



AC - DC DIN RAIL MOUNTABLE POWER SUPPLY
INDUSTRIAL CONTROL EQUIPMENT

FEATURES

- UNIVERSAL INPUT 90~264VAC
- SHORT CIRCUIT PROTECTION
- INTERNAL INPUT FILTER
- 2 YEARS WARRANTY

SELECTION CHART

GDA 100 - 24 x

Wattage $\left\{ \begin{array}{l} | \\ | \\ | \end{array} \right.$ A : SCREW TERMINALS
 12 : 12V OUT / 24 : 24V OUT / 48 : 48V OUT AL : CLASS 2 POWER (24V ONLY)

MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)	EFF. (typ.)
Single Output Models						
GDA100-12A	90 ~264 VAC	100.8 WATTS	+ 12 VDC	8400 mA	82%	84%
GDA100-24A	90 ~264 VAC	100.8 WATTS	+ 24 VDC	4200 mA	84%	86%
GDA100-24AL	90 ~264 VAC	91.2 WATTS	+ 24 VDC	3800 mA	83%	85%
GDA100-48A	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
Switching frequency	Vi nom, Io nom	45		60	KHz
Isolation voltage	Input-Output	3000 / 4242			VAC / VDC
	Input-FG	1500 / 2121			VAC / VDC
Isolation resistance	Input-Output, @ 500VDC	100			MΩ
Ambient temperature	Operating at Vi nom	-25		+ 71	°C
Derating (see derating curve)	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
Temperature coefficient	Vi nom, Io min			± 0.03	% / °C
MTBF	Bellcore Issue 6 @40°C, GB	12V model	448000		Hours
		24V model	456000		Hours
		24AL model	493000		Hours
		48V model	490000		Hours
Altitude during operation				3000	m
Dimension	Screw terminal type	L90 x W54 x D114			mm
Cooling	Free air convection				
Pollution degree		2			

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
Rated input current	Vi : 115 VAC, Io nom		1.65	2.4	A
Line frequency	Vi nom, Io nom	47		63	Hz

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INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Inrush current	V_i : 115 / 230 VAC , I_o nom			30 / 60	A
Power dissipation	V_i : 230 VAC, I_o nom	12V model		18.5	W
		24V model		15	W
		24AL model		14	W
		48V model		14	W
Leakage current	Input-Output			0.25	mA
	Input-FG			3.5	mA

OUTPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit	
Output voltage accuracy (Adjusted before shipment)	V_i nom, I_o max	0		+ 1	%	
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	single mode		± 1	%	
		parallel mode		± 5	%	
Voltage trim range	V_i nom, 0.8 I_o nom	12V model	11.4		14.5	VDC
		24V model	22.5		28.5	VDC
		24AL model	22.5		24.5	VDC
		48V model	47		56	VDC
Rated continuous loading	V_i nom	12V model	8.4 A @ 12Vdc / 6.9 A @ 14.5 Vdc			
		24V model	4.2 A @ 24Vdc / 3.5 A @ 28.5 Vdc			
		24AL model	3.8 A @ 24Vdc / 3.7 A @ 24.5 Vdc			
		48V model	2.1 A @ 48Vdc / 1.8 A @ 56 Vdc			
Hold up time	V_i : 115 / 230 VAC , I_o nom	15 / 30			ms	
Turn on time	V_i nom, I_o nom			1000	ms	
	V_i nom, I_o nom → 12V, 24V models : with 7000 μ F CAP 48V model : with 3500 μ F CAP			1500	ms	
Rise time	V_i nom, I_o nom			150	ms	
	V_i nom, I_o nom → 12V, 24V models : with 7000 μ F CAP 48V model : with 3500 μ F CAP			500	ms	
Fall time	V_i nom, I_o nom			150	ms	
Transient recovery time	V_i nom, 1~0.5 I_o nom			2	ms	
Ripple & noise	V_i nom, I_o nom, BW = 20MHz			50	mV	
Power back immunity	V_i nom, I_o nom	12V model	18		VDC	
		24V model	35		VDC	
		24AL model	35		VDC	
		48V model	63		VDC	
Capacitor load	V_i nom, I_o nom	12V, 24V models		7000	μ F	
		48V model		3500	μ F	
DC ON indicator threshold at start up (Green LED)	V_i nom, I_o nom	12V model	10		11.2	VDC
		24V model	17.6		19.4	VDC
		48V model	37		43	VDC
DC LOW indicator threshold after start up (Red LED)	V_i nom, I_o nom	12V model	10		11.2	VDC
		24V model	17.6		19.4	VDC
		48V model	37		43	VDC
Parallel operation	0.1 I_o min ~ 0.9 I_o max (Except 24AL model)			3	unit	
Efficiency	V_i nom, I_o nom, P_o / P_i	Up to 88%, See model list and typ efficiency curve				

