

DRA480 SERIES



AC - DC DIN RAIL MOUNTABLE
480W
INDUSTRIAL CONTROL EQUIPMENT

FEATURES

- COMPACT DESIGN
- HIGH EFFICIENCY UP TO 90%
- ACTIVE PFC FUNCTION
- PARALLEL FUNCTION (SWITCH SELECTABLE)
- UNIVERSAL INPUT VOLTAGE

SELECTION CHART

DRA 480 - 24 x

Wattage

A : SCREW TERMINALS
 B : DETACHABLE CONNECTOR

24 : 24VOUT
48 : 48VOUT

MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)	EFF. (typ.)
Single Output Models						
DRA480-24x	90 ~ 264 VAC	480 WATTS	+ 24 VDC	20A	86%	89%
DRA480-48x	90 ~ 264 VAC	480 WATTS	+ 48 VDC	10A	87%	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 Vi nom	-10		+ 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	L125 x W175 x D126			mm	
	Detachable connector type	L142 x W175 x D126			mm	
Cooling	Free air convection				mm	
Case material	Metal					



SPECIFICATION

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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	230	264	VAC
		DC IN	120		370	VDC
Rated input current	Io nom	Vi : 115VAC		6.9		A
		Vi : 230VAC		3.3		A
Line frequency	Vi nom, Io nom		47		63	Hz
Inrush current	Vi nom, Io nom	Vi : 115VAC			25	A
		Vi : 230VAC			50	A
P. F. C.	Vi : 230VAC, Io nom			0.99		

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		35			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			10A / 250VAC internal			
Rated over load protection	Vi nom		110		140	%
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		Continuous current limited			



SPECIFICATION

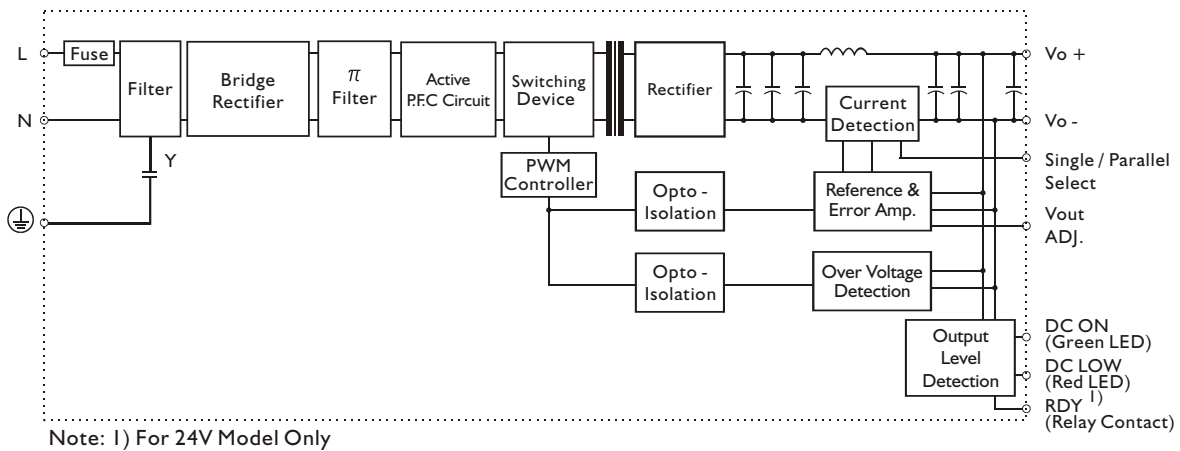
All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

APPROVALS AND STANDARDS

UL / cUL	UL508 Listed, UL60950-1 Recognized
TUV	EN60950-1
CE	EN61000-6-3, EN55022 class B, EN61000-3-2, EN61000-3-3 EN61000-6-2, EN55024

CIRCUIT SCHEMATIC

• Block diagram for DRA480 series

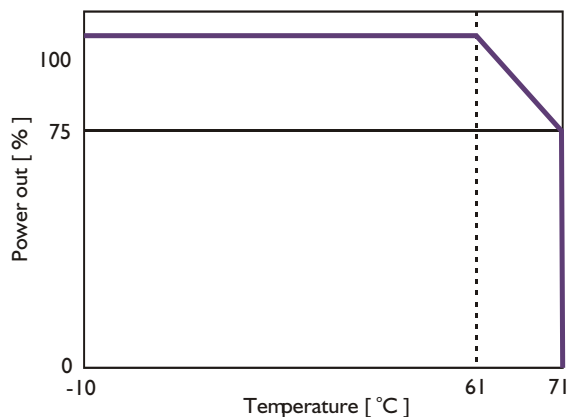


PHYSICAL CHARACTERISTICS

CASE SIZE

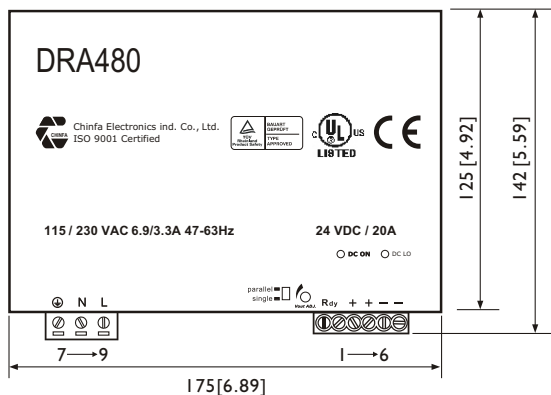
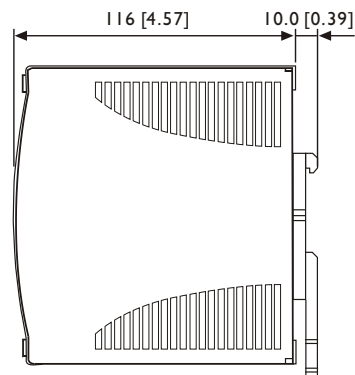
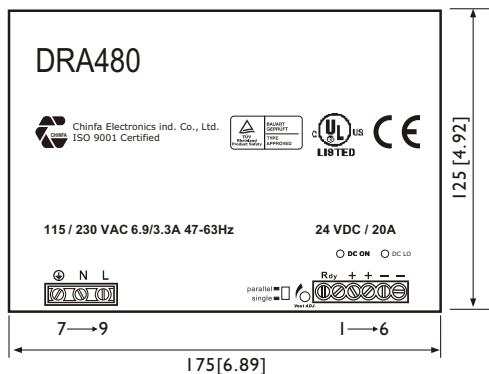
SCREW TERMINAL TYPE	125 x 175 x 126 mm 4.92 x 6.89 x 4.96 inches
DETACHABLE CONNECTOR TYPE	142 x 175 x 126 mm 5.59 x 6.89 x 4.96 inches
WEIGHT	1800g

DERATING



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 mm stripping at cable end recommends

Detachable connector:

- 14-24AWG flexible / solid cable,
- 7 mm stripping at cable end recommends

PIN ASSIGNMENT

PIN NO.	Designation	Description
1	OUT	RDY
2		A normal open relay contact for DC ON level control (Only for 24V model)
3		V +
4		V +
5		V -
6		V -
7	IN	⊕
8		N
9		L
	OTHER	DC ON
		DC LO
		Vout ADJ.
		S / P
		Trimmer-potentiometer for Vout adjustment
		Single / Parallel select switch