B EN61000-3-2, EN61000-3-3 EN61000-6-2, EN55024 EN61204-3

CIRCUIT SCHEMATIC

• Block diagram for DRA100 series

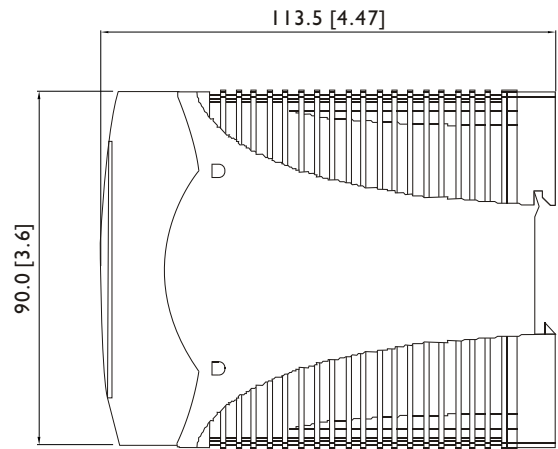
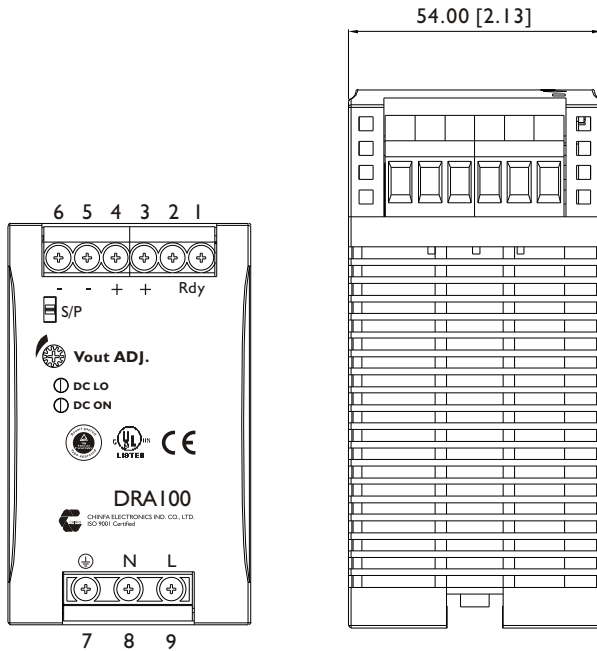


PHYSICAL CHARACTERISTICS

CASE SIZE	90 x 54 x 113.5 mm (3.6 x 2.13 x 4.47 inches)
WEIGHT	450g

MECHANISM & PIN CONFIGURATION

mm [inch]



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 25mm free space

For cooling recommended

Connector size range

Solid: 0.2-2.0mm² (AWG24-14)

(use copper conductors only)

PIN ASSIGNMENT

PIN NO.		Designation	Description
1	OUT	RDY	A normal open relay contact for DC ON level control (Only for 24V model)
2		Vo+	Positive output terminal
3		Vo+	Positive output terminal
4		Vo-	Negative output terminal
5		Vo-	Negative output terminal
6		Vo-	Negative output terminal
7	IN	⊕	Ground this terminal to minimize high-frequency emissions
8		N	Input terminals (neutral conductor, no polarity at DC input)
9	OTHER	L	Input terminals (phase conductor, no polarity at DC input)
		Vout Adj.	Trimmer-potentiometer for Vout adjustment
		DC ON	Operation indicator LED
		DC Lo	DC low voltage indicator LED
		S/P	Single/Parallel select switch (without 24AL Model)