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DC-DC Power Supply Short Specification Sheet Model ESA-DS Series



This specification defines the electrical performance and characteristics of ESA Model ESA-DS. The ESA-DS was designed with reference to the Intel ATX Power Supply Design Guide, ATX 12V Ver. 2.01, with a wide DC input and based on patented technology.

DC INPUT

Vin Range (V):	Minimum	Rated	Maximum
	8	12-24	32

DC Output (Max)

Model:	ESA-DS160					ESA-DS200				
Output (V Nom):	5	3.3	12	-12	5SB	5	3.3	12	-12	5SB
Current (A Max):	15	14	12	0.8	2	20	14	14	0.8	2
	76					100		300		
Power (Watts Max):	140		9.6	10		180		9.6	10	
	160					200				

Regulation

Load Regulation					
Voltage Output (V):	+5	+3.3	+12	-12	+5SB
Minimum	4.75	3.14	11.4	-10.8	+4.75
Nominal	5.00	3.30	12.0	-12.0	+5.00
Maximum	5.25	3.46	12.6	-13.2	+5.25
P-P Noise (Max mV):	50	65	120	180	65
Line Regulation:	± 1% Typical				
Total Efficiency (Typical):	80% (Full Load @ 12Vdc input & 25°C)				

Safety (General)

Over Voltage Protection for (V):	+5	+3.3	+12
Threshold Voltage:	6.1	3.9	13.8
Under Voltage Protection for (V):	+5	3.3	
Threshold Voltage:	3.5	2.2	
Over Power Protection:	115~160%		
Short Circuit Protection:	Short to ground or between output rails. Unit will shut down.		
Rise Time Turn on Delay:	Rise Time (0.5V to 4.75V): <17ms @Normal Load		
Power Good Signal:	Duration: 150ms to 500ms		

Regulatory Standards and Requirements

Safety	USA Europe Canada	UL-60950-1 CE: (LVD) EN60950 C-UL 60950-1
EMC:		FCC Part 15 Class B (DOC), EN55022, EN55024 98
MTBF:		> 100,000 hrs. @ 25 C with 75% rated load. Calculation based on Bellcore Ver. 6.0 Technical Reference, "Reliability Prediction procedure for Electrical Equipment". Fans are exception.
Nuclear and Medical Applications		DSPS products are not authorized for use as a critical component of life support systems, equipment used in hazardous environments or nuclear control systems without written approval.

Environmental

OP/Storage Temperature:	0°C ~ 45°C / -40°C ~ 50°C
Humidity:	Non-condensing - Operating: 85%, Storage: 95%
Altitude:	Operating: Up to 2000 meters (max), Storage: Up to 10000 meters (max)
Cooling:	40x40 (mm) fan with automatic speed control.

Mechanical

Dimensions:	W81.5 x H40.5 x L150 mm, W3.2" x H1.65" x L6"
DC Input Connector:	At rear of ESA-FSXX: 30A/60V connector
Main Output Connector note	Note: ESA-DS: 40A/100V screws with washers.

Technical Revisions

The appearance of products including the safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.