



COMPOSANTS ÉLECTRONIQUES
ELECTRONIC COMPONENTS

DRA60 SERIES



AC - DC DIN RAIL MOUNTABLE
60W CLASS 2 OUTPUT
INDUSTRIAL CONTROL EQUIPMENT

FEATURES

- AC/DC POWER MODULE
- UNIVERSAL INPUT 90~265VAC
- HIGH EFFICIENCY UP TO 86%
- SHORT CIRCUIT PROTECTION
- INTERNAL INPUT FILTER
- 2 YEARS WARRANTY

MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (typ.)	EFF. (min.)
Single Output Models						
DRA60-05A	90~265 VAC	50 WATTS	+ 5 VDC	10000 mA	80%	78%
DRA60-12A	90~265 VAC	60 WATTS	+ 12 VDC	5000 mA	84%	80%
DRA60-24A	90~265 VAC	60 WATTS	+ 24 VDC	2500 mA	86%	84%
DRA60-48A	90~265 VAC	60 WATTS	+ 48 VDC	1250 mA	86%	83%

SPECIFICATION

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

GENERAL						
Characteristics	Conditions		min.	typ.	max.	unit
Switching frequency	Vi nom, Io nom		50			KHz
Isolation voltage	Input / Output		3,000			VAC
Isolation resistance	Input / Output, @ 500VDC		100			MΩ
Ambient temperature	Operating at Vi nom, Io 70% ... 100%		-10		+ 50	°C
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, G40			167,000		Hrs
Relative humidity	Vi nom, Io nom				90	% RH
Dimension	L90 x W40.5 x D115					mm
Cooling	Free air convection					
Case material	Plastic					

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		265	VAC
		DC in	120		370	VDC
Line frequency	Vi nom, Io nom		47		63	Hz
Inrush current	Io nom	Vi : 115VAC			21	A
		Vi : 230VAC			42	A



SPECIFICATION

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

OUTPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy	V_i nom, I_o min ... I_o nom			± 2	%
Minimum load	V_i nom	0			%
Line regulation	I_o nom, V_i min ... V_i max			± 1	%
Load regulation	V_i nom, I_o min ... I_o nom			± 2	%
Transient recovery time	50% load step changed		300		μ S
Temperature coefficient	V_i nom, I_o min			± 0.02	% / °C
Ripple & noise	V_i nom, I_o nom, BW = 20MHz			50	mV
Hold up time	$V_i = 115$ VAC, I_o nom	20			ms
	$V_i = 230$ VAC, I_o nom	75			ms
	V_i nom, I_o nom 5V model	5		5.5	VDC
		12		14	VDC
		24		28	VDC
		44		55	VDC
DC ON indicator	V_i nom, I_o nom	Green LED			
Efficiency	V_i nom, I_o nom, P_o / P_i	Up to 86%. See model list			

CONTROL AND PROTECTION

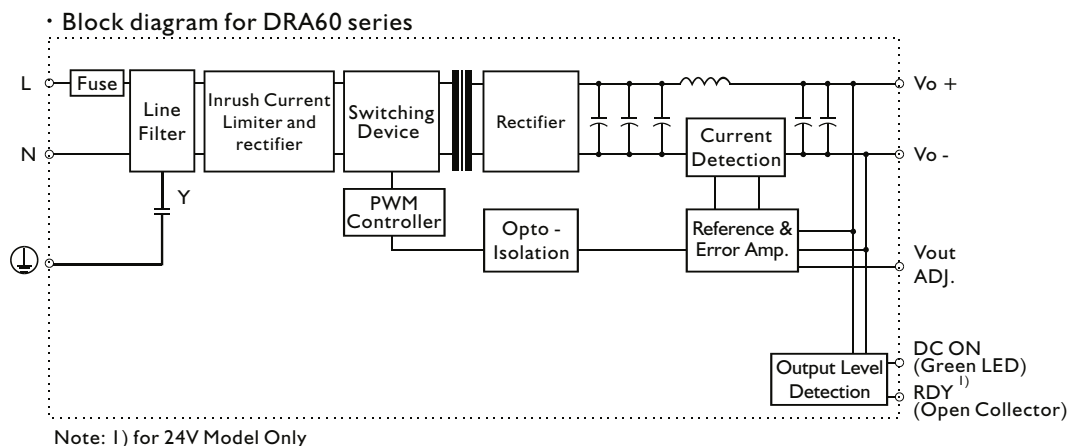
Characteristics	Conditions	min.	typ.	max.	unit
Input fuse		T2A / 250VAC internal			
Rated over load protection	V_i nom	105		125	%
Power Rdy (24V model only) 1)	Threshold	20	22	24	VDC
Output short circuit	V_i nom, I_o nom	Hiccup mode			

