

# DRA240 SERIES



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 115/230VAC AUTO SELECT

## SELECTION CHART

# DRA 240 - 24 x

Wattage

A : SCREW TERMINALS  
 B : DETACHABLE CONNECTOR

24 : 24V OUT  
48 : 48V OUT

## MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)	EFF. (typ.)
<b>Single Output Models</b>						
DRA240-24x	115 / 230 VAC	240 WATTS	+ 24 VDC	10A	87%	89%
DRA240-48x	115 / 230 VAC	240 WATTS	+ 48 VDC	5A	88%	90%

## 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 Vinom	-25		+ 71	°C	
Derating	Vi nom, from +61 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	L123.6 x W83 x D123.6			mm	
	Detachable connector type	L142 x W83 x D123.6			mm	
Cooling	Free air convection				mm	
Case material	Metal					

## SPECIFICATION

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

### INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Rated input voltage	Io nom	115 / 230(auto select)			VAC
Input voltage range	Ta min ... Ta max, AC in	115V selected	93	132	VAC
	Io nom	AC in 230V selected	186	264	VAC
		DC in	210	370	VDC
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 : 115VAC		30	A
		Vi : 230VAC		60	A
P. F. C.	Vi : 230VAC, Io nom		0.7		

### OUTPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy (Adjusted before shipment)	Vi nom, Io max	-0		+ 1	%
Minimum load	Vi nom	0			%
Line regulation	Io nom, Vi min ... Vi max			± 0.5	%
Load regulation	Vi nom, Io min ... Io nom	single mode		± 1	%
		parallel mode		± 5	%
Temperature coefficient	Vi nom, Io min			± 0.02	% / °C
Ripple & noise	Vi nom, Io nom, BW = 20MHz			100	mV
Hold up time	Vi nom, Io nom	Vi = 115VAC	25		ms
		Vi = 230VAC	30		ms
Voltage trim range	Vi nom, Io nom	24V models	22.5	28.5	VDC
		48V models	47	56	VDC
DC ON indicator threshold at start up	Vi nom, Io nom	24V models	17.6	19.4	VDC
		48V models	37	43	VDC
DC LOW indicator threshold after start up	Vi nom, Io nom	24V models	17.6	19.4	VDC
		48V models	37	43	VDC
Parallel operation	0.9 Io max			3	unit
Efficiency	Vi nom, Io nom, Po / Pi	Up to 90%, See model list			

### CONTROL AND PROTECTION

Characteristics	Conditions	min.	typ.	max.	unit
Input fuse		T6.3A / 250VAC internal			
Rated over load protection	Vi nom	120		145	%
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
Over voltage protection	Vi nom, Io nom	120		145	%
Output short circuit	Vi nom, Io nom	Current limited			

## SPECIFICATION

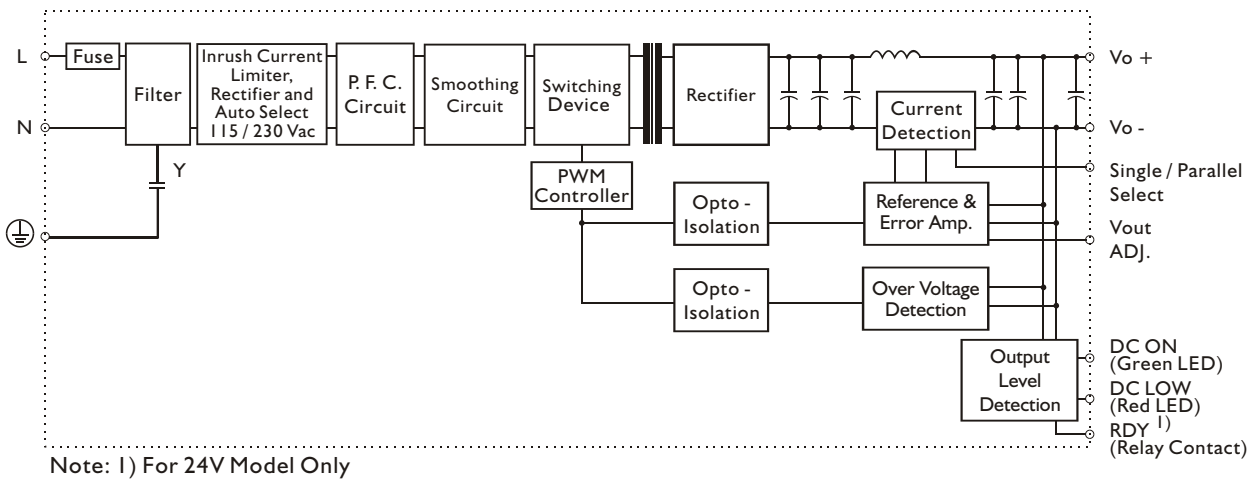
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## APPROVALS AND STANDARDS

UL / cUL	UL508 Listed, UL60950-I Recognized
TUV	EN60950
CE	EN61000-6-3, EN55022 class B EN61000-3-2, EN61000-3-3 EN61000-6-2, EN55024 EN61204-3

## CIRCUIT SCHEMATIC

• Block diagram for DRA240 series



## PHYSICAL CHARACTERISTICS

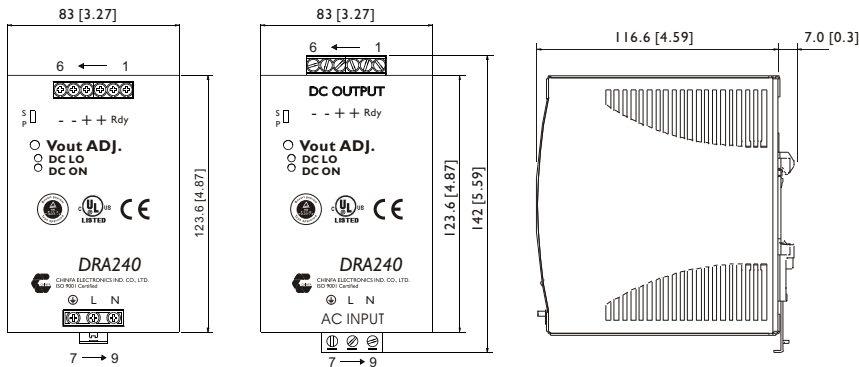
### CASE SIZE

SCREW TERMINAL TYPE	123.6 x 83 x 123.6 mm (4.87 x 3.27 x 4.87 inches)
DETACHABLE CONNECTOR TYPE	142 x 83 x 123.6 mm (5.59 x 3.27 x 4.87 inches)

WEIGHT	1100g
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## 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.

### INSTALLATION

- Ventilation / Cooling
  - Normal convection
  - All sides 25mm free space
  - For cooling recommended
- Connector size range
- Screw terminal:
  - 10-24AWG flexible / solid cable,
  - 8 m/m stripping at cable end recommends
- Detachable connector:
  - 14-24AWG flexible / solid cable,
  - 7 m/m stripping at cable end recommends

## PIN ASSIGNMENT

PIN NO.	Designation	Description
1	RDY	A normal open relay contact for DC ON level control (Never connect except 24V model)
2		
3	V +	Positive output terminal
4	V +	Positive output terminal
5	V -	Negative output terminal
6	V -	Negative output terminal
7	⊕	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

