

DRA480 SERIES

FOR DC BACKUP SYSTEM

AC - DC DIN RAIL MOUNTABLE

480W

INDUSTRIAL CONTROL EQUIPMENT



FEATURES

- COMPACT DESIGN
- SIMPLE IN APPLICATION
- LOW PRICING
- WORKABLE FOR BOTH POWER SUPPLY / DC BACKUP SYSTEM
- UNIVERSAL INPUT VOLTAGE

SELECTION CHART

DRA 480 - 24 A *

Wattage

DC Backup System

SCREW TERMINALS

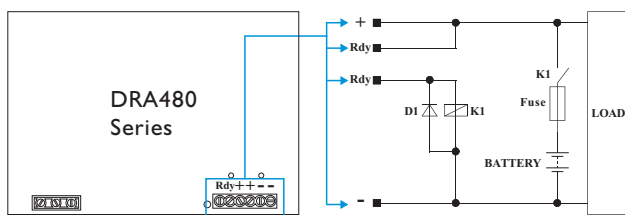
24 : 27.2VOUT
48 : 54.5VOUT

MODEL LIST

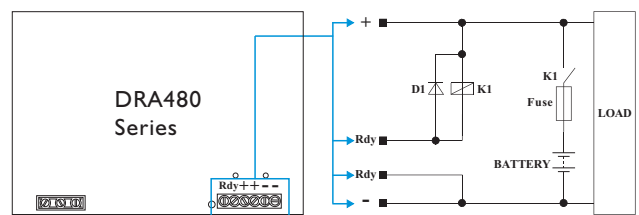
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)	EFF. (typ.)
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Single Output Models

DRA480-24A*	90 ~ 264 VAC	480 WATTS	+ 27.2 VDC	17.6A	86%	89%
DRA480-48A*	90 ~ 264 VAC	480 WATTS	+ 54.5 VDC	8.8A	87%	90%



DRA480 Series For DC Backup System Application



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Note :

1. The suffix "*" is part of the model number, which specifies the product is designed and pre-trim for low-cost DC backup power system with external Lead-Acid battery, Relay and Fuse.
2. The manufacturer is liable neither for the external components nor the damage to the power supply causing by external components.
3. The total consumption current including loading and battery charging current should not exceed the maximum rated current of power supply.
4. The operation concept of DC backup power system :
 - A. When AC power alive : The "Rdy" is close circuit to active the external Relay . The power supply feeds current into the external loads and charges through Relay to the external battery as well.
 - B. When AC power interrupted : The "Rdy" is remain close circuit to maintain the external Relay remain active, the external battery supply current to the external loads.
 - C. When Battery power low : The "Rdy" become open circuit and the external Relay become inactive to disconnect the battery from external loads.

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 +56 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 D123			mm
Cooling	Free air convection				mm
Case material	Metal				

INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit	
Rated input voltage	Io nom		115 / 230		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		7		A
		Vi : 230VAC		3.5		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			± 0.5	%	
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	30			ms	
Voltage trim range	Vi nom, Io nom	24V models	22.5		28.5	VDC
		48V models	47		56	VDC
Rdy Close / DC ON indicator threshold at start up	Vi nom, Io nom	24V models	21.2		22.2	VDC
		48V models	42.8		43.8	VDC
Rdy Open / DC LOW indicator threshold after start up	Vi nom, Io nom	24V models	21.1		22.1	VDC
		48V models	42.7		43.7	VDC