CONTROL AND PROTECTION

Characteristics	Conditions	min.	typ.	max.	unit
Input fuse		T3.15A / 250VAC internal			
Internal surge voltage protection	IEC 61000-4-5	Varistor			
Rated over load protection	V_i nom (see typ current limited curve)	110		140	%
	24AL model	102		108	%

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CONTROL AND PROTECTION

Characteristics	Conditions	min.	typ.	max.	unit
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 (Auto Recovery)	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			Fold forward		
Degree of protection			IP20		

APPROVALS AND STANDARDS

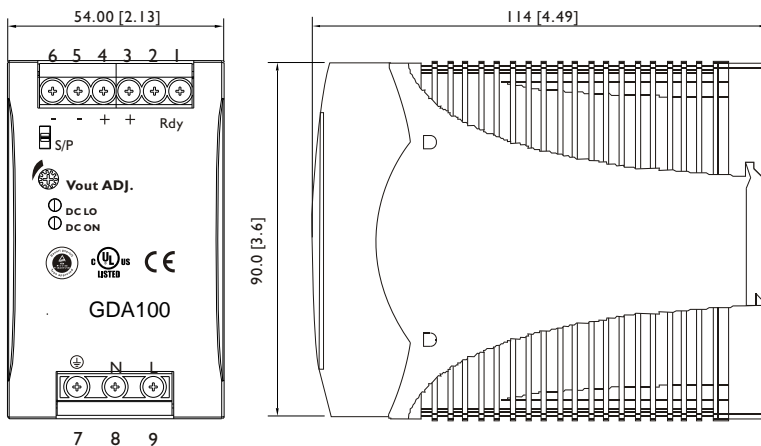
UL / cUL	UL 508 Listed UL 60950-1, UL 1310 Class 2 Power (24AL model only) Recognized ISA 12.12.01(Class I, Division 2, Groups A, B, C and D) (in-process)
TUV	EN 60950-1, CB scheme EN 61558-1, EN 61558-2-17 (meet EN 60204)
CE	EN 61000-6-3, EN 55022 Class B, EN 61000-3-2, EN 61000-3-3 EN 61000-6-2, EN 55024, EN 61000-4-2 Level 4, EN 61000-4-3 Level 3 EN 61000-4-4 Level 4, EN 61000-4-5 L-N Level 3, L / N-FG Level 4 EN 61000-4-6 Level 3, EN 61000-4-8 Level 4, EN 61000-4-11 ENV 50204 Level 2, EN 61204-3
Vibration resistance	meet IEC 60068-2-6 (Mounting by rail : 10-500 Hz, 2G, along X, Y, Z each Axis, 60 min for each Axis)
Shock resistance	meet IEC 60068-2-27 (15G, 11ms, 3 Axis, 6 Faces, 3 times for each Face)

PHYSICAL CHARACTERISTICS

Case size	90 x 54 x 114 mm (3.6 x 2.13 x 4.49 inches)
Case material	Plastic
Weight	430g
Packing	0.51kg ; 32PCS / 17.5kg / 1.85CUFT

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.