Note 1): Pls see fig1 for Rdy connection.

APPROVALS AND STANDARDS

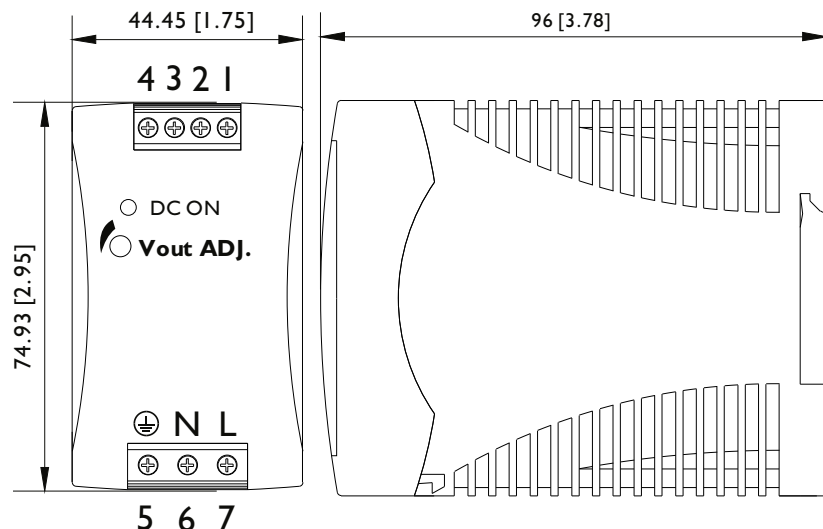
UL / cUL	UL1950, UL1310 Listed, Class 2
TUV	EN60950
CE	EN50081-1 / EN55022 class B for EMI
	EN50082-1 / EN55024 for EMS

CIRCUIT SCHEMATIC



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
Above/below 25m/m free space
For cooling recommended
Connector size range
Solid: 0.2-2.0mm² (AWG24-14)
(use copper conductors only)

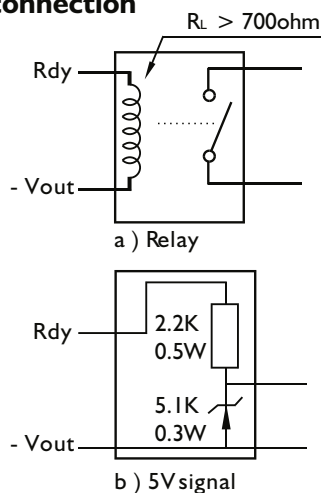
PHYSICAL CHARACTERISTICS

CASE SIZE	90 x 40.5 x 115 mm 3.6 x 1.59 x 4.53 inches
CASE MATERIAL	Plastic
WEIGHT	360g

PIN ASSIGNMENT

PIN NO.	Designation	Description
1	RDY	DC OK output for relay (not connect except 24V model)
2	+	Positive output terminal
3	+	Positive output terminal
4	-	Negative output terminal
5	-	Negative output terminal
6	⊕	Ground this terminal to minimize high-frequency emissions
7	N	Input terminals (neutral conductor, no polarity at DC input)
8	L	Input terminals (phase conductor, no polarity at DC input)
	Vout ADJ.	Trimmer-potentiometer for Vout adjustment
	DC ON	Operation indicator LED

Fig. 1 Rdy connection



DERATING

