AA10S Series

10W Single Output AC/DC Power Module



FEATURES

- Ultra-compact AC-DC power supply for PCB Mounting
- Over Load and Over Voltage Protection
- EMI meets EN55022, Class B and EMS compliance to EN61000-4
- Universal Input voltage range 85-264 VAC, 47-440 Hz
- UL/IEC/EN 60950-1 Certified , CE Marked
- 3kVAC Isolatoin , Protection Class ll level
- Lead free, RoHs Compliant
- 3 Years Product Warranty



The AA10S series , isolated fully encapsulated 10W AC/DC power module with 3,000VAC isolation. With Universal input voltage 85-264VAC and International safety approvals, these power modules are ideal for applications in commercial and industrial electronic equipment. These isolated AC/DC converters are the latest offering from a world leader in power systems technology and manufacturing — Delta Electronics, Inc. With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performance, as well as extremely high reliability under highly stressful operating conditions

Model List

Model Number	Output Voltage	Output Current	Input Current	Max. capacitive Load	Efficiency (typ.)
			115VAC, 60Hz		
		Max.	@Max. Load		@Max. Load
	VDC	mA	mA(typ.)	uF	%
AA10S0300A	3.3	2500	171	2200	70
AA10S0500A	5	2000	201	2200	72
AA10S1200A	12	833	191	1000	76
AA10S1500A	15	667	193	1000	75
AA10S2400A	24	417	201	680	72

Input Characteristics

Parameter	Model	Min.	Typ.	Max.	Unit
Input Voltage Range	All Models	85	---	264	VAC
Input Frequency Range		47	---	440	Hz
Input Voltage Range		120	---	370	VDC
No-Load Power Consumption		---	---	0.3	W
Inrush Current (Cold Start at 25℃)	115VAC	---	---	15	A
	230VAC	---	---	30	A

E-mail: DCDC@delta.com.tw
http://www.deltaww.com/dcdc

Output Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		---	±1.0	±2.0	%
Line Regulation	Vin=Min. to Max.	---	±0.5	±1.0	%
Load Regulation	Iout=Min. to Max.	---	±0.5	±1.0	%
Ripple & Noise (20MHz)	3.3 & 5.0VDC Output Models	---	1.5	1.8	$\%V_{PP}$ of
	Other Output Models	---	0.8	1.0	$\%V_{PP}$ of
Minimum Load		---	10	---	%Inom.
Over Voltage Protection	Zener diode clamp	---	120	---	% of Vo
Temperature Coefficient		---	±0.01	±0.02	%/℃
Overshoot		---	---	5	% Vout
Current Limitation	Foldback, auto-recovery (long term overload condition may cause damage)	105	---	---	%Inom.
Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)				

General Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
I/O Isolation Voltage	Input to Output, 60 Seconds	3000	---	---	VACrms
I/O Isolation Resistance	500 VDC	100	---	---	MΩ
Switching Frequency		---	125	---	KHz
Hold-up Time		---	20	---	ms
MTBF (calculated)	MIL-HDBK-217F@25℃, Ground Benign	300,000	---	---	Hours
EMC Emission	Conducted and radiated	EN 55011, class B, EN 55022, class B, FCC part 15, class B			
EMC Immunity according EN61000-6-1	Standard	Specification Requirement			Performance Criteria
	EN61000-4-2	Air ±8KV Cont. ±4KV			B
	EN61000-4-3	80~1000MHz, 10V/m 80% AM, 1KHz modulation			A
	EN61000-4-4	AC port ±2KV DC, SL, TL ±2KV not less than 1 min.			B
	EN61000-4-5	1.2/50uS(8/20uS) AC dif. ±1KV DC ±0.5KV			B
	EN61000-4-6	0.15~80MHz, 10Vrms (functional earth ports included)			B
		80% AM, 1KHz modulation			
	EN61000-4-8	50Hz/60Hz, 30A/m			A
	EN61000-4-11	30%, 10ms			B
		60%, 100ms, 95%, 5000ms			C
Protection Class II		According IEC/EN 60536			
Safety Approvals		cUL/UL 60950-1,IEC/EN 60950-1			