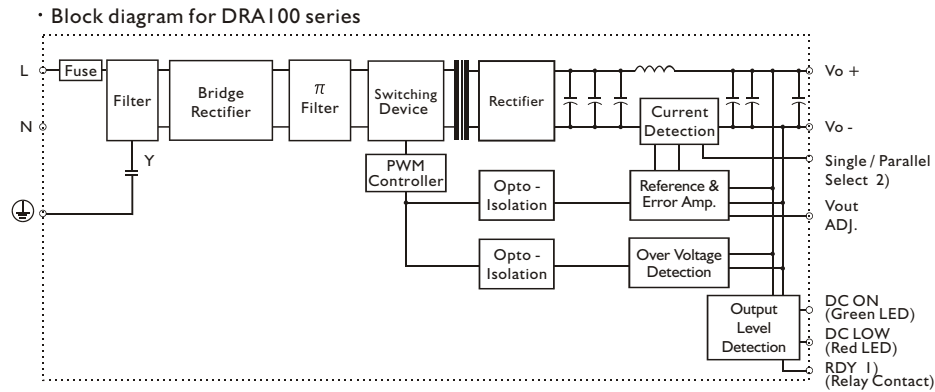
INSTALLATION

Ventilation / Cooling
Normal convection
All sides 25mm free space
For cooling recommended
Connector size range
AWG24-10 (0.2~4mm²) flexible / solid cable,
-Input connector can withstand torque at maximum 9 pound-inches.
-Output connector can withstand torque at maximum 5.5 pound-inches.
8 m/m stripping at cable end recommends
Use copper conductors only, 60 / 75°C

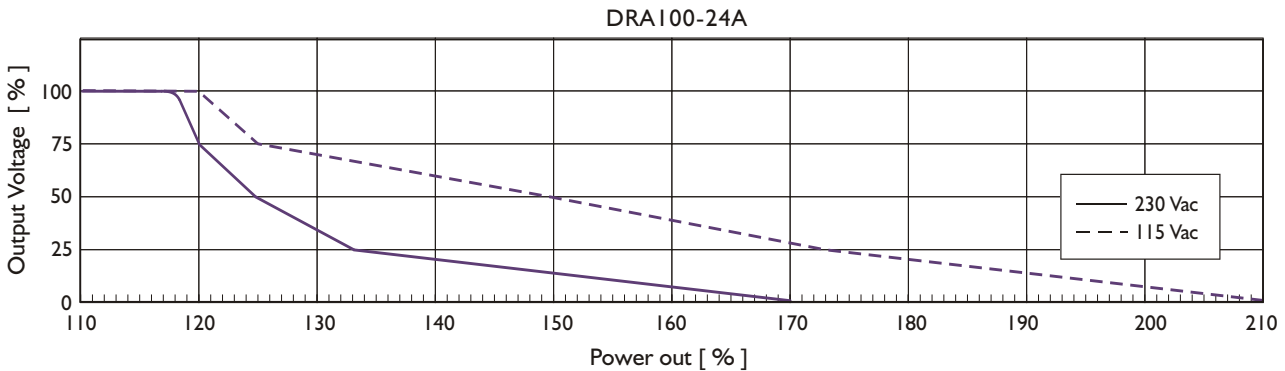
PIN ASSIGNMENT

PIN NO.	Designation	Description
1	OUT	RDY
2		A normal open relay contact for DC ON level control (Never connect except 24AL model)
3, 4		V +
5, 6		V -
7	IN	⊕
8		N
9		L
	OTHER	DC ON
		DC LO
		Vout ADJ.
		S / P

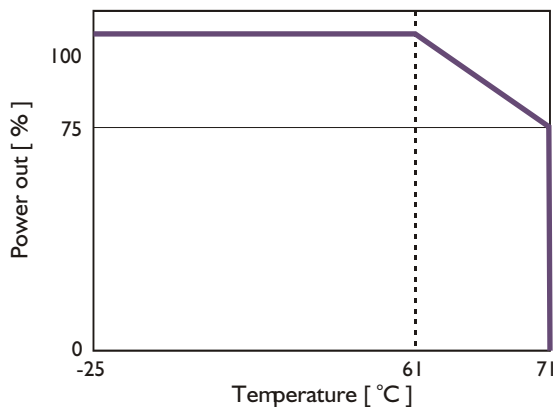
CIRCUIT SCHEMATIC



TYP. CURRENT LIMITED CURVE



DERATING CURVE



TYP. EFFICIENCY CURVE