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APPROVALS AND STANDARDS

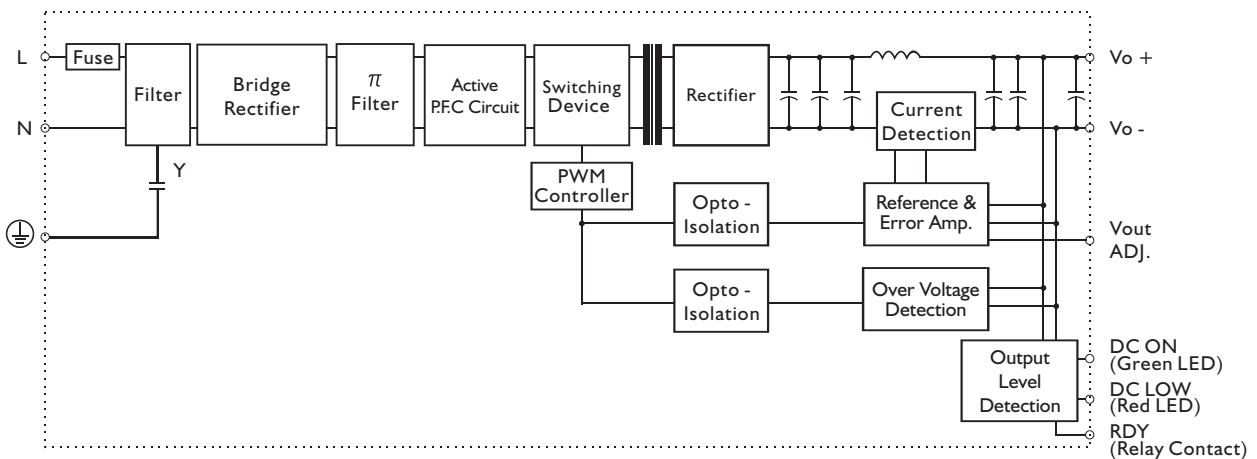
UL / cUL	UL508 Listed, UL60950-I Recognized
TUV	EN60950-I
CE	EN61000-6-3, EN55022 class B, EN61000-3-2, EN61000-3-3 EN61000-6-2, EN55024

CONTROL AND PROTECTION

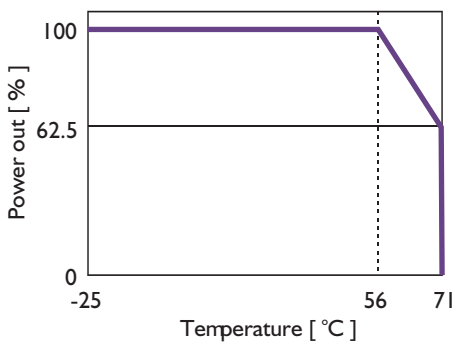
Characteristics	Conditions	min.	typ.	max.	unit
Input fuse		T10A / 250VAC internal			
Rated over load protection	Vi nom	105		125	%
Over voltage protection	Vi nom, Io nom	24V models	30	33	V
		48V models	57	63	V
Output short circuit	Vi nom	Continuous current limited			

CIRCUIT SCHEMATIC

· Block diagram for DRA480 series



DERATING



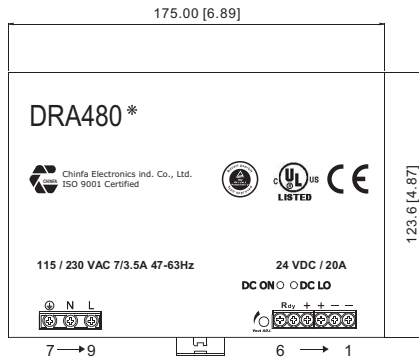
PHYSICAL CHARACTERISTICS

CASE SIZE

SCREW TERMINAL TYPE	125 x 175 x 123 mm 4.92 x 6.89 x 4.84 inches
WEIGHT	1920g

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

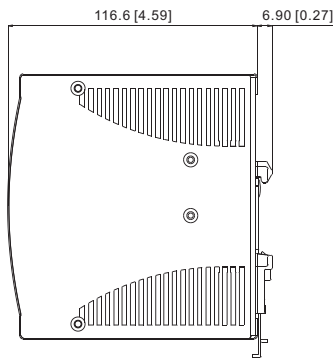
For cooling recommended

Connector size range

Screw terminal:

10-24AWG flexible / solid cable,

8 m/m stripping at cable end recommends



PIN ASSIGNMENT

PIN NO.	Designation	Description
1	OUT	RDY
2		A normal open relay contact for DC ON level control
3		V +
4		Positive output terminal
5		V -
6	V -	Negative output terminal
7	IN	⊕
8		N
9		L
	OTHER	DC ON
		DC LO
		Vout ADJ.