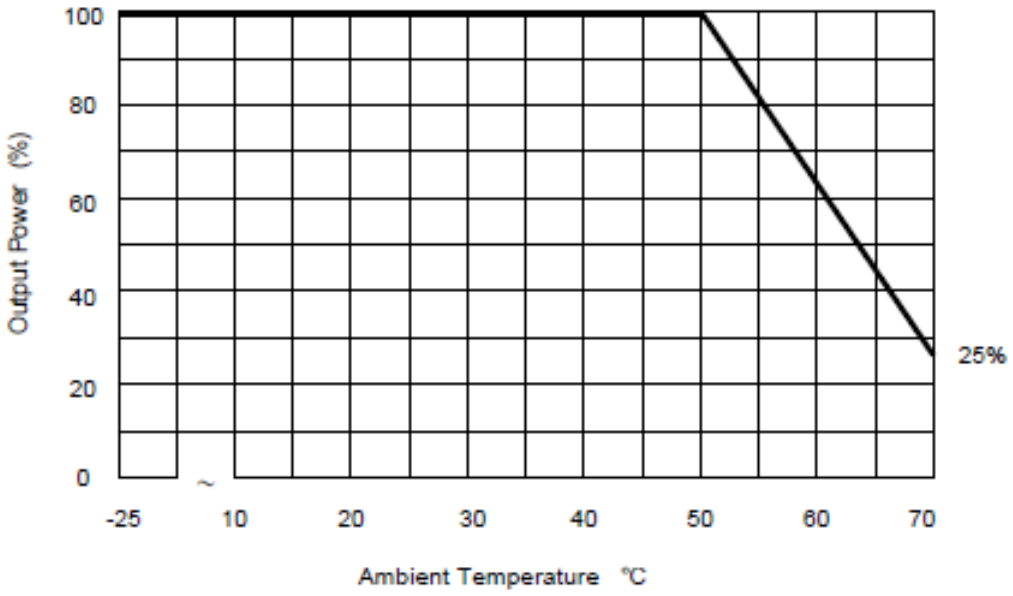
Recommended Input Fuse

All Models	
External Fuse (Recommended)	1.5A Slow – Blow Type

Environmental Specifications

Parameter	Conditions		
Temperature Range (operational)	Ambient	-25℃	+70℃
Storage Temperature Range		-40℃	+85℃
Over Temperature Protection	at 90℃ (automatic recovery at 67℃)		
Cooling	Free-Air convection		
Humidity (non condensing)		---	95 % rel. H

Power Derating Curve

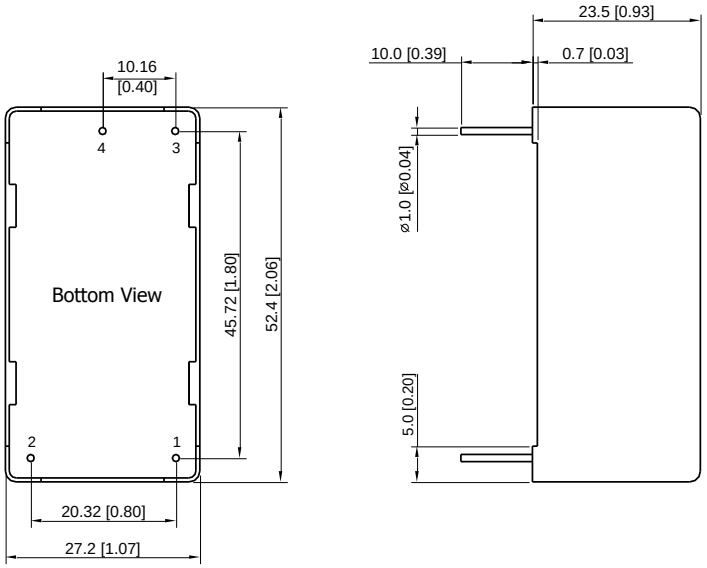


Notes

1. All specifications typical at Ta=+25℃, resistive load, 115VAC, 60Hz input voltage and after warm-up time rated output current unless otherwise noted.
2. Ripple & Noise measurement bandwidth is 0~20 MHz
3. These power modules require a minimum output loading to maintain specified regulation, operation under no-load conditions will not damage the power supplies however they may not meet all listed specifications.
4. All AC/DC modules should be externally fused at the front end for protection.
5. Other input and output voltage may be available, please contact us for custom solution
6. Specifications subject to change without notice

Mechanical Drawing

Mechanical Dimensions



Pin Connections

Pin	Function
1	AC(N) – AC Neutral
2	AC(L) – AC Line
3	+Vout
4	-Vout

- ▶All dimensions in mm (inches)
- ▶Tolerance: ±0.5 (±0.02)
- ▶Pin diameter ⇔ 1.0 ±0.1 (0.04±0.004)

Physical Outline

Case Size	:	52.4x27.2x23.5mm (2.06x1.07x0.93 Inches)
Case Material	:	Plastic resin + Fiberglass (flammability to UL 94V-0 rated)
Weight	:	54g

Part Numbering System

A	A	10	S	05	00	A
Form factor	**Family series**	**Watt**	**Number of Outputs**	**0nput Voltage I**	**Output Voltage II**	**Option Code**
AC/DC Power Module	A~Z	10 :10W	S - Single	03 : 3.3V	03 : 3.3V	A - Std. Functions
			D - Dual	05 : 5V	05 : 5V	
				12 : 12V	12 : 12V	
				15 : 15V	15 : 15V	
				24 : 24V	24 : 24V	

CONTACT: www.deltaww.com/dcdc

USA:
Telephone:
East Coast: 978-656-3993
West Coast: 510-668-5100
Fax: (978) 656 3964
Email: DCDC@delta-corp.com

Europe:
Phone: +31-20-655-0967
Fax: +31-20-655-0999
Email: DCDC@delta-es.com

Asia & the rest of world:
Telephone: +886 3 4526107
ext 6220~6224
Fax: +886 3 4513485
Email: DCDC@delta.com.tw

WARRANTY

Delta offers a three(3) years limited warranty. Complete warranty information is listed on our web site or is available upon request from Delta.

Information furnished by Delta is believed to be accurate and reliable. However, no responsibility is assumed by Delta for its use, nor for any infringements of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Delta. Delta reserves the right to revise these specifications at any time, without notice

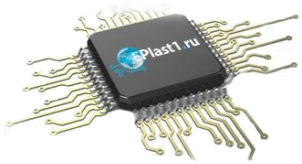
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